UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

Developments in Natural Gas Index Liquidity and Transparency	)	Docket No. AD17-12-000
Price Discovery in Natural Gas and Electric Markets	)	PL03-3-000
Natural Gas Price Formation	)	AD03-7-000

POST TECHNICAL CONFERENCE COMMENTS
OF THE INDEPENDENT MARKET MONITOR FOR PJM

Pursuant to the supplemental notice of technical conference issued on June 21, 2017, and the Commission's Technical Conference of June 29, 2017, in this proceeding, Monitoring Analytics, LLC, acting in its capacity as the Independent Market Monitor for PJM ("Market Monitor"), submits these comments.

I. COMMENTS

A. Gas Indices

A number of private organizations publish indices of gas prices at various locations. These price reporting agencies (PRAs) rely on traders to report the details of trades and the PRAs aggregate the results, following their own published guidelines.[1] In some cases the index values reflect the subjective judgments of the PRAs, which may include posting an

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[1] For example: S&P Global Platts. Methodology and Specifications Guide North American Natural Gas. June 2017 (<*https://www.platts.com/elqNow/elqNotAuthRedir.htm?ref=/IM.Platts.Content/MethodologyReferences/MethodologySpecs/na_gas_methodology.pdf*>).

index value when there are no trades at the referenced point. At times the index values posted by each PRA may differ significantly, as indicated at the Technical Conference, as a result of different index calculation methods or because different transactions are reported or both. These differences are unexplained and are an indicator of the level of accuracy or inaccuracy even for the small sample of trades included in the reported indices.

The extent to which the indices represent the market is unclear. It is not completely clear what proportion of the volume of physical trades is reported to PRAs. Argus states that 15 percent of all trades, by volume, are fixed price trades over the past three years, a reduction from 21 percent between 2008 and 2013.[2] Argus also states that 43 percent of fixed price trades are reported, meaning that about 6.5 percent of all transactions are reported. These results do not address the relative merits of the different indices or whether one index has all 6.5 percent of reported transactions or whether it is necessary to calculate a subjectively weighted average of indices in order to include all reported transactions. These results do not address the distribution of the 6.5 percent across trading locations, some of which have fewer transactions and some of which have more transactions. A participant at the Technical Conference stated that at some significant trading locations there is only one organization reporting trades. In addition, a participant at the Technical Conference indicated that only one of the top ten trading organizations, ranked by the increase in volume in 2016, report trades to a PRA and only six of the top 20 producers report trades to a PRA. There are also high and increasing levels of concentration in reporting, according to a participant at the Technical Conference. The top five reporting organizations accounted for 53 percent of the volumes reported to PRAs in 2016.

It does not appear that there have been studies of the properties of the sample of reported trades and how the properties of the sample compare to the properties of all

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[2] Statement of Argus Media Inc., Docket No. AD17-12, "Development in Natural Gas Index Liquidity and Transparency," (June 29, 2017)

trades.[3] For example, are more high price trades reported than low price trades, or are more low price trades reported than high price trades? How does the mean value of reported trades compare to the mean value of all trades? As a result of this lack of analysis and data, it does not appear to be possible to make any definitive statements about the meaning or accuracy of the gas indices. If only one participant submits trades that define the index, this gives other participants the option to do an index trade that incorporates a discount to the index. This affects the incentives to report trades and affects the accuracy of the index in defining the market price.

ICE data are superior to reported indices in that the actual trades are reported and are visible to users in real time. Based on the data provided to the Commission at the Technical Conference, ICE data also incorporate a much larger share of the market than the indices. ICE indicated that it has trades including about 280 individual counterparties and about 65 percent of the market. ICE indicated that there is not a clear explanation of what the remaining 35 percent of trades are, based on Form No. 552 data. The trades on ICE also do not include all trades, and there are times and locations for which liquidity is low or nonexistent. The same questions about whether the ICE trades are representative of the nontransparent part of the market exist as for indices although the nontransparent part is smaller for ICE. These questions appear susceptible to analysis and that analysis should be pursued.

While most participants at the Technical Conference indicated confidence in the gas indices, it was never satisfactorily explained exactly why they were confident. Participants repeated that the indices are widely used and are therefore good metrics. Participants at the Technical Conference listed a number of reasons why market participants use indices, none of which were based on confidence in the accuracy of the indices. The fact that indices are

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[3] The Market Monitor raised this question on the third panel of the Technical Conference and there was no response.

widely used means, according to participants at the Technical Conference, only that participants have no better substitutes or that use of indices is a low risk strategy from a regulatory perspective, and is not evidence that the indices are accurate and is not even evidence that participants are confident in the indices.

As the ICE representative pointed out at the Technical Conference, market price transparency does not depend on the PRA index model. Gas price transparency would be as good or better with transactions taking place through an exchange rather than with individually negotiated transactions selectively reported to PRAs. (Tr. at 92: 3–11.)

B. Gas Indices and Power Markets

Power generation is an increasing share of gas demand. Power plants need real-time information on gas prices because the dispatch of power plants can vary by hour and is seldom constant for a continuous 24 hour period. Indices are not a good measure of real-time gas prices. Indices are an even worse measure of real-time gas prices when the market is tight and prices are high and volatile, which is when gas prices have a disproportionately large impact of the market cost of electricity.

It does not make sense to use indices for calculating the market value of natural gas for an electric generator or for market power mitigation in wholesale power markets. Indices are, by definition, a measure of prices for transactions that occurred during the prior day. Indices do not reflect the current market value of gas unless the cost of gas has not changed from the prior day. In PJM, generators must submit day-ahead offers by 10:30 AM EPT, just when the gas market trading activity for the next gas day starts. Indices for the next gas day are not available. Generators may estimate the end of the day index by relying on ICE trades or bid/offer data. In addition, indices are defined to cover pipeline delivery zones and receipt zones that require further transportation arrangements to deliver gas to a power plant. For that reason, in parts of PJM, generators commonly rely on third party quotes for delivered gas rather than on indices.

In PJM, the Market Monitor does not engage in reference pricing. Reference pricing is the determination by a market monitor of what a participant's gas costs are. In PJM, the Market Monitor relies on fuel cost policies created by market participants, following basic guidelines established by the Market Monitor, to define how fuel costs will be calculated in an algorithmic, verifiable and systematic way, so that fuel costs cannot be set arbitrarily and so that fuel costs can be verified after the fact. In general, market participants rely on ICE trades when reported and on bilateral trades or ICE bid/offer data when ICE is not traded. ICE data are available in real time and reflect current market conditions and are therefore a better metric of the gas costs actually incurred by market participants when there are reported trades. In PJM, some market participants do choose to use an index in their fuel cost policies if daily and hourly accuracy is not an important objective or if they rely on a LDC tariff rate or a contract price rather than a market price for gas.

C. Alternatives

The contrast between the transparency of prices in wholesale power markets like PJM and the natural gas market is stark. Both the wholesale power market and the gas market have locational pricing based on an underlying network of sources and delivery infrastructure. Wholesale power prices reflecting the actual marginal cost of production and actual transmission constraints are posted every five minutes in PJM for every one of thousands of nodes on the system. In the gas market, gas price indices are reported daily, after the fact and calculated based on voluntary reports of bilateral trades representing less than ten percent of all transactions. ICE trades are reported in real time by trading location but also represent less than all trades. Both indices and ICE are much less locationally granular than power prices in PJM (LMP).

In situations where only one or a small number of participants are reporting trades that become the index price, the lack of transparency and the asymmetry in reporting create efficiency issues and potential market power issues for the market. There was concern expressed at the Technical Conference about the regulatory risks of reporting trades. There

was concern expressed at the Technical Conference about the low level of reporting. There appeared to be general concern about the risks to market efficiency and competition of not reporting although those concerns were generally not stated explicitly. There were no solutions proffered to address the fact that indices are of questionable value in representing the actual market value of gas as a result of low levels of reporting and lack of evidence about how reported trades compare to the actual market value of gas. Mandatory reporting was discussed but uniformly rejected by those who addressed it. Even if mandatory reporting to PRAs were added, it would not address the need for real-time transparency.

If the goal is to have transparent and accurate gas pricing available to all market participants in real time, the Commission should consider making mandatory the real-time reporting of trades on an electronic exchange. An exchange would ensure transparency and reveal the actual liquidity of the market trading points as well as actual prices, in real time. The issue of access to that data would need to be addressed. An exchange would permit more efficient price formation on high demand days as well as normal demand days. The result would be to make the market more competitive.

II. CONCLUSION

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

Respectfully submitted,

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