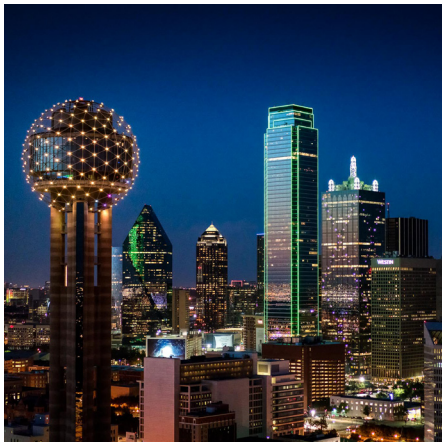
Energy Risk Report

Procurement recommendations for commercial, industrial and institutional electricity users

SEPTEMBER 2019

ERCOT



EBWAnalyticsGroup
Andrew D. Weissman, Editor in Chief

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Bearish seasonal assessment may temper fall and winter scarcity concerns.

OUR PROJECTIONS AND RECOMMENDATIONS

Time Period	EBW* Recommendation	Price ($/MWh)				
		09/23/2019	Trend Past Month	Trend Since January	12-Month Range	Year-Ago Actual Price
Bal 2019	Portfolio	$27.40	$2.45	$0.52	$22.78-$28.87	$34.26
Cal 2020	Portfolio	$47.83	$1.82	$4.66	$37.66-$49.34	—
Cal 2021	Portfolio	$39.52	$0.47	-$0.24	$34.98-$43.17	—

** See Glossary on last page*

August the Priciest Month Since 2011

ERCOT wholesale power futures have edged higher since mid-August. Balance of Cal 2019 futures at benchmark ERCOT North have gained $2.45/MWh (9.8%), while the summer 2020 strip added $2.65/MWh (4.3%). Conversely, the summer 2021 strip posted a modest $0.36/MWh (-0.6%) month-over-month slide. The divergence between summers 2020 and 2021 likely reflects market expectations for significant reserve margin growth over the next two years—mitigating scarcity concerns for 2021.

August and September price spikes underscored the peril and promise of a wind-rich generating fleet without significant spare capacity. 1 Day-ahead power prices at ERCOT North averaged $230/MWh in August—the highest monthly average price since August 2011—due to hot weather, limited spare capacity and seasonally modest wind output. Grid operators avoided the need for rolling blackouts but did issue conservation requests, and real-time power prices hit the $9,000/MWh offer cap.

Power prices soared again earlier this month during a heat wave, but stronger-than-expected wind output during several key hours and bearish peak demand forecast revisions helped temper the magnitude and duration of the spike.

Regional natural gas futures have followed nationwide benchmarks higher. Balance of Cal 2019 futures at the benchmark Houston Ship Channel hub gained $0.39/MMBtu (18.3%) month-over-month, while Cal 2020 added $0.16/MMBtu (6.8%) and Cal 2021 ticked higher by $0.06/MMBtu (2.5%) over the same stretch.

National natural gas market fundamentals have strengthened since mid-August thanks in part to bullish forecast shifts, ultimately filtering into prices at Houston Ship Channel. All else equal, rising gas futures prices translate to higher expected marginal generator fuel costs, pushing the wholesale power forward curve upward.

Wind may be the second-largest source of generation in Texas next year. 2 Well-regarded consultancy Rystad forecasts annual wind output to exceed 87 TWh in 2020, edging

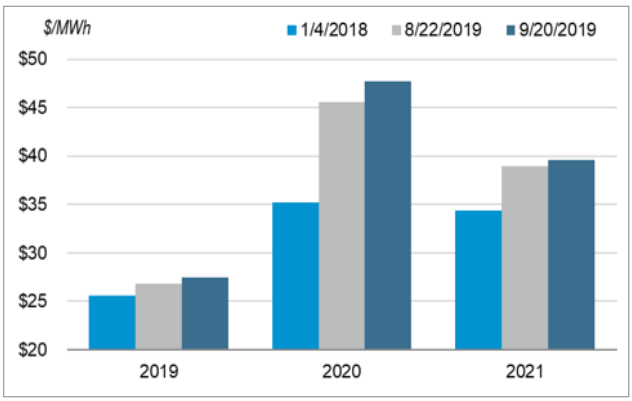
Key Takeaways

1 Power prices spiked repeatedly in August and September.
Wind output was a central driver of the duration and severity of scarcity events.

2 Wind could eclipse coal next year.
Surging renewable output should weigh on power prices, but also leaves end users increasingly exposed to scarcity risk.

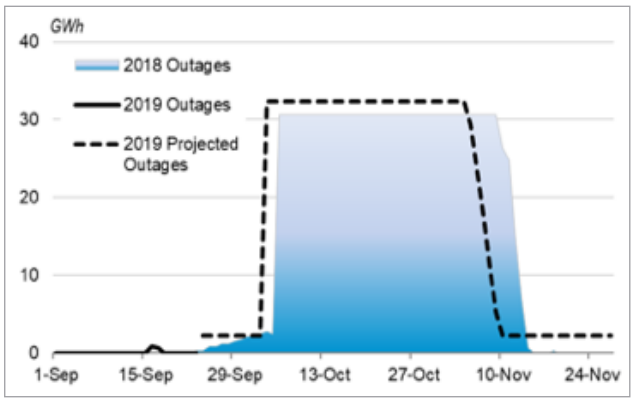
3 ERCOT forecasts significant fall and winter reserve margins.
Even short-lived price spikes could inflate future risk premiums, however.

ERCOT North Day-Ahead Peak Futures ($/MWh), Balance of 2019, 2020, and 2021



Source: EBW AnalyticsGroup, Bloomberg

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



Source: EBW AnalyticsGroup, Bloomberg

out coal-fired generation by 3 TWh. ERCOT data suggests wind output exceeded coal generation during the first half of the year, but the latter likely regained primacy during the summer as demand soared and wind generation typically fades seasonally.

The shift toward a renewables-heavy grid—solar output is expected to grow exponentially over the next several years as wind generation edges higher as well—is likely to weigh on average power prices to the benefit of end users by increasing the use of low marginal cost resources.

Nonetheless, greater reliance on variable renewable output and the associated loss of dispatchable thermal capacity via economically-induced retirement exposes end users to significant and persistent scarcity risk—especially during the peak of the summer.

ERCOT projects more-than-adequate fall and winter reserve capacity. 3 The ISO's final fall and preliminary winter Seasonal Assessments of Resource Adequacy (SARA) project plentiful reserve capacity for the next two seasons, even after factoring in likely outages and the potential for record demand.

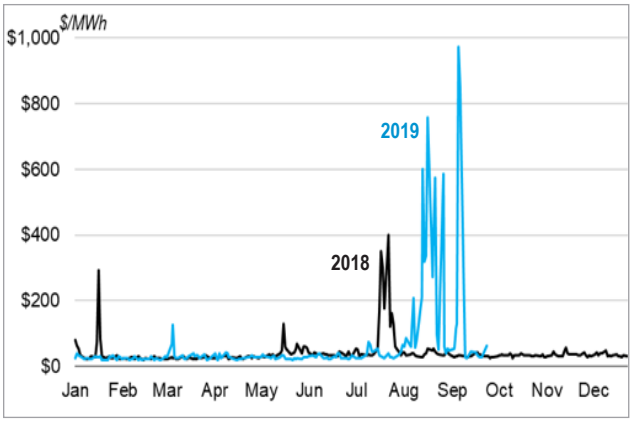
The projections are likely welcome news for end users, who could see significantly lower power prices over the coming months as demand wanes and wind output surges seasonally. Nonetheless, as the last two winters have demonstrated, extremely cold weather can still result in short-lived scarcity events, hitting unhedged end users and inflating future risk premiums.

We recommend end users prepare to utilize a portfolio approach to hedge future obligations. National natural gas price trends are likely to reverse over the coming months, weighing on wholesale power futures prices and potentially providing an opportune end user procurement window. We suggest waiting to hedge near-dated off-peak obligations until the fall, given the potential for meaningful savings set against smaller corresponding upside risk.

A portfolio approach is advised for the summer 2020 and summer 2021 strips. We suggest de-risking the highest-priced hours of the year while retaining flexibility to capitalize on downside price drivers, including the aforementioned gas market softening and continued renewable generation growth.

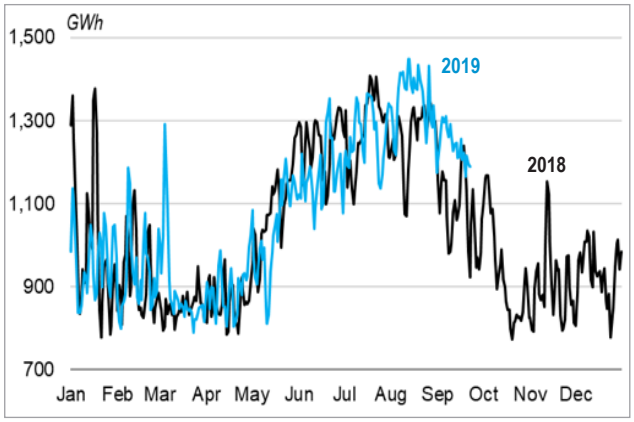
ERCOT is likely to see tight market conditions for the next several summers, but the experience of the last several years—a relatively mild summer 2018 outcome and a dramatic drop in July and August 2019 futures prices earlier this year—counsels a flexible approach to hedging outstanding exposure. Nonetheless, less risk-acceptant end users may instead wish to procure outstanding future summer obligations now to fully remove risk from the equation. ■

ERCOT North Day-Ahead Peak Electricity Prices, 2019 vs 2018 ($/MWh)



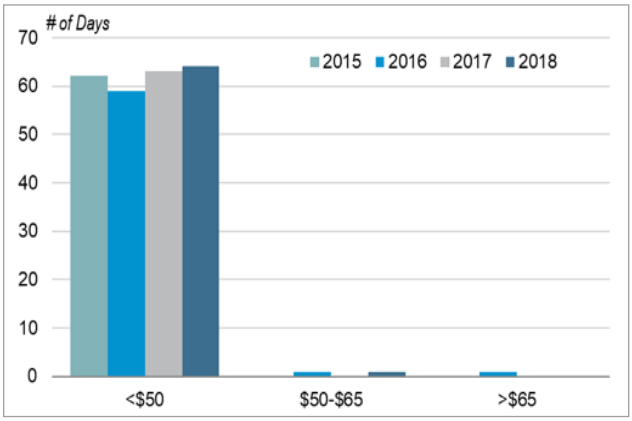
Source: EBW AnalyticsGroup, Bloomberg

ERCOT Daily Generation (GWh), 2019 vs 2018



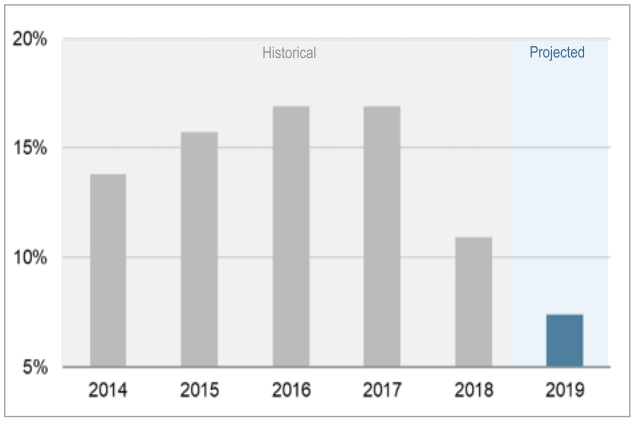
Source: EBW AnalyticsGroup

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



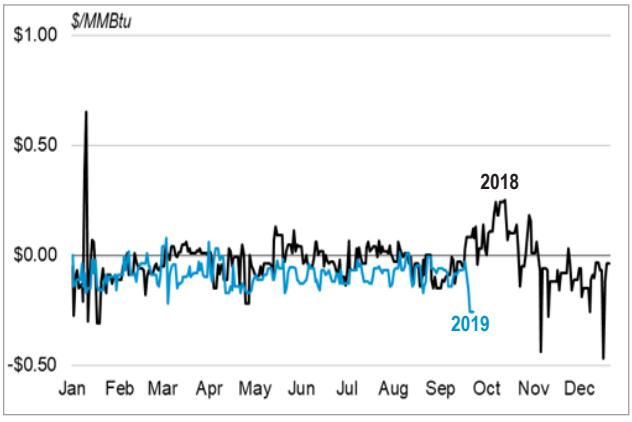
Source: EBW AnalyticsGroup, Bloomberg

ERCOT Historical and Projected Reserve Margins, 2014–2019



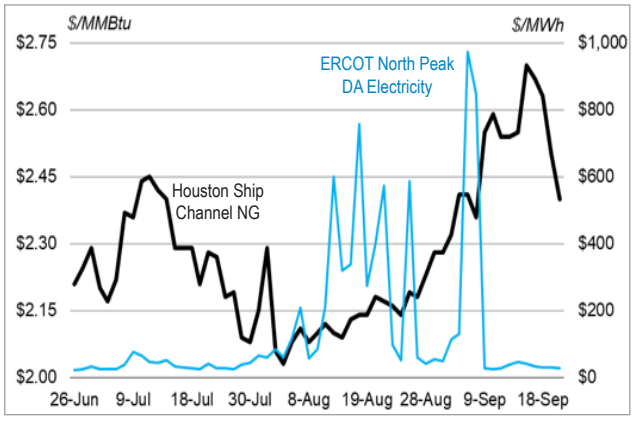
Source: ERCOT, NERC

Houston Ship Channel Natural Gas Hub Basis Differential, 2018 vs 2019 ($/MMBtu)



Source: EBW AnalyticsGroup, Bloomberg

ERCOT 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.