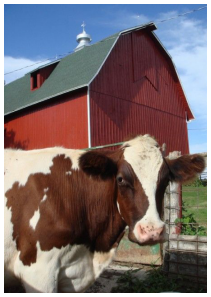
Energy Risk Report

Procurement recommendations for commercial, industrial and institutional electricity users

SEPTEMBER 2019

MISO



EBWAnalyticsGroup
Andrew D. Weissman, Editor in Chief

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Despite rising prices, MISO futures remain cheap by historical standards.

OUR PROJECTIONS AND RECOMMENDATIONS

Time Period	EBW* Recommendation	Price ($/MWh)				
		09/16/2019	Trend Past Month	Trend Since January	12-Month Range	Year-Ago Actual Price
Bal. Cal 2019	Buy	$33.28	$2.55	-$1.72	$29.61-$35.78	$41.28
Cal 2020	Portfolio	$33.95	$1.55	-$1.53	$30.31-$36.63	—
Cal 2021	Portfolio	$32.70	$0.75	-$2.17	$29.52-$35.73	—

** See Glossary on last page*

Soaring Natural Gas Prices Lift MISO Forward Curve

MISO futures have moved higher since mid-August, led by a late-season heat wave and surging natural gas prices nationally. 1 Futures at Indiana Trading Hub gained $1.40/MWh (4.5%) for the balance of Cal 2019, $1.08/MWh (3.2%) for Cal 2020, and $0.72/MWh (2.1%) for Cal 2021. A mid-September heat wave helped lift demand and prices, but the bulk of MISO futures' gains is due to the recent surge in natural gas prices.

Natural gas at Chicago Citygates soared along with national benchmarks on a massive short squeeze. A leading cause of the summer swoon in natural gas prices—heavy shorting by large funds—has reversed course since late August to send prices soaring. Many funds with large short positions were forced to buy back natural gas as prices exploded to multi-month highs. As a result, balance of Cal 2019 gained 24¢/MMBtu (10.3%) while longer-term prices showed modest to little upside, including a softer 11¢/MMBtu (4.4%) gain for Cal 2020 and no material changes for Cal 2021.

While spurred by slightly more bullish fundamentals, end users can take heart that the bearish fundamental picture remains largely unchanged—although it has been partially diminished by looming winter upside price risks. Further, local pricing has been slightly insulated from the brunt of national increases due to weakened basis differentials, thanks to elevated regional imports from Appalachia and stronger east Canadian storage.

MISO may add new rules requiring generating capacity that clears Planning Resource Auctions to face penalties for unavailability. 2 Some generating capacity in MISO has repeatedly faced outages spanning more than three months, inviting questions as to whether owners are simply trying to game the system. While MISO is studying the issue and widely anticipated to introduce penalties for non-performance, we are cautious that any penalties may be watered down and have minimal real-world impact or material benefits to end users.

MISO may be taking steps toward seasonal capacity auctions. Due to the seasonal nature of intermittent renewables, MISO wants to explore seasonal capacity auctions as non-summer

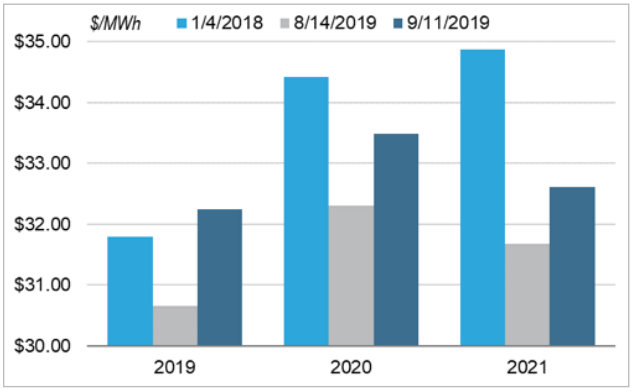
Key Takeaways

1 Heat wave and rising fuel costs lift MISO prices.
Electricity forwards rose on the back of a searing short-covering rally in natural gas and a late-summer heat wave.

2 MISO may adjust Planning Resource Auctions.
Potential changes include penalties for generators facing extended outages and new seasonal capacity auctions.

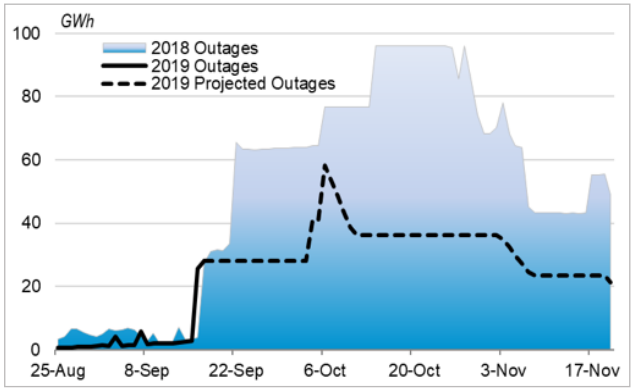
3 Wind generation to rise seasonally.
Summer wind generation has been flat year-over-year, but added capacity should bolster output and reduce pricing during non-summer months.

MISO Indiana Hub Day-Ahead Peak Futures ($/MWh), 2019, 2020, and 2021



Source: EBW AnalyticsGroup, Bloomberg

Lost Daily Generation (GWh) from Nuclear Outages in MISO, 2018 vs 2019



Source: EBW AnalyticsGroup, Bloomberg

Loss of Load Expectation (LOLE) increases. It is too early to speculate as to the final form any rulemaking may take, but the option opens another risk for end users.

Wind generation is up slightly year-to-date, with another 1.5 GW of wind slated to come online by the end of the year. 3 Consumers will likely continue to realize lower wholesale electricity costs due to growing low marginal cost wind generation. Year-to-date generation is up 113 GWh/d (6%), but the bulk of gains were from March to May while summer generation has been roughly flat.

Declines may be most pronounced during the shoulder season when renewable generation is higher—wind output in March and April was double that of August—and lower during the summer. This pattern may increasingly be priced into seasonal MISO futures as wind generation grows.

In Michigan, a fire at a natural gas compressor station has refocused regulators on fuel security questions and non-gas alternatives for meeting electricity demand. Fuel security concerns have been thrust into the forefront with the Consumers Energy fire that reduced supplies in frigid temperatures in January 2019.

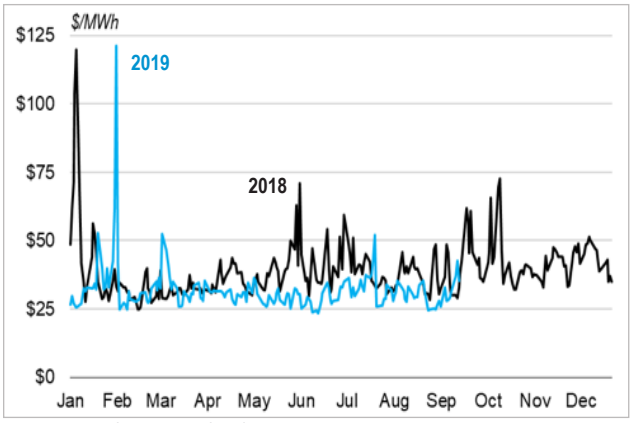
Natural gas generates roughly a quarter of Michigan electricity, yet regulators believe heating demand should take primacy in tight market situations—potentially threatening the viability of gas-fired generation. Instead, regulators are pointing to increased electricity transmission to improve flexibility of supplies and demand response for natural gas to better manage future disruptions.

Michigan is calling for increased MISO-wide involvement in helping manage fuel diversity and grid security. Although direct ramifications are unclear at this time, if the movement away from natural gas—currently the lowest-cost dispatchable resource in MISO—picks up steam, prices may rise.

We recommend end users selectively guard against upside winter price risks for balance of Cal 2019 while continuing a portfolio approach for Cal 2020 and Cal 2021. The surge in natural gas prices underlying the move up in MISO futures appears to be too much, too fast—and is likely to relent in the weeks ahead. Consumers with outstanding risk exposure for the balance of Cal 2019 should look for signs of any declines—and pounce on decade-low valuations for 4Q2019.

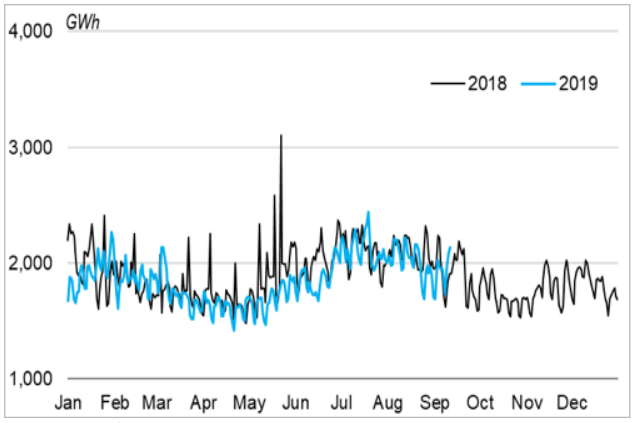
Longer term, Cal 2020 and Cal 2021 futures remain cheaper than any actual pricing in over a decade. Although prices may again succumb to downward pressure in the most-likely scenario after winter threats subside—particularly if wind output resumes historical capacity factors—MISO end users would be well-served to reduce outstanding risk exposure at historically bargain prices. ■

MISO Indiana Hub Day-Ahead Peak Electricity Prices, 2018 vs 2019 ($/MWh)



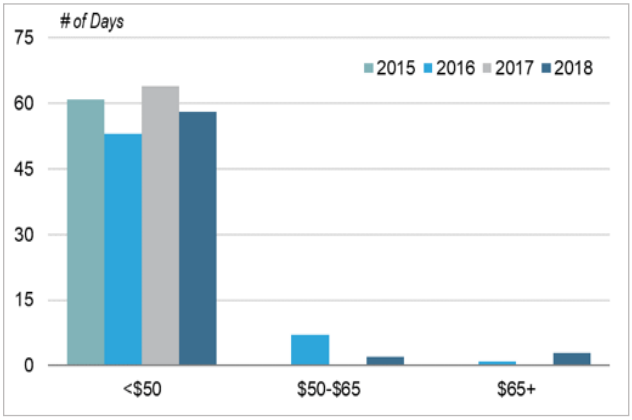
Source: EBW AnalyticsGroup, Bloomberg

MISO Daily Generation (GWh), 2018 vs 2019



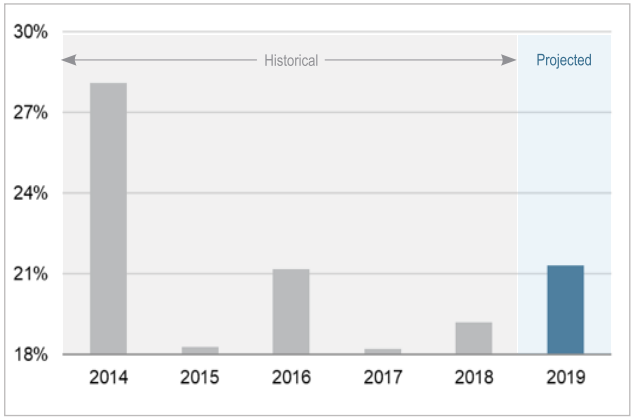
Source: EBW AnalyticsGroup

MISO Indiana Daily High and Scarcity Prices ($/MWh), Number of Days in October–December, 2015–2018



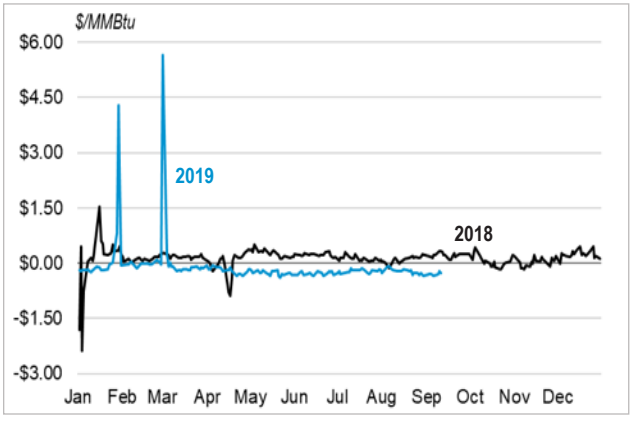
Source: EBW AnalyticsGroup, Bloomberg

Historical and Projected Reserve Margins, 2014–2019



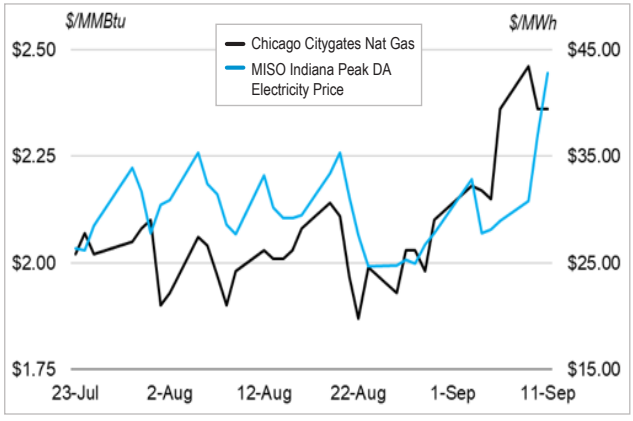
Source: MISO, NERC

Chicago Citygates Natural Gas Hub Basis Differential, 2018 vs 2017 ($/MMBtu)



Source: Bloomberg

MISO Natural Gas and Electricity Prices



Source: EBW AnalyticsGroup, Bloomberg

Energy Risk Report

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Glossary: Our recommendations are made for a hypothetical commercial or industrial end user that consumes large amounts of electricity. With that in mind, end users must decide the timing to cover their electricity requirements.

"Wait" means that in our view prices are elevated and end users can get a better value by waiting for prices to fall.

"Buy" means that in our view prices are cheap relative to their true value, and end users are better served to buy now before prices rise.

"Portfolio" is more of a middle ground reflecting more balanced upside and downside risks. By taking a portfolio approach to procurement, end users cover a portion of requirements regularly to reduce upside risk exposure, but still retain downside potential should prices fall. In this light, a portfolio approach to procurement could be considered a cousin of dollar–cost averaging.