UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

	)	
PJM Interconnection, L.L.C.	)	Docket No. ER22-1200-001
	)	

COMMENTS OF THE INDEPENDENT MARKET MONITOR FOR PJM

Pursuant to Rules 211 of the Commission's Rules and Regulations,[1] Monitoring Analytics, LLC, acting in its capacity as the Independent Market Monitor ("Market Monitor") for PJM Interconnection, L.L.C. ("PJM"),[2] submits these comments on the filing submitted by PJM on June 13, 2022 ("Deficiency Response") in response to the deficiency notice issued in this proceeding May 13, 2022 ("Deficiency Notice").

In its response to the Commission's Deficiency Notice, PJM clarified a number of details that validate the concerns and arguments raised by the Market Monitor in its protest filed on March 25, 2022 ("March 25th Protest") to PJM's March 4th Filing. PJM's IRD proposal is not an accurate or efficient way to deploy reserves. The March 4th Filing should be rejected.

I. COMMENTS

   A. Load Bias

In response to the Commission's question 3, PJM states that "the load bias in an approved RT SCED case does not affect the IRD case solution." That was not the question

---

[1]   18 CFR § 385.211 (2021).

[2]   Capitalized terms used herein and not otherwise defined have the meaning used in the PJM Open Access Transmission Tariff ("OATT"), the PJM Operating Agreement ("OA") or the PJM Reliability Assurance Agreement ("RAA").

asked. The Commission asked how the load bias will affect procurement. PJM does not answer the question. The load bias used in IRD relative to the load bias used in the most recently approved RT SCED case will affect procurement. The most recently approved RT SCED case is the system dispatch prior to the contingency. For example, if the approved RT SCED case load bias were 3,000 MW and the IRD case load bias (including the largest contingency) were 2,000 MW, IRD would procure 1,000 MW less energy than the most recently approved RT SCED case. In general, if the difference in load bias between the IRD and the approved RT SCED solution does not match the MW from the largest contingency, IRD will result in either under or over deploying reserves into energy. IRD will result in over deployment when the load bias from the RT SCED case is below the IRD load bias and under deployment when the load bias from the RT SCED case is above the IRD load bias. Both outcomes are inefficient and inconsistent with the actual system requirements. The IRD approach creates a mismatch which is neither necessary or efficient. As a result, the IRD approach should be rejected.

B. Constraint Control

In response to the Commission's question 4(b), PJM states that PJM operators will "utilize subsequent RT SCED cases to control constraints to reflect system conditions." PJM admits that the IRD solution cannot control for constraints given that the contingency that occurred is not modeled in the IRD case that PJM will use to trigger the synchronized reserve event. The PJM IRD approach does not model the actual contingency, its size or its location. Those basic facts are reason enough to reject the IRD approach. As the Commission recognized in the question, without accurate modeling of the MW size and location of the contingency that occurred, the flows on transmission facilities that are calculated in the IRD solution are inaccurate, and IRD cannot be relied on to accurately reflect any locational flows affected by the contingency, or to monitor flows on specific constraints. As PJM agrees, it is only the subsequent RT SCED solutions that calculate the most accurate solution to control constraints and reflect actual system locational conditions

because they reflect the actual contingency, including the MW size and the location. The IRD cannot get it right. The IRD will, by definition and as PJM agrees, result in incorrect locational prices and incorrect dispatch signals until an accurate RT SCED solution is available because the IRD results cannot reflect the congestion issues caused by the actual contingency. As a result, the IRD approach should be rejected.

C. Production Cost

In response to the Commission's question 4(c), PJM states that IRD results in the lowest production cost solution but only with two important assumptions, both admittedly incorrect. PJM states that the size of the unit lost in IRD is assumed in advance and therefore may not match the actual contingency, and that PJM assumes that IRD deploys all inflexible Tier 2 synchronized reserves when that is not likely to be the case. PJM's assertion that IRD results in the lowest production cost solution is not correct and cannot be correct except by accident. If it is known that two key inputs to the solution are or are very likely to be incorrect, then PJM cannot reasonably assert that the solution is a lowest production cost solution. PJM again admits that the "Subsequent RT SCED cases will be utilized to produce the lowest production cost solution for intervals after IRD." The fact, cited by PJM, that the current all call approach is not efficient or appropriate does not mean that the IRD approach is an improvement. It is not. PJM should be directed to evaluate a more efficient and focused and locationally accurate way to call on reserves, in the stakeholder process.

It is clear from PJM's answers that the most accurate solution for reliability, for constraint control, and for ensuring lowest production cost is an RT SCED solution that models the actual contingency, including its MW size and location. The impact of using IRD for a single interval would be to produce price and dispatch signals that are incorrect and short duration. There is no reason to produce such disruptive signals. As a result, the IRD approach should be rejected.

D. Uplift

PJM fails to answer the Commission's question 6(c). The Commission requested a comparison of LMP and uplift in the IRD scenario from PJM's prospective analysis. In their response, PJM redefines uplift as costs not reflected in LMP. That is not the definition of uplift. PJM pays uplift when a unit does not recover its offer from energy and ancillary services revenues or when a unit has a lost opportunity cost when following PJM's instruction.

PJM further argues, without any supporting analysis, that "IRD will not incur uplift." But PJM cannot guarantee that IRD LMPs will be high enough to cover all offers. At best, IRD LMPs will be reflected in the interval in which the event occurred and in the next interval. Beyond that, PJM will return to the use of the next RT SCED case. For example, if an event happens at 01:03, the IRD case executed in the 00:55 to 01:00 interval will be used for dispatch and pricing. LMPs in the 01:00-01:05 interval will be set using the IRD case. If no new case is approved, LMPs in the 01:05-01:10 interval will be set using the same IRD case. Any condenser or unit that can only deploy their synchronized reserve MW only after seven minutes will not be paid the IRD prices. Such units will start to generate energy only after the prices are set by the subsequent RT SCED case, and not during the interval when the IRD solution is used to set prices. The seven minutes is the difference between 01:10 (the end of the second interval) and 01:03 (the start of the event), and is within the required response time (10 minutes) for a synchronized reserve resource in PJM. The Commission's question 6(b) raises this exact issue of "potential uplift resulting from dispatching resources that an RT SCED case approved after the IRD case's approval determines were unnecessary based on the actual system conditions." Once the condenser comes online and generates energy, the LMPs resulting from subsequent approved RT SCED may not be enough to recover its energy offers. PJM's conclusion that IRD will not incur uplift despite the Commission's clear example is unsupported. As a result, the IRD approach should be rejected.

E. Reserve Recovery Period

In response to the Commission's question 8 regarding the reserve recovery period, PJM explains that it targets an immediate recovery in synchronized reserves. PJM attempts to justify this approach using the sequence of two synchronized reserve events on May 16, 2022. The May 16 events do not justify requiring recovery of synchronized reserve events instantaneously. PJM procures nonsynchronized reserves in addition to synchronized reserves. If a second contingency were to occur in the period when PJM is recovering reserves that were deployed to address a first contingency, PJM can deploy nonsynchronized reserves that have the same response time as synchronized reserves. In addition, a number of resources may still have room to move after the responding to the first synchronized reserve event. PJM also has a number of other resources to call on, such as load response or curtailing export transactions, if multiple contingencies were to occur in quick succession. There is no need to target an immediate replenishment of reserves, given that the NERC requirement allows 90 minutes to replenish synchronized reserves. PJM never fully develops the logical implications of requiring that reserve recovery be immediate. PJM should not use the IRD filing to establish such a significant change to the reserve requirement without a full and complete proposal that stakeholders and the Commission have an opportunity to review in detail. As a result, the IRD approach should be rejected.

III. CONCLUSION

The Market Monitor respectfully requests that the Commission afford due consideration to these comments as it resolves the issues raised in this proceeding.

Respectfully submitted,

Jeffrey W. Mayes

Joseph E. Bowring
Independent Market Monitor for PJM
President
Monitoring Analytics, LLC
2621 Van Buren Avenue, Suite 160
Eagleville, Pennsylvania 19403
(610) 271-8051
joseph.bowring@monitoringanalytics.com

General Counsel
Monitoring Analytics, LLC
2621 Van Buren Avenue, Suite 160
Eagleville, Pennsylvania 19403
(610) 271-8053
jeffrey.mayes@monitoringanalytics.com

Catherine A. Tyler
Deputy Market Monitor
Monitoring Analytics, LLC
2621 Van Buren Avenue, Suite 160
Eagleville, Pennsylvania 19403
(610) 271-8050
catherine.tyler@monitoringanalytics.com

Siva Josyula
Senior Analyst
Monitoring Analytics, LLC
2621 Van Buren Avenue, Suite 160
Eagleville, Pennsylvania 19403
(610) 271-8050
siva.josyula@monitoringanalytics.com

Joel Romero Luna
Senior Analyst
Monitoring Analytics, LLC
2621 Van Buren Avenue, Suite 160
Eagleville, Pennsylvania 19403
(610) 271-8050
joel.luna@monitoringanalytics.com

Dated: July 5, 2022

CERTIFICATE OF SERVICE

I hereby certify that I have this day served the foregoing document upon each person designated on the official service list compiled by the Secretary in this proceeding.

Dated at Eagleville, Pennsylvania,
this 5th day of July, 2022.

Jeffrey W. Mayes
General Counsel
Monitoring Analytics, LLC
2621 Van Buren Avenue, Suite 160
Eagleville, Pennsylvania 19403
(610) 271-8053
jeffrey.mayes@monitoringanalytics.com