

Energy Market Insights

October 2020

New England

Mid-Atlantic

California

Mexico

New York

Midwest

Texas

New England

October 2020

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Insight of the Month

Clean Energy Standard Existing (CES-E) expands the MA CES program



- Established by the MassDEP on Aug 11, 2017, the CES sets a minimum % of kWh sales that must be procured from clean energy sources. The mandate began at 16% in 2018, and increases 2% annually to 80% by 2050
- The July 2020 revision of the CES legislation added the Clean Energy Standard – Existing (CES-E) as a new CES component that creates an incentive for existing, large, zero-emission generators
- The annual compliance percentage is expected to decrease moving forward, beginning at 20% in 2020 and projected to reach 18% by 2030
- In order to achieve the Commonwealth’s emission limits, the CES-E is seen as an important step in keeping pre-2020 nuclear power and imported hydropower online

CES-E Compliance			
Year	Est. Compliance %	Est. MAX CES-E Price (\$/MWh)*	Est. Retail Impact (\$/MWh)**
2021	20.0%	\$ 1.43	\$ 0.85
2022	20.0%	\$ 1.43	\$ 0.84
2023	20.0%	\$ 1.43	\$ 0.72
2024	20.0%	\$ 1.43	\$ 0.62
2025	20.0%	\$ 1.43	\$ 0.64
2026	19.0%	\$ 1.36	\$ 0.60
2027	19.0%	\$ 1.36	\$ 0.60
2028	19.0%	\$ 1.36	\$ 0.60
2029	18.0%	\$ 1.29	\$ 0.57
2030	18.0%	\$ 1.29	\$ 0.57

* Est. max impact based on the 2020 Class I ACP

**Est. retail impact based on Class I REC prices as of 10/5/2020

KEY TAKEAWAY: The CES-E will be considered a “change in law” and will be applicable to existing and new supply contracts signed after 10/4/2019. Enel X estimates the cost impact for a 10,000 MWh customer will be ~\$8,600 in 2021.

ISONE – Power Prices

Forward prices breach \$35/MWh level, but find resistance at \$38/MWh

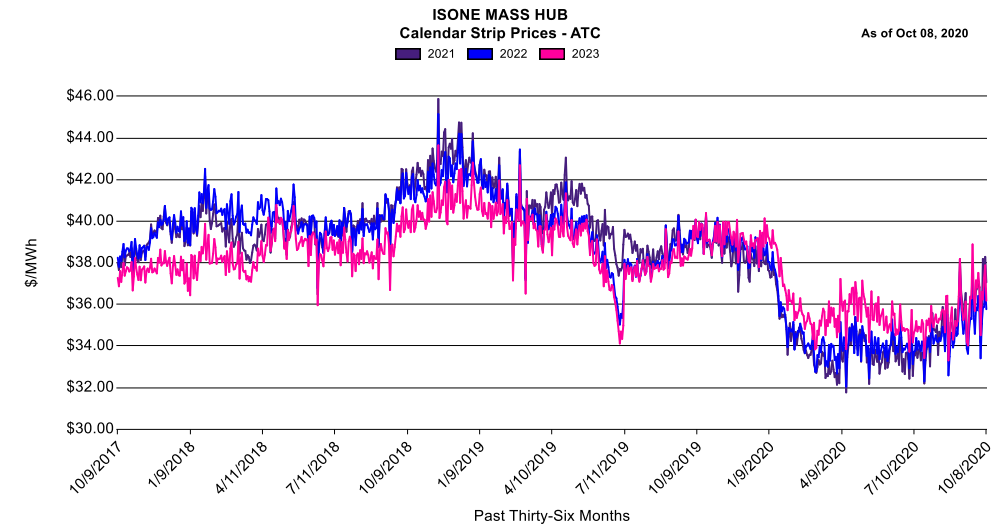


Where are forwards trending?

- CY2021-22 power prices traded ~\$1/MWh higher in September compared to the month prior and are down ~\$2/MWh Y-o-Y
- In September, prices broke above the \$35/MWh resistance level and were last seen hovering around the \$36/MWh mark
- Prices have tested the \$38/MWh level a few times, but have failed to eclipse that level

Where are index prices trending?

- Day-ahead prices averaged \$20.46/MWh in September, down \$3.33/MWh M-o-M, fueled by mild weather
- Prices continue to settle at decade-plus lows, with September down nearly \$1/MWh Y-o-Y and \$7/MWh compared to the five-year average



Average Monthly Day Ahead LMP - MassHub									
	2012	2013	2014	2015	2016	2017	2018	2019	2020
Jan	\$40.59	\$86.53	\$168.81	\$71.14	\$38.60	\$40.30	\$108.75	\$56.76	\$26.45
Feb	\$30.92	\$122.31	\$156.02	\$122.77	\$29.90	\$30.02	\$39.58	\$35.62	\$23.06
Mar	\$26.16	\$53.09	\$111.16	\$64.25	\$20.63	\$35.75	\$35.38	\$38.07	\$17.18
Apr	\$25.88	\$42.89	\$44.98	\$28.43	\$28.36	\$29.23	\$45.00	\$26.97	\$18.36
May	\$25.88	\$40.31	\$36.95	\$24.92	\$21.24	\$27.31	\$24.04	\$24.21	\$16.48
Jun	\$34.75	\$37.09	\$37.92	\$21.16	\$22.61	\$25.48	\$26.82	\$22.09	\$19.84
Jul	\$41.88	\$52.07	\$37.50	\$26.44	\$31.12	\$27.60	\$32.89	\$29.78	\$23.78
Aug	\$38.53	\$34.72	\$30.35	\$30.06	\$35.54	\$24.90	\$39.16	\$25.69	\$23.79
Sep	\$31.53	\$40.43	\$34.10	\$30.82	\$28.62	\$23.57	\$33.89	\$21.14	\$20.46
Oct	\$35.27	\$33.94	\$32.19	\$37.01	\$21.98	\$29.74	\$38.46	\$20.75	
Nov	\$54.96	\$45.21	\$47.71	\$29.42	\$24.98	\$33.98	\$57.43	\$32.29	
Dec	\$46.30	\$92.96	\$43.00	\$22.42	\$53.28	\$71.31	\$47.31	\$40.98	
Avg	\$36.05	\$56.79	\$65.06	\$42.40	\$29.74	\$33.27	\$44.06	\$31.20	\$21.04

New England – Gas Prices

Algonquin Basis forwards prices continue consolidation

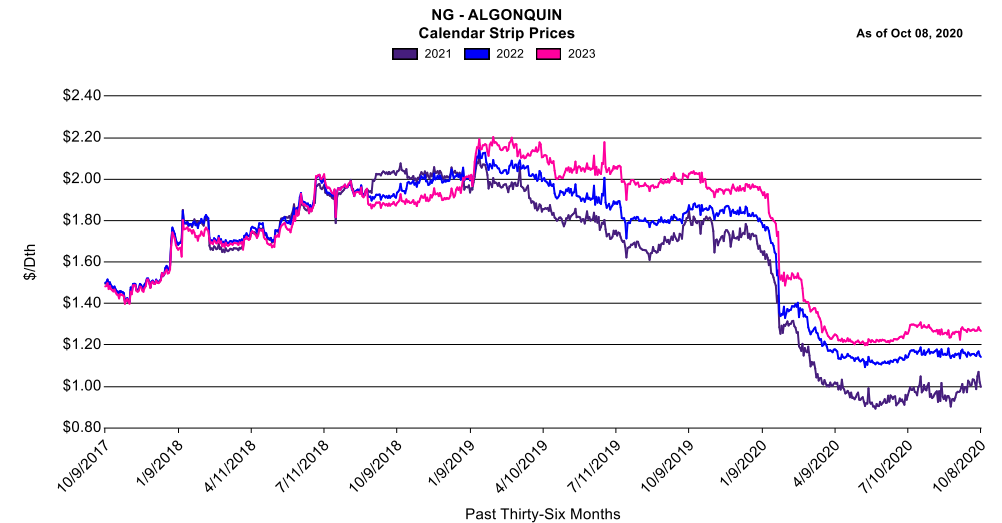


Where are forwards trending?

- Algonquin Basis prices for CY2021-23 have remained relatively flat M-o-M – hovering around the \$1/MMBtu mark for CY2021
- Increasing NYMEX prices combined with mild weather remain a large driver for the continued suppression of New England basis

Where are index prices trending?

- Algonquin City-Gate (AGT) full value daily prices averaged \$1.42/MMBtu in September, falling ~4% M-o-M.
- The previous record low for September was in 2017, when prices averaged \$1.90/MMBtu
- Spot market prices are expected to rebound seasonally as we get into the winter months.



Average of Daily Prices - Algonquin City-Gate									
	2012	2013	2014	2015	2016	2017	2018	2019	2020
Jan	\$ 5.36	\$ 10.64	\$ 24.69	\$ 9.34	\$ 4.54	\$ 5.09	\$ 15.62	\$ 6.95	\$2.83
Feb	\$ 3.64	\$ 17.87	\$ 21.05	\$ 17.50	\$ 3.46	\$ 3.73	\$ 4.40	\$ 4.20	\$2.27
Mar	\$ 2.81	\$ 6.78	\$ 15.19	\$ 7.99	\$ 1.87	\$ 4.52	\$ 3.97	\$ 4.04	\$1.58
Apr	\$ 2.39	\$ 5.07	\$ 4.80	\$ 3.16	\$ 2.93	\$ 3.11	\$ 4.98	\$ 2.56	\$1.63
May	\$ 2.63	\$ 4.45	\$ 3.85	\$ 1.87	\$ 2.12	\$ 3.06	\$ 2.35	\$ 2.32	\$1.39
Jun	\$ 3.41	\$ 4.38	\$ 4.05	\$ 1.69	\$ 2.28	\$ 2.45	\$ 2.62	\$ 2.12	\$1.52
Jul	\$ 3.81	\$ 4.65	\$ 3.10	\$ 1.99	\$ 2.75	\$ 2.50	\$ 2.83	\$ 2.28	\$1.63
Aug	\$ 3.41	\$ 3.49	\$ 2.71	\$ 2.34	\$ 3.11	\$ 2.36	\$ 3.17	\$ 2.02	\$1.49
Sep	\$ 3.32	\$ 3.79	\$ 3.16	\$ 2.80	\$ 2.59	\$ 1.90	\$ 2.94	\$ 1.95	\$1.42
Oct	\$ 3.71	\$ 3.84	\$ 2.83	\$ 3.69	\$ 2.26	\$ 2.78	\$ 3.23	\$ 1.66	
Nov	\$ 6.91	\$ 6.44	\$ 6.18	\$ 3.29	\$ 2.54	\$ 3.27	\$ 6.08	\$ 3.31	
Dec	\$ 5.90	\$ 13.09	\$ 6.01	\$ 2.19	\$ 6.74	\$ 9.35	\$ 5.77	\$ 4.61	
Avg	\$3.94	\$7.04	\$8.13	\$4.82	\$3.10	\$3.68	\$4.83	\$3.17	\$1.75

**This is a generic wholesale curve to New England. Pricing does not reflect locational adjustments, utility tariff designations or rate class adjustments specific to your facility. For more detailed pricing please contact your Enel X representative.*



New York

October 2020

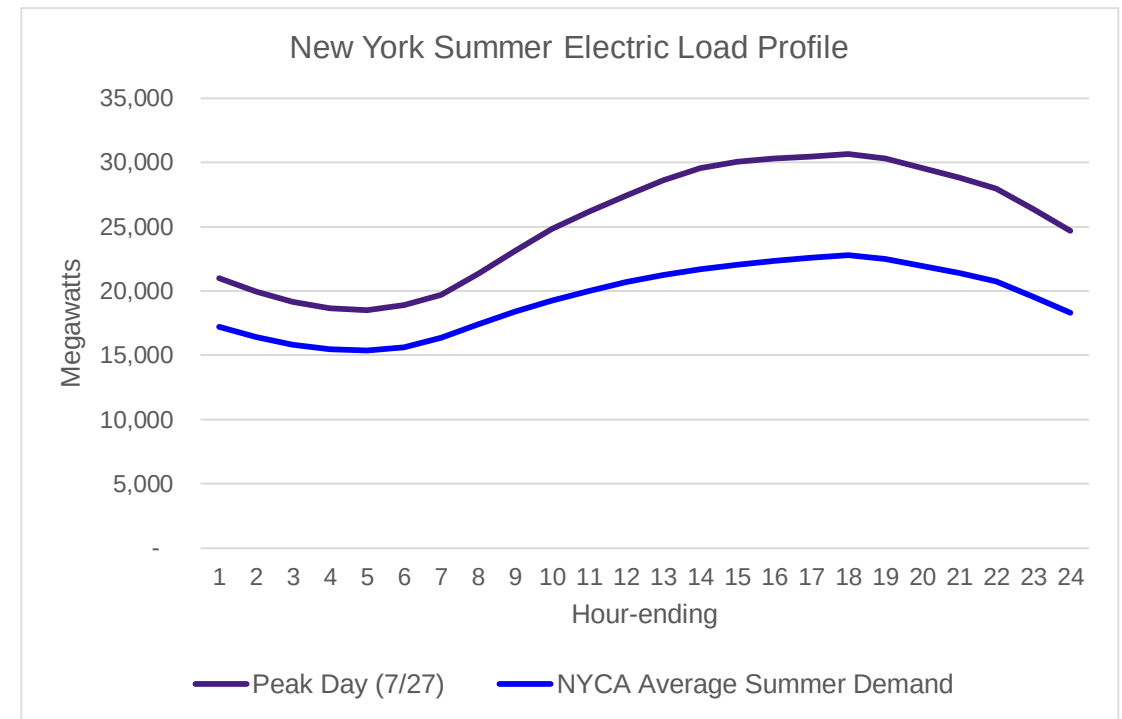
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Insight of the Month

NYISO sets preliminary system peak for 2021/2022



- NYISO's preliminary system peak was set on Monday, July 27, 2020 from 5 – 6 PM
- A customer's demand (in kW) during the single-hour system peak sets their share of capacity costs
- Real-time peak load was 30,660 MW, making it the 2nd highest peak in the past 5 years
 - Peak load was not materially impacted by city or state measures to control the coronavirus
- Since the summer peak in 2019 fell on a weekend, customers that have different weekday vs. weekend operations will likely experience a significant shift in their capacity tags (and resultant capacity costs beginning next year)



KEY TAKEAWAY: Customers entering into new fixed all-inclusive supply agreements should be aware of adjustment language as it relates to their capacity obligation. Suppliers may be able to offer lower pricing on adjustable products, but the expectation is that those costs will increase next year, specifically for facilities with higher demand on weekdays.

NYC – Power Prices

Weather, pandemic, and delays in carbon proposal weigh on prices

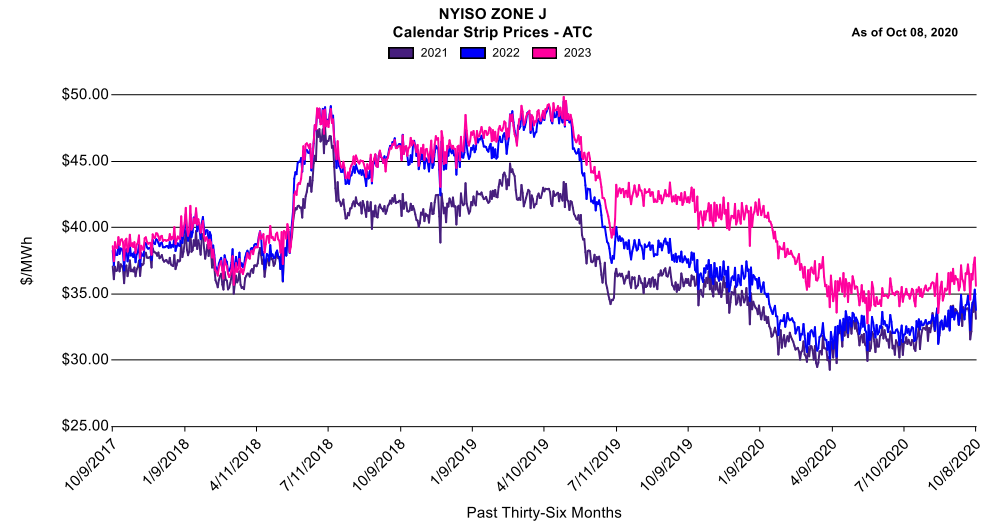


Where are forwards trending?

- The Zone J CY2021 strip traded in a fairly tight range between \$32.50 - \$34.50/MWh over the past month, last trading on Oct. 6 at \$33.65/MWh
- A recent run up in near-term Henry Hub gas pricing is putting upward pressure on forward power

Where are index prices trending?

- Average DA monthly prices for NYISO – Zone J in September dropped back to June levels as cooler temperatures arrived with the start of fall
- NOAA reported 242 fewer Cooling-Degree-Days (CDD) for New York in September compared to August



Average Monthly Day Ahead LMP - NYISO - Zone J									
	2012	2013	2014	2015	2016	2017	2018	2019	2020
Jan	\$45.22	\$81.20	\$175.92	\$57.34	\$35.04	\$40.64	\$96.58	\$49.20	\$25.12
Feb	\$33.12	\$90.67	\$122.84	\$112.33	\$29.61	\$30.55	\$34.05	\$33.07	\$21.26
Mar	\$29.67	\$48.82	\$102.52	\$51.26	\$20.75	\$36.04	\$31.98	\$35.00	\$16.81
Apr	\$28.60	\$43.94	\$46.49	\$27.53	\$28.62	\$32.27	\$34.77	\$28.82	\$15.53
May	\$30.48	\$45.25	\$37.31	\$30.35	\$23.45	\$31.61	\$26.96	\$23.39	\$14.95
Jun	\$40.43	\$43.65	\$39.95	\$24.95	\$25.47	\$30.17	\$29.79	\$23.41	\$19.78
Jul	\$50.80	\$60.14	\$39.79	\$30.01	\$35.43	\$33.57	\$36.94	\$31.23	\$25.50
Aug	\$42.05	\$40.12	\$32.10	\$31.10	\$35.64	\$28.66	\$39.36	\$26.59	\$23.45
Sep	\$36.85	\$39.89	\$32.91	\$32.45	\$27.01	\$26.26	\$35.52	\$21.49	\$19.33
Oct	\$37.79	\$37.55	\$32.09	\$27.68	\$20.84	\$27.88	\$34.70	\$19.86	
Nov	\$50.32	\$40.82	\$41.29	\$23.34	\$25.62	\$29.97	\$38.60	\$26.55	
Dec	\$45.53	\$61.14	\$36.23	\$20.24	\$46.06	\$49.54	\$38.63	\$28.53	
Avg	\$39.24	\$52.77	\$61.62	\$39.05	\$29.46	\$33.10	\$39.82	\$28.93	\$20.19

Upstate NY – Power Prices

Forward power remains low, but showing some upside potential

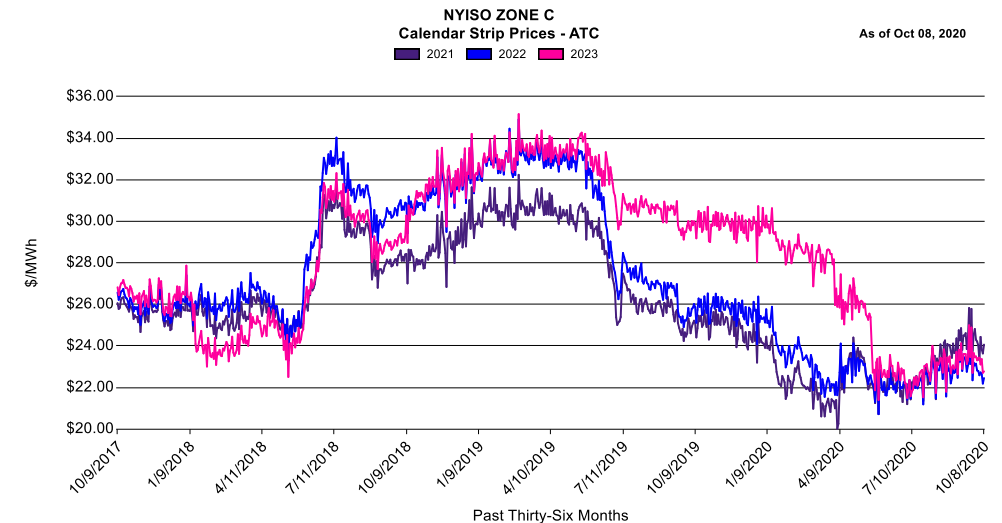


Where are forwards trending?

- The Zone C CY2021 strip eclipsed \$24/MWh several times in September, approaching as high as \$26/MWh on Sep 23
- Although it finished September at \$24.21/MWh, breaking above some resistance at \$24/MWh, it failed to hold onto those gains and slid to \$23.83/MWh as of close of trading on Oct. 6
- Unlike NYC power, upstate NY is reflecting some of the backwardation in forward gas (likely due to its comparatively carbon-free generation fleet, which would be less impacted by a carbon price)

Where are index prices trending?

- Comparatively cooler September temperatures helped bring down prices by 17% compared to August
- With the onset of cooler temperatures heading into winter, look for an increase in heating degree days to put upward pressure on spot prices



Average Monthly Day Ahead LMP - NYISO - Zone C									
	2012	2013	2014	2015	2016	2017	2018	2019	2020
Jan	\$34.93	\$49.86	\$121.65	\$37.81	\$21.50	\$29.68	\$62.19	\$35.02	\$16.57
Feb	\$28.45	\$42.80	\$80.31	\$75.58	\$17.63	\$24.98	\$23.91	\$25.74	\$16.36
Mar	\$24.66	\$39.23	\$85.79	\$37.35	\$12.58	\$24.47	\$22.14	\$27.67	\$13.99
Apr	\$25.07	\$37.20	\$40.38	\$22.80	\$22.01	\$20.86	\$28.14	\$21.82	\$11.87
May	\$27.64	\$38.06	\$32.23	\$25.66	\$16.11	\$20.28	\$22.94	\$15.11	\$13.08
Jun	\$31.66	\$34.09	\$35.71	\$20.24	\$21.06	\$20.86	\$25.51	\$15.67	\$16.46
Jul	\$40.73	\$44.94	\$34.52	\$24.94	\$29.31	\$25.74	\$31.54	\$25.27	\$22.18
Aug	\$34.98	\$32.75	\$29.40	\$25.43	\$30.40	\$22.71	\$32.87	\$22.40	\$19.94
Sep	\$32.46	\$34.30	\$28.79	\$25.14	\$22.75	\$21.72	\$29.40	\$16.90	\$16.36
Oct	\$34.26	\$33.65	\$29.30	\$24.02	\$18.27	\$20.67	\$29.50	\$16.49	
Nov	\$42.82	\$33.80	\$34.18	\$16.32	\$21.58	\$23.18	\$31.86	\$19.75	
Dec	\$33.10	\$46.29	\$31.50	\$13.65	\$25.79	\$33.62	\$31.12	\$19.76	
Avg	\$32.56	\$38.91	\$48.65	\$29.08	\$21.58	\$24.06	\$30.93	\$21.80	\$16.31

New York – Gas Prices

CY2021 Transco Z6 NY Basis just above \$0.50/MMBtu

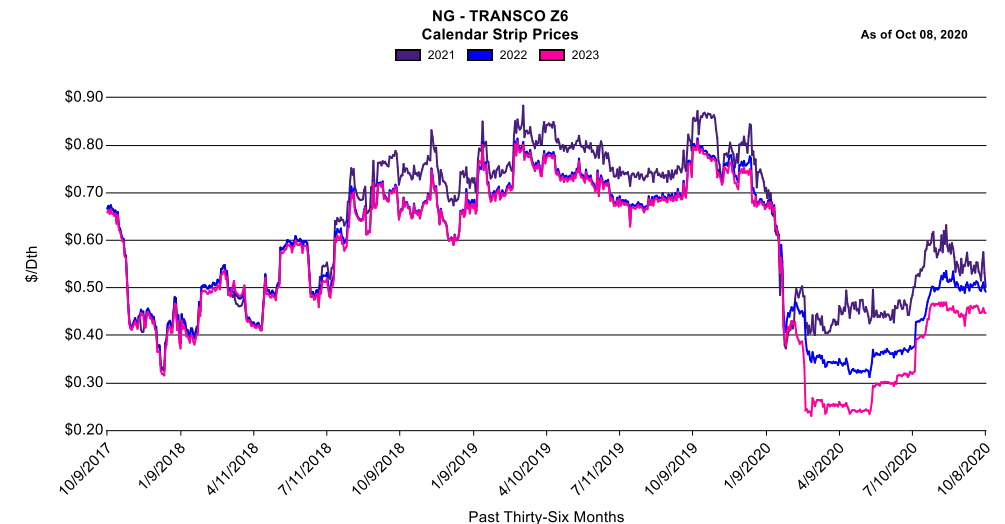


Where are forwards trending?

- Transco Z6 NY CY2021 basis-only strip traded flat, finishing September where it started around \$0.53/MMBtu
- Conversely, the full-value strip slid slightly, dropping 4 cents to close the month at \$3.451/MMBtu
- While the basis strip is up about 12 cents from March lows, it is still down nearly 30 cents from trailing two-year highs, making for favorable conditions to lock the basis portion
- Backwardation in the market will likely make longer term contracts less expensive

Where are index prices trending?

- Daily City-Gate prices averaged \$1.25/MMBtu in September, the lowest daily average spot price of the year so far and the lowest since October 2016
- As Heating-Degree-Days pick up in October in New York, expect a slight bump in cash prices



Average of Daily Prices - Transco Z6 NY Full Value									
	2012	2013	2014	2015	2016	2017	2018	2019	2020
Jan	\$5.08	\$10.00	\$27.66	\$7.24	\$3.82	\$3.82	\$18.73	\$6.02	\$2.20
Feb	\$3.15	\$10.69	\$11.27	\$16.01	\$3.09	\$2.85	\$3.21	\$2.85	\$1.87
Mar	\$2.35	\$4.20	\$8.24	\$3.67	\$1.29	\$3.44	\$2.83	\$2.91	\$1.49
Apr	\$2.13	\$4.64	\$4.13	\$2.22	\$1.57	\$2.81	\$2.79	\$2.37	\$1.51
May	\$2.58	\$4.18	\$3.49	\$2.60	\$1.56	\$2.80	\$2.56	\$2.28	\$1.35
Jun	\$2.67	\$3.92	\$3.22	\$2.35	\$1.83	\$2.34	\$2.78	\$2.11	\$1.43
Jul	\$3.17	\$3.98	\$2.72	\$1.98	\$2.14	\$2.44	\$2.88	\$2.17	\$1.69
Aug	\$3.00	\$3.45	\$2.38	\$2.37	\$2.03	\$2.17	\$3.00	\$1.87	\$1.47
Sep	\$2.94	\$3.71	\$2.25	\$2.09	\$1.34	\$2.29	\$2.74	\$1.75	\$1.25
Oct	\$3.46	\$3.65	\$2.09	\$2.22	\$1.12	\$2.32	\$2.89	\$1.53	
Nov	\$3.97	\$3.83	\$3.88	\$1.77	\$2.10	\$2.91	\$4.18	\$2.62	
Dec	\$4.54	\$5.25	\$3.25	\$1.58	\$4.37	\$5.67	\$4.12	\$2.56	
Avg	\$3.25	\$5.13	\$6.21	\$3.84	\$2.19	\$2.99	\$4.39	\$2.59	\$1.58



Mid-Atlantic

October 2020

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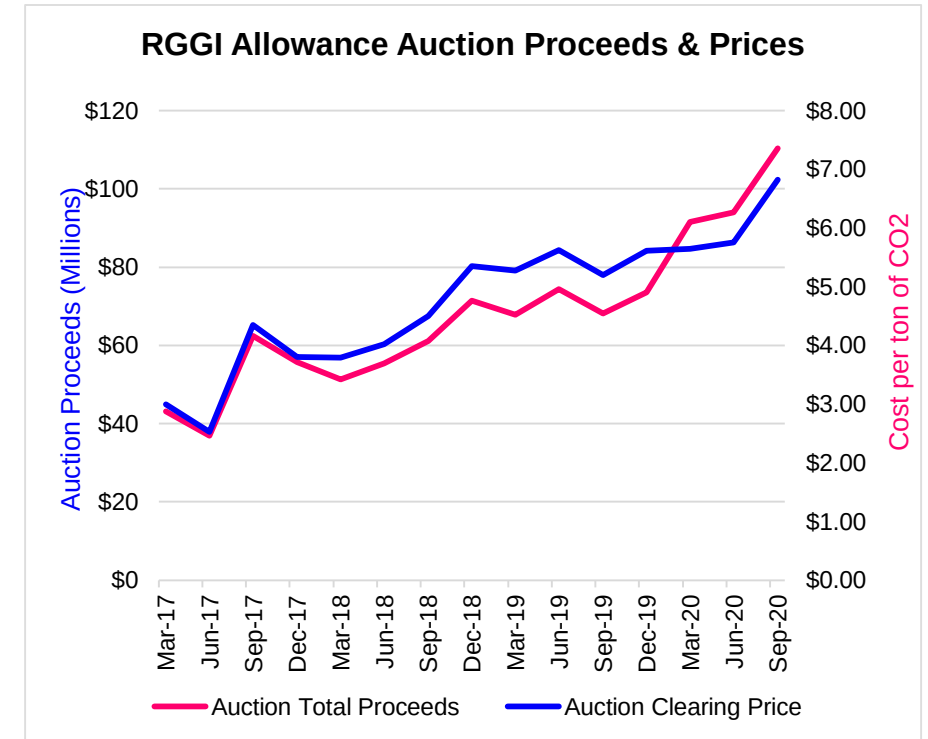
Insight of the Month

Pennsylvania moving toward joining RGGI by 2022



Pennsylvania moved one step closer to joining the Regional Greenhouse Gas Initiative (RGGI), a carbon cap and reduction program for the power sector which currently spans 10 states

- The Regional Greenhouse Gas Initiative (RGGI) program aims to limit CO2 emissions from electric power plants by requiring states to hold allowances for CO2 emissions
- Allowances are purchased through markets or auctions and revenues can then be used to invest in state consumer programs like renewable energy development or energy efficiency
- The PA Environmental Quality Board (EQB) voted 13-6 to introduce the formal process to join RGGI on September 15, 2020 following Governor Tom Wolfe signing an executive order addressing climate change in PA nearly one year prior
- The majority of groups across Pennsylvania support the state joining RGGI, although following the EQB meeting, there is a 60-day public comment period and more hearings to come
- Pennsylvania currently ranks in the top five states for CO2 emissions



KEY TAKEAWAY: Customers in Pennsylvania should be aware of the state's push toward joining RGGI in an attempt to fight climate change. Joining RGGI would add an additional cost to CO2-producing generators, and all else equal, could slightly increase the cost of power for the region.

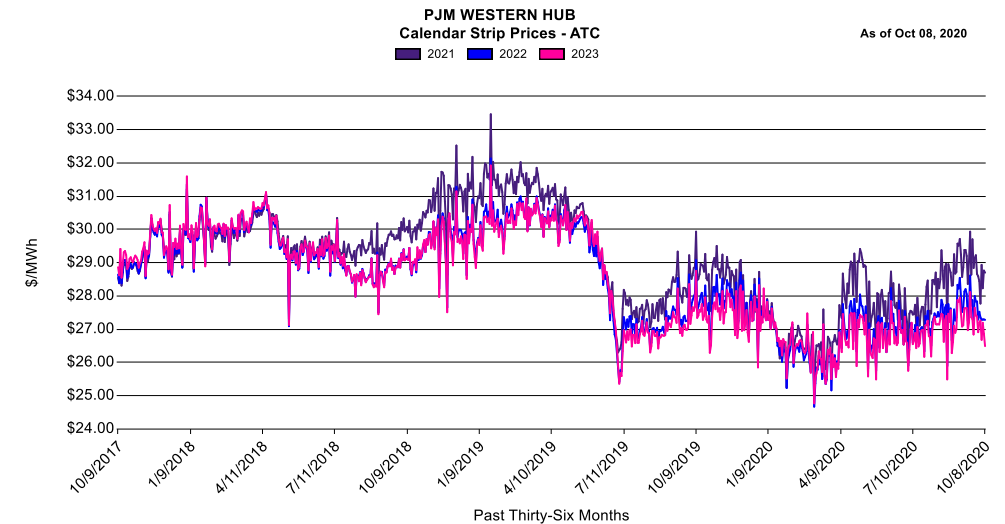
PJM – Power Prices

Forward prices reach 12-month high, and retreat



Where are forwards trending?

- PJM West Hub forwards reached a 12-month high in mid-September, but pulled back in the second half of the month
- Depending on the delivery year, forward prices are just trading between \$1.5-\$3.5/MWh above all-time contract lows
- One-month and three-month forecasts are predicted to be warmer than average in the Mid-Atlantic which could negate some of the upward pressure on prices usually seen leading up to winter



Where are index prices trending?

- Average day-ahead prices at PJM West Hub are back below \$20/MWh in September driven by mild temperatures and lower than average demand to end the summer
- Customers with market exposure, or some type of block and index procurement strategy should continue to benefit with lower costs through the Fall of 2020

Average Monthly Day Ahead LMP - WestHub									
	2012	2013	2014	2015	2016	2017	2018	2019	2020
Jan	\$33.99	\$36.01	\$132.05	\$38.62	\$30.99	\$31.24	\$72.91	\$33.57	\$22.03
Feb	\$31.61	\$36.23	\$71.44	\$75.79	\$28.48	\$26.51	\$27.61	\$27.28	\$19.89
Mar	\$29.86	\$40.19	\$69.56	\$39.94	\$25.49	\$31.66	\$33.69	\$29.82	\$18.63
Apr	\$30.34	\$39.76	\$41.45	\$32.99	\$30.00	\$29.41	\$35.25	\$25.76	\$17.38
May	\$31.54	\$39.37	\$42.04	\$34.74	\$24.30	\$29.14	\$35.50	\$25.30	\$17.38
Jun	\$33.35	\$37.27	\$40.79	\$31.57	\$26.34	\$26.16	\$29.64	\$22.61	\$18.53
Jul	\$41.09	\$47.37	\$37.23	\$34.07	\$32.38	\$28.88	\$32.27	\$27.64	\$25.42
Aug	\$34.08	\$34.66	\$34.46	\$30.45	\$32.60	\$27.08	\$32.23	\$24.30	\$23.18
Sep	\$33.17	\$36.31	\$35.63	\$30.25	\$30.76	\$29.99	\$32.71	\$26.15	\$19.56
Oct	\$35.25	\$35.83	\$35.34	\$31.46	\$30.20	\$29.34	\$33.21	\$25.02	
Nov	\$39.47	\$36.48	\$39.43	\$27.71	\$26.81	\$30.23	\$37.34	\$29.22	
Dec	\$32.81	\$41.20	\$33.31	\$25.42	\$32.13	\$36.70	\$33.79	\$23.63	
Avg	\$33.88	\$38.39	\$51.06	\$36.08	\$29.21	\$29.70	\$36.34	\$26.69	\$20.22

PJM – Gas Prices

Transco Z6 xNY retreats to early-May lows

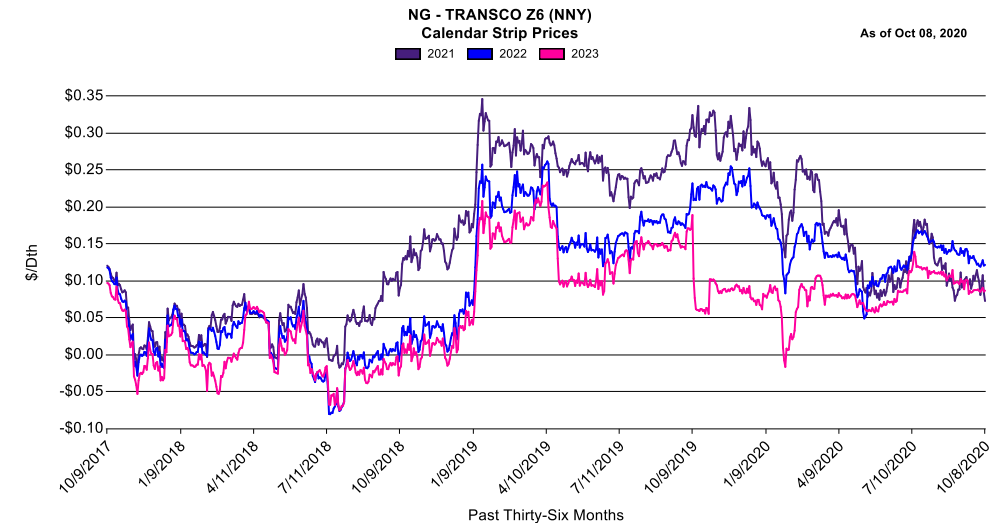


Where are forwards trending?

- Transco Zone 6 xNY forward basis for CY 2021-22 dropped slightly in the second half of September, with CY2021 strip prices nearing 18-month lows
- Basis prices are highly sensitive to natural gas demand in the region, and in the short term abundant storage and a mild forecast could cause forward strips to remain low

Where are index basis prices trending?

- With lower demand for natural gas power generation and mild temperatures, we could expect to see Transco Z6 xNY basis remain in the (\$0.70)/Dth negative range for October 2020
- East region natural gas storage is closing in on both the 5-year average (5.4% below) and September 2019 (6.7% below)



Average of Daily Prices - Transco z6 xNY Basis Only									
	2012	2013	2014	2015	2016	2017	2018	2019	2020
Jan	\$0.64	\$1.42	\$20.61	\$2.13	\$0.92	\$0.24	\$13.07	\$1.08	\$0.15
Feb	\$0.34	\$0.66	\$2.62	\$11.20	\$0.69	(\$0.10)	\$0.42	\$0.07	(\$0.03)
Mar	\$0.12	\$0.28	\$1.18	\$0.73	(\$0.38)	\$0.30	\$0.13	(\$0.02)	(\$0.26)
Apr	\$0.17	\$0.17	(\$0.34)	(\$0.36)	(\$0.33)	(\$0.24)	\$0.01	(\$0.25)	(\$0.19)
May	\$0.12	\$0.10	(\$1.04)	(\$0.21)	(\$0.29)	(\$0.30)	(\$0.22)	(\$0.33)	(\$0.34)
Jun	\$0.14	\$0.03	(\$1.35)	(\$0.35)	(\$0.60)	(\$0.55)	(\$0.15)	(\$0.25)	(\$0.15)
Jul	\$0.20	\$0.12	(\$1.34)	(\$0.71)	(\$0.61)	(\$0.49)	\$0.07	(\$0.14)	(\$0.03)
Aug	\$0.13	\$0.08	(\$1.49)	(\$0.36)	(\$0.67)	(\$0.62)	\$0.08	(\$0.30)	(\$0.76)
Sep	\$0.10	\$0.10	(\$1.68)	(\$0.48)	(\$1.43)	(\$0.64)	(\$0.22)	(\$0.78)	(\$0.69)
Oct	\$0.12	(\$0.02)	(\$1.63)	(\$0.11)	(\$1.57)	(\$0.56)	(\$0.37)	(\$0.72)	
Nov	\$0.35	\$0.27	(\$0.21)	(\$0.27)	(\$0.31)	(\$0.14)	\$0.04	(\$0.01)	
Dec	\$0.40	\$0.64	(\$0.02)	(\$0.28)	\$0.13	\$2.17	\$0.08	\$0.23	
Avg	\$0.24	\$0.32	\$1.28	\$0.91	(\$0.37)	(\$0.08)	\$1.08	(\$0.12)	(\$0.25)



Midwest

October 2020

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Insight of the Month

States, utilities and generators favor goals of net-zero carbon by 2050

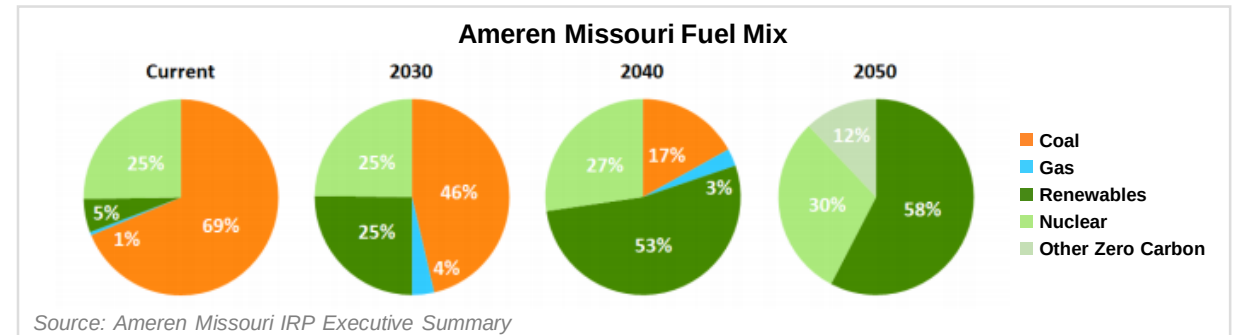


In the past month the State of Michigan, Vistra and Ameren Missouri have all announced goals to achieve net-zero carbon emissions by 2050.

Michigan – On Sept. 23, as reported by S&P Global Platts, Michigan Governor Gretchen Whitmer signed executive orders for economy-wide carbon neutrality by 2050 and a reduction to 1990 levels by 2028.

Vistra – Vistra, a competitive power supplier which owns power plants in IL and OH, announced that it would be shuttering 7 coal-fired plants with 6,800 MW of capacity between 2022 and 2027, and that it was increasing its net-zero carbon emissions goal from 80% to 100% by 2050.

Ameren Missouri – The company's triennial Integrated Resource Plan (IRP), released on Sept. 28, established a goal of net-zero carbon emissions by 2050. This includes a plan to shut-down 75% of the company's coal-fired plants by 2040 and 100% by 2042



KEY TAKEAWAY: A clear shift from fossil fuels to renewables is beginning at a utility scale. In the near term, capacity price could become volatile as plants close and are replaced by intermittent resources that may not be able to meet real-time energy needs. Demand for renewables will continue upwards as regulatory requirements and large-scale utility goals will compete for resources with corporate buyers.

MISO – Power Prices

CY2021-2023 prices pull back from recent highs

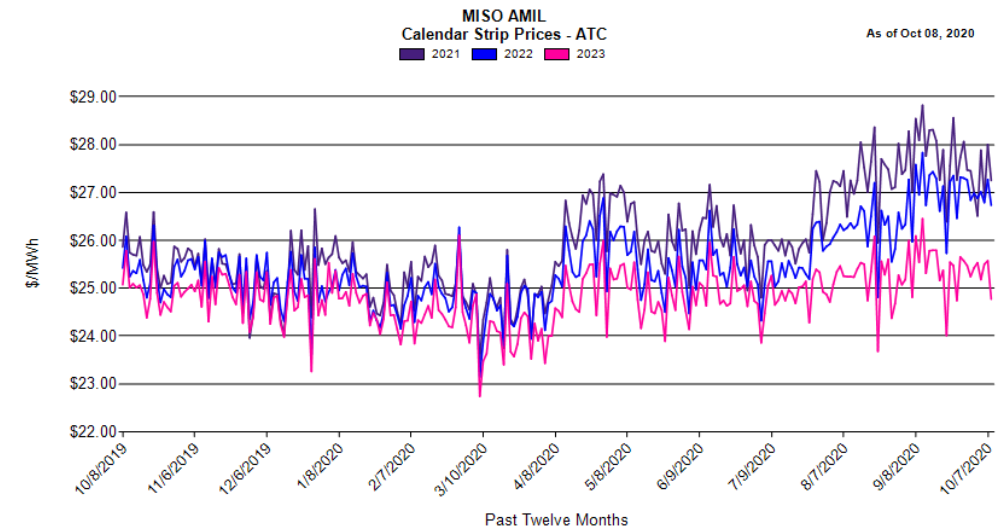


Where are forwards trending?

- CY2021-23 Illinois Hub power prices peaked in early September, but retreated in the weeks that followed
- Prices for 2021 fell back into the \$27-28/MWh channel
- Backwardation between 2021 and 2023 remains constant since increasing in July and August

Where are index prices trending?

- Moderating temps over the center of the US brought hourly prices to near-record lows and the lowest September rates in the past 9 years
- Through the first three quarters of 2020, prices have averaged \$21.85/MWh – which is just over \$4/MWh, or 19%, lower than the same period a year ago



Average Monthly Day Ahead LMP - ILLINOIS HUB									
	2012	2013	2014	2015	2016	2017	2018	2019	2020
Jan	\$25.54	\$27.62	\$51.83	\$27.04	\$22.84	\$28.17	\$34.55	\$30.25	\$23.52
Feb	\$24.86	\$23.82	\$54.44	\$30.18	\$22.76	\$24.05	\$23.73	\$25.80	\$21.60
Mar	\$24.06	\$31.53	\$41.18	\$27.83	\$22.16	\$25.20	\$23.66	\$27.08	\$19.24
Apr	\$23.78	\$34.30	\$34.38	\$25.86	\$24.84	\$25.51	\$30.26	\$25.77	\$18.29
May	\$27.82	\$34.18	\$40.86	\$27.60	\$25.32	\$29.11	\$31.36	\$24.28	\$19.35
Jun	\$26.34	\$30.04	\$34.83	\$25.43	\$26.49	\$29.01	\$29.76	\$22.98	\$21.61
Jul	\$39.78	\$32.05	\$31.68	\$28.11	\$30.91	\$29.57	\$30.38	\$27.69	\$26.90
Aug	\$27.61	\$30.32	\$31.33	\$27.30	\$32.33	\$26.65	\$31.38	\$24.35	\$25.65
Sep	\$23.69	\$27.82	\$30.96	\$28.82	\$29.20	\$29.39	\$30.65	\$25.29	\$20.47
Oct	\$24.16	\$34.52	\$31.51	\$27.19	\$28.71	\$25.53	\$33.08	\$23.60	
Nov	\$30.73	\$28.06	\$34.06	\$23.07	\$23.71	\$25.51	\$34.11	\$25.67	
Dec	\$26.26	\$31.94	\$28.56	\$21.80	\$30.34	\$25.28	\$31.56	\$23.40	
Avg	\$27.05	\$30.52	\$37.13	\$26.69	\$26.63	\$26.92	\$30.37	\$25.51	\$21.85

Chicago – Gas Prices

Forward prices stabilize after summer run-up

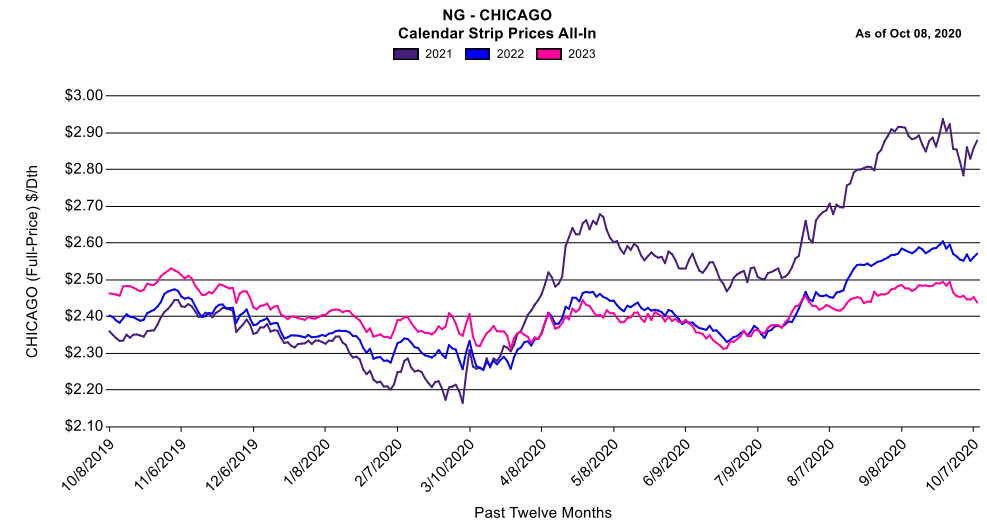


Where are forwards trending?

- Chicago City-Gate CY2021 prices peaked above \$2.90 in August and September, but have stabilized just below that level
- Prices for CY2022-23 remain fairly flat, as most of the recent volatility is concentrated in the front year
- Depending on the delivery year, prices for CY2022-23 are trading between a \$0.35-\$0.45/MMBtu discount to CY2021

Where are index prices trending?

- Prices at Chicago City-Gates fell back below the \$2/MMBtu mark after briefly breaking above in August
- Low shoulder month demand and prices should remain consistent until weather driven demand takes over



Average of Daily Prices - Chicago City-Gate									
	2012	2013	2014	2015	2016	2017	2018	2019	2020
Jan	\$ 2.82	\$ 3.49	\$ 7.93	\$ 3.04	\$ 2.34	\$ 3.29	\$ 3.79	\$ 3.22	\$ 1.92
Feb	\$ 2.65	\$ 3.45	\$ 11.95	\$ 3.98	\$ 1.99	\$ 2.81	\$ 2.57	\$ 2.64	\$ 1.74
Mar	\$ 2.22	\$ 4.00	\$ 9.35	\$ 2.90	\$ 1.79	\$ 2.84	\$ 2.48	\$ 3.39	\$ 1.57
Apr	\$ 2.06	\$ 4.27	\$ 4.72	\$ 2.59	\$ 1.90	\$ 2.96	\$ 2.77	\$ 2.45	\$ 1.66
May	\$ 2.45	\$ 4.12	\$ 4.59	\$ 2.81	\$ 1.91	\$ 3.02	\$ 2.49	\$ 2.36	\$ 1.67
Jun	\$ 2.46	\$ 3.87	\$ 4.64	\$ 2.70	\$ 2.46	\$ 2.79	\$ 2.75	\$ 2.11	\$ 1.55
Jul	\$ 2.99	\$ 3.70	\$ 4.11	\$ 2.83	\$ 2.72	\$ 2.80	\$ 2.69	\$ 2.12	\$ 1.67
Aug	\$ 2.91	\$ 3.51	\$ 3.92	\$ 2.85	\$ 2.74	\$ 2.81	\$ 2.86	\$ 1.98	\$ 2.05
Sep	\$ 2.93	\$ 3.70	\$ 3.94	\$ 2.69	\$ 2.89	\$ 2.87	\$ 2.81	\$ 2.13	\$ 1.80
Oct	\$ 3.50	\$ 3.79	\$ 3.84	\$ 2.39	\$ 2.86	\$ 2.78	\$ 3.21	\$ 1.94	
Nov	\$ 3.72	\$ 3.73	\$ 4.37	\$ 2.14	\$ 2.41	\$ 2.97	\$ 4.06	\$ 2.51	
Dec	\$ 3.43	\$ 4.57	\$ 3.49	\$ 1.94	\$ 3.63	\$ 2.84	\$ 3.75	\$ 2.10	
Avg	\$2.84	\$3.85	\$5.57	\$2.74	\$2.47	\$2.90	\$3.02	\$2.41	\$1.74

California

October 2020

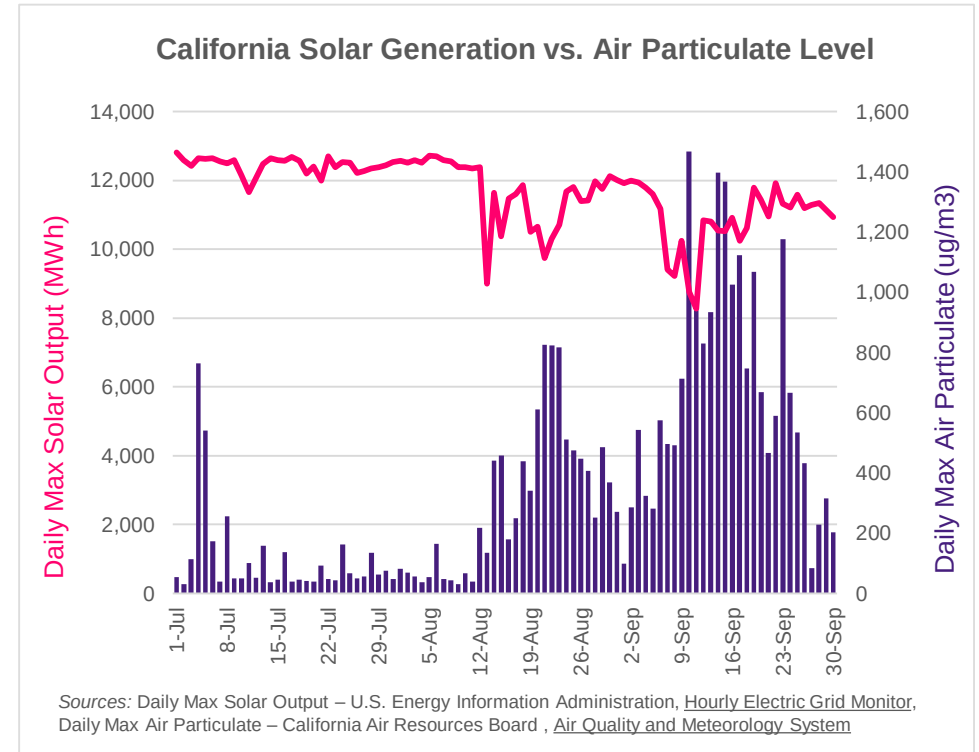
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Insight of the Month

Record wildfire season exposes risks to CA's grid and solar development



- 5 out of the top 10 largest wildfires on record in California occurred in 2020, with more than 4 million acres burned this year, according to Cal Fire.
- Climate change is causing more extreme weather events and the state's grid reliability and clean energy ambitions will be put at risk as wildfire seasons worsen in years to come.
- Aging utility transmission lines have often been the ignitor of wildfires. As a result of the massive risk, utilities have opted to cut power to these lines during periods of high winds in events called Public Safety Power Shutoffs.
 - While these events mitigate wildfire risk, they significantly decrease the pool of available generation to meet customer demand resulting in rising energy prices and weakening grid reliability.
- Solar power's promising rise in California's generating portfolio has recently shown its susceptibility to wildfires. In September, smoke blanketing the West Coast increased particulate levels throughout the state to 6 times the average of July. [EIA notes that](#) "[i]n the first two weeks of September, solar-powered generation in CAISO was 13.4% lower than the same time a year ago, despite growth in installed generation capacity."



KEY TAKEAWAY: Climate change is causing longer and more devastating wildfire seasons. Consumers in California can expect greater volatility, increased prices, and decreased grid reliability in periods of high demand until regulators and utilities take steps towards hardening the grid while keeping their responsibility to ratepayers in mind.

Northern CA – Power Prices

Forward power prices fall despite bumpy September

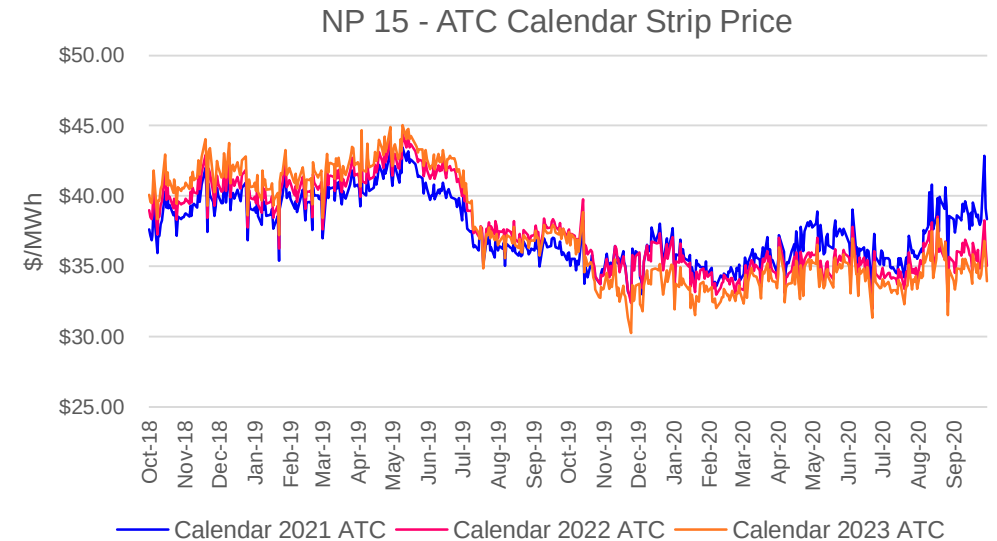


Where are forwards trending?

- NP-15 forward prices showed significant volatility in September, but ultimately 2021 prices finished the month down \$2.4/MWh (-5%) compared to the end of August.
- Backwardation continued to become more extreme, with CY2021 strips trading roughly \$3.87/MWh higher than CY2023 strip prices.

Where are index prices trending?

- NP-15 day-ahead prices averaged \$41.66/MWh in September, a 16% decline M-o-M. Prices still remain elevated and are 17% above the 5-year average.
- Temperatures along the West Coast are currently forecasted to remain above average through the remainder of October



Average Daily Price - NP 15									
	2012	2013	2014	2015	2016	2017	2018	2019	2020
Jan	\$ 27.09	\$ 37.35	\$ 46.07	\$ 33.40	\$ 28.54	\$ 34.90	\$ 32.94	\$ 41.09	\$ 31.19
Feb	\$ 25.27	\$ 37.50	\$ 61.99	\$ 30.71	\$ 24.01	\$ 29.23	\$ 30.47	\$ 75.58	\$ 26.34
Mar	\$ 21.80	\$ 40.19	\$ 47.63	\$ 30.72	\$ 19.60	\$ 22.12	\$ 30.06	\$ 36.63	\$ 26.58
Apr	\$ 20.21	\$ 41.96	\$ 47.48	\$ 32.27	\$ 21.23	\$ 22.13	\$ 24.91	\$ 22.25	\$ 21.61
May	\$ 23.39	\$ 38.42	\$ 46.67	\$ 32.69	\$ 20.76	\$ 29.28	\$ 20.75	\$ 18.46	\$ 18.43
Jun	\$ 25.37	\$ 39.80	\$ 45.42	\$ 34.64	\$ 28.09	\$ 33.12	\$ 28.14	\$ 22.94	\$ 23.49
Jul	\$ 26.79	\$ 42.65	\$ 47.23	\$ 35.54	\$ 32.80	\$ 35.84	\$ 54.89	\$ 30.28	\$ 25.70
Aug	\$ 35.24	\$ 39.43	\$ 46.49	\$ 34.32	\$ 34.85	\$ 45.20	\$ 49.84	\$ 31.82	\$ 49.66
Sep	\$ 31.01	\$ 40.76	\$ 45.45	\$ 34.46	\$ 34.66	\$ 39.72	\$ 33.42	\$ 34.55	\$ 41.66
Oct	\$ 36.25	\$ 38.75	\$ 44.73	\$ 32.49	\$ 34.03	\$ 41.19	\$ 43.74	\$ 36.32	
Nov	\$ 34.86	\$ 40.74	\$ 45.12	\$ 29.41	\$ 30.17	\$ 36.27	\$ 52.40	\$ 41.51	
Dec	\$ 32.38	\$ 49.41	\$ 37.52	\$ 28.65	\$ 36.60	\$ 34.22	\$ 54.17	\$ 39.82	
Avg	\$ 28.30	\$ 40.58	\$ 46.81	\$ 32.44	\$ 28.78	\$ 33.60	\$ 37.98	\$ 35.94	\$ 29.41

Southern CA – Power Prices

September spot prices remain high amid prolonged heat

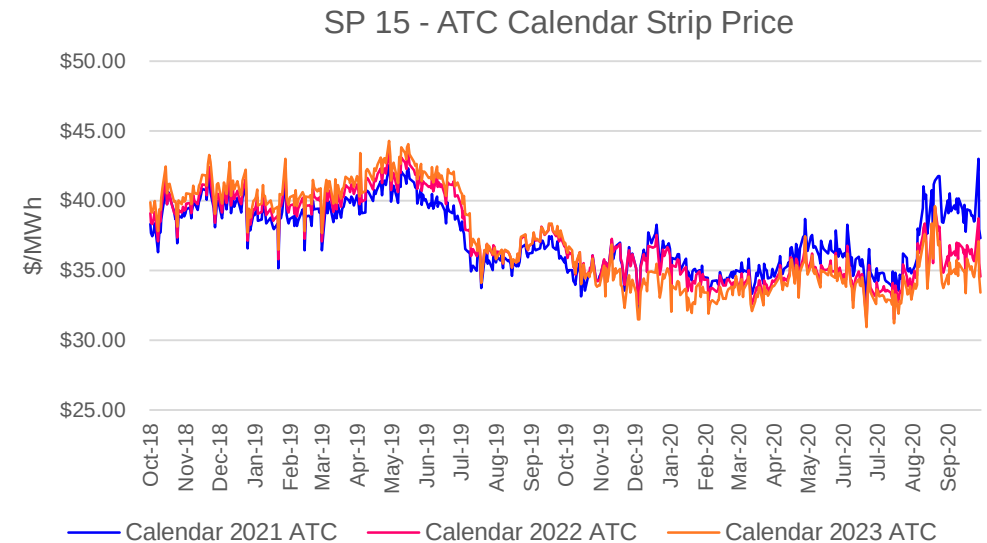


Where are forwards trending?

- In September, SP-15 forwards averaged \$1.75/MWh higher than over the course of August
- CY2021 prices finished the month down, but are still 5% higher compared to the start of 2020
- SP-15 CY2022 & 2023 prices are both trading at roughly an 11% discount to 2021, as backwardation grows due to short term resource adequacy concerns

Where are index prices trending?

- Average day-ahead monthly prices at SP-15 decreased 42% M-o-M. They are 20% higher than this time last year and the 5-year average, as demand remains high due to above average temperatures.
- Spot prices typically remain consistent September to October in SP-15. Given forecasts project seasonally high temperatures through the remainder of October in conjunction with natural gas pipeline maintenance increasing in the shoulder season, we expect spot rates to remain elevated in the short term.



Average Daily Price - SP 15									
	2012	2013	2014	2015	2016	2017	2018	2019	2020
Jan	\$ 26.08	\$ 42.88	\$ 46.47	\$ 33.51	\$ 28.18	\$ 33.55	\$ 34.37	\$ 39.96	\$ 31.22
Feb	\$ 25.58	\$ 42.75	\$ 61.70	\$ 30.05	\$ 22.99	\$ 26.39	\$ 34.24	\$ 70.89	\$ 25.67
Mar	\$ 22.59	\$ 46.44	\$ 47.60	\$ 29.00	\$ 18.05	\$ 21.75	\$ 30.53	\$ 36.02	\$ 24.99
Apr	\$ 25.16	\$ 49.05	\$ 44.71	\$ 27.93	\$ 18.44	\$ 24.80	\$ 24.88	\$ 23.52	\$ 18.53
May	\$ 26.64	\$ 43.69	\$ 45.85	\$ 27.21	\$ 21.01	\$ 28.35	\$ 21.65	\$ 18.43	\$ 17.26
Jun	\$ 26.07	\$ 42.14	\$ 45.25	\$ 33.94	\$ 29.95	\$ 32.80	\$ 28.17	\$ 23.07	\$ 22.20
Jul	\$ 29.67	\$ 43.85	\$ 47.75	\$ 36.02	\$ 34.29	\$ 36.70	\$ 75.43	\$ 31.52	\$ 27.99
Aug	\$ 36.61	\$ 41.25	\$ 45.89	\$ 35.69	\$ 34.93	\$ 45.35	\$ 69.73	\$ 32.84	\$ 77.05
Sep	\$ 35.90	\$ 43.42	\$ 46.65	\$ 34.76	\$ 32.89	\$ 38.43	\$ 35.33	\$ 36.08	\$ 44.22
Oct	\$ 37.76	\$ 39.97	\$ 45.17	\$ 32.62	\$ 33.06	\$ 41.09	\$ 38.88	\$ 34.36	
Nov	\$ 35.55	\$ 40.64	\$ 44.98	\$ 28.86	\$ 27.79	\$ 39.51	\$ 51.59	\$ 42.03	
Dec	\$ 34.30	\$ 48.58	\$ 37.87	\$ 28.09	\$ 33.95	\$ 39.12	\$ 52.93	\$ 40.24	
Avg	\$ 30.16	\$ 43.72	\$ 46.66	\$ 31.47	\$ 27.96	\$ 33.99	\$ 41.48	\$ 35.75	\$ 32.13

California – Gas Prices

SoCal forward basis reaches new heights

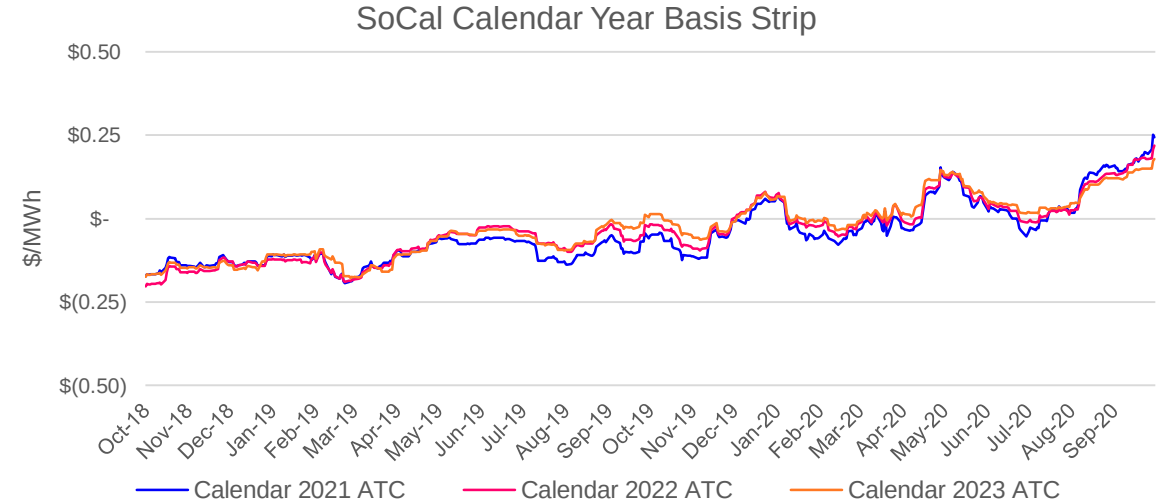


Where are forwards trending?

- The SoCal Basis Calendar Year 2021 strip price continued to climb in September and finished the month at \$0.20/MMBtu, a new 2-year high following increased demand for power generation
- CY 2021 strip prices have now more than tripled year-to-date as concerns regarding gas availability in the region have increased

Where are index prices trending?

- The average daily spot price for PG&E City Gas increased 62% M-o-M due to a prolonged heat wave driving gas demand for power generation. Above-average temperatures are expected to persist through the remainder of October. This in addition to pipeline maintenance causing restricted availability will keep spot prices elevated in the short term



Average Daily Price - PG&E City Gate Basis Only				
	2017	2018	2019	2020
Jan	\$0.30	(\$0.76)	\$0.61	\$0.95
Feb	\$0.44	\$0.05	\$4.88	\$0.76
Mar	\$0.30	\$0.06	\$1.12	\$0.80
Apr	\$0.23	(\$0.08)	\$0.63	\$0.64
May	\$0.25	\$0.10	\$0.65	\$0.83
Jun	\$0.19	\$0.07	\$0.18	\$0.81
Jul	\$0.27	\$0.20	\$0.24	\$0.52
Aug	\$0.40	\$0.40	\$0.44	\$0.80
Sep	\$0.34	\$0.17	\$0.51	\$1.29
Oct	\$0.26	\$0.50	\$0.92	
Nov	\$0.14	\$0.94	\$0.76	
Dec	\$0.16	\$1.09	\$1.19	

Average Daily Price - SoCal Basis Only				
	2017	2018	2019	2020
Jan	\$0.02	(\$0.60)	\$0.45	\$0.26
Feb	(\$0.11)	(\$0.19)	\$4.11	(\$0.01)
Mar	(\$0.22)	(\$0.41)	\$0.34	(\$0.21)
Apr	(\$0.27)	(\$0.66)	(\$0.61)	(\$0.30)
May	(\$0.28)	(\$0.80)	(\$0.82)	(\$0.06)
Jun	(\$0.17)	(\$0.47)	(\$0.58)	\$0.03
Jul	(\$0.17)	\$1.15	\$0.05	(\$0.19)
Aug	\$0.02	\$0.89	\$0.23	\$0.17
Sep	(\$0.16)	(\$0.56)	\$0.14	\$0.09
Oct	(\$0.11)	(\$0.29)	\$0.21	
Nov	(\$0.11)	\$0.12	\$0.11	
Dec	\$0.27	\$0.93	\$0.79	

Texas

October 2020

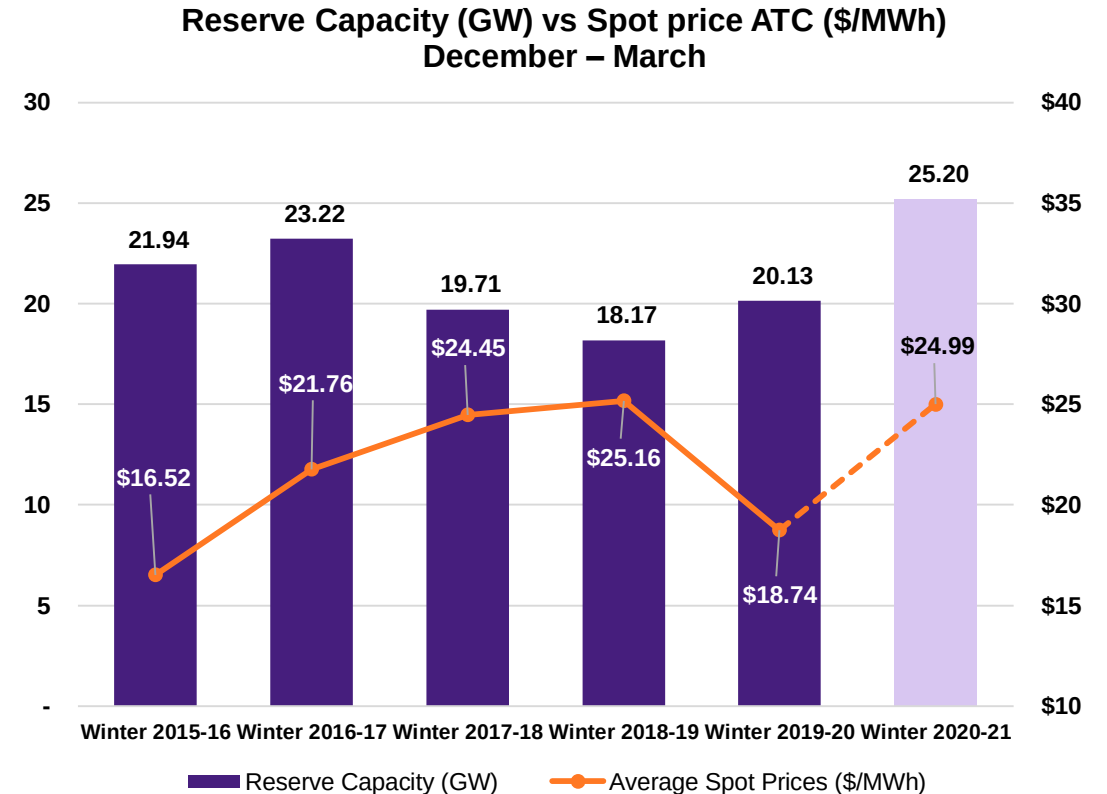
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Insight of the Month

ERCOT expects sufficient generation for upcoming winter 2020-2021



- According to its preliminary Seasonal Report (SARA), with 82.9 GW of total available resources and anticipated peak demand of 57.6 GW, ERCOT expects sufficient generation for winter 2020-2021 (Dec-Mar)
- Reserve Capacity for Winter 2020-2021, the difference between total available resources and anticipated peak demand, is predicted to be 25.2 GW
- In the past 5 years, reserve capacity and spot prices have shown an inverse correlation - Higher reserves resulted in lower spot prices for the winter period and vice versa
- During Winter 2018-2019, with 18.17 GW reserves, spot prices averaged \$25.16/MWh, the highest in the past 5 years. Last year, with 20.13 GW reserve capacity and flourishing natural gas supply, spot prices averaged \$18.74/MWh
- Reserve capacity for the upcoming winter is expected to be the highest in the past 5 years, however, with reduced natural gas supply year on year. Dec 20 – Mar 21 ATC energy forwards for North Hub have averaged \$25/MWh in the last 6 months



KEY TAKEAWAY: In Texas, natural gas is the primary driver of spot prices and this year due to COVID and plummeting natural gas demand, dry gas production across the US has fallen sharply year-over-year. As a result, even with 25.2 GW of expected reserves, energy forwards are factoring in relatively higher premiums to average ~ \$25/MWh.

ERCOT – Power Price Update

North Hub forwards volatility extended through September

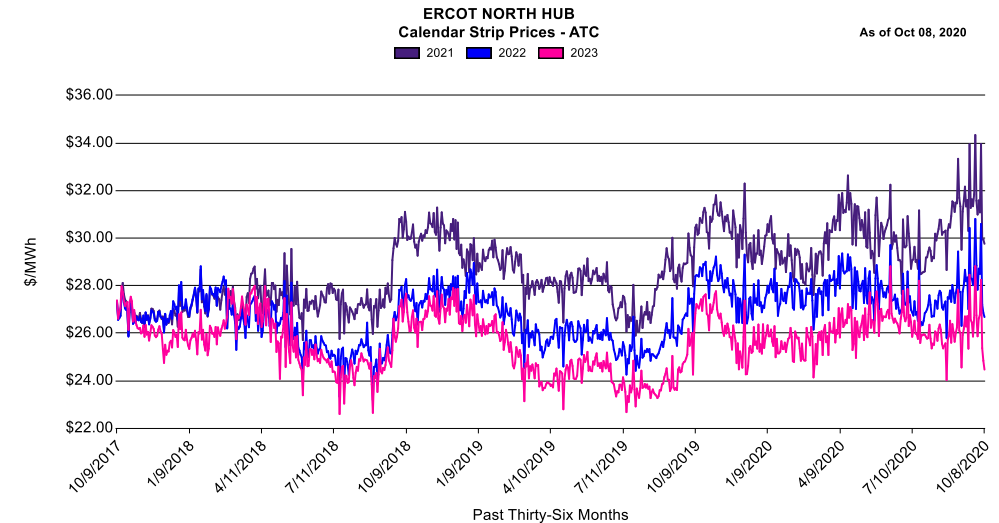


Where are forwards trending?

- Last month, ERCOT North Hub forwards experienced some large price swings – up to 13%, compared to August, on multiple occasions
- The price movements can be attributed to unexpected change in weather, varying demand and cutbacks on natural gas production as the state was hit by storms
- The delta between CY2021 and CY2023 continues to average ~ \$5/MWh, presenting a unique opportunity for budget-conscious and risk-averse customers to lock in a longer-term contract

Where are index prices trending?

- Day-Ahead prices averaged \$18.99/MWh in September, down 51% month-over-month
- Reduced demand due to COVID and increased solar capacity has resulted in September spot prices plummeting 76% compared to a year ago



Average Monthly Day Ahead LMP - North Hub									
	2012	2013	2014	2015	2016	2017	2018	2019	2020
Jan	\$22.91	\$26.19	\$36.71	\$25.00	\$19.13	\$22.99	\$37.59	\$24.32	\$16.96
Feb	\$21.45	\$25.12	\$51.30	\$23.93	\$15.29	\$19.45	\$21.77	\$20.86	\$17.72
Mar	\$23.31	\$30.73	\$49.91	\$26.24	\$16.86	\$21.23	\$22.61	\$28.10	\$23.34
Apr	\$27.42	\$33.81	\$40.29	\$23.62	\$18.35	\$21.41	\$23.52	\$22.99	\$19.91
May	\$23.59	\$33.05	\$35.77	\$23.79	\$17.91	\$23.42	\$35.31	\$23.98	\$18.23
Jun	\$32.53	\$34.96	\$39.73	\$24.32	\$23.16	\$25.89	\$30.21	\$25.18	\$18.92
Jul	\$29.94	\$33.06	\$36.02	\$29.46	\$26.80	\$30.65	\$78.97	\$29.78	\$22.99
Aug	\$39.22	\$35.84	\$39.33	\$45.30	\$29.83	\$26.83	\$31.60	\$126.52	\$39.21
Sep	\$27.64	\$33.44	\$33.87	\$24.58	\$26.25	\$23.35	\$27.30	\$79.88	\$18.99
Oct	\$27.75	\$29.73	\$34.69	\$20.82	\$24.01	\$21.41	\$30.03	\$28.00	
Nov	\$29.24	\$30.46	\$34.53	\$19.20	\$18.66	\$21.58	\$31.22	\$23.62	
Dec	\$25.81	\$35.42	\$26.57	\$17.44	\$25.15	\$20.95	\$30.40	\$18.73	
Avg	\$27.57	\$31.82	\$38.23	\$25.31	\$21.78	\$23.26	\$33.38	\$37.66	\$21.81

ERCOT – Gas Price Update

HSC Basis continued its downward trend for third consecutive month

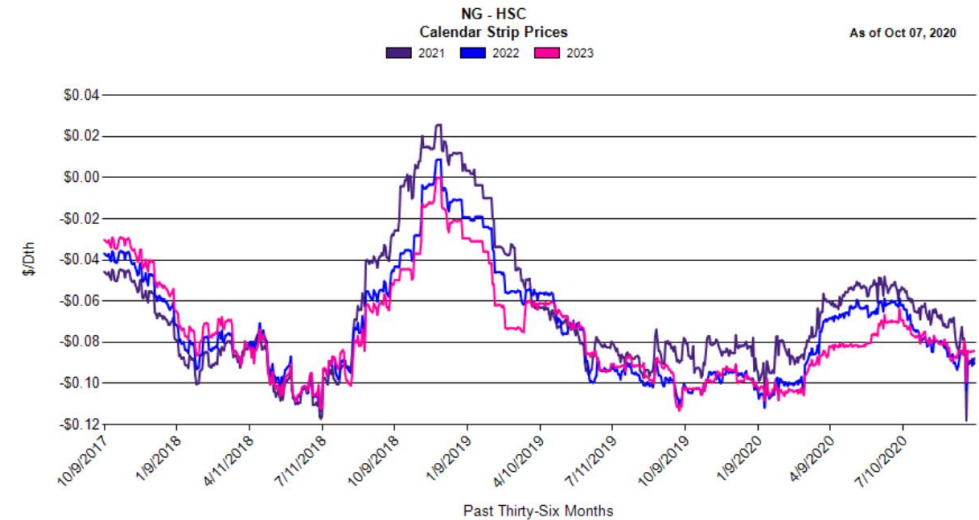


Where are forwards trending?

- After a brief rally in the second quarter of 2020, Houston Ship Channel (HSC) basis for CY 2021-23 has maintained a downward trend for three consecutive months.
- Month over month, basis fell 12.5% on average and was last seen trading between near \$(0.09)/Dth.

Where are index prices trending?

- HSC City-Gate prices dipped just below \$2/MMBtu in September, after eclipsing the level in August for the first time in 2020
- Through the first three quarters of 2020, prices have averaged \$1.81/MMBtu – which is 72 cents, or 28%, lower compared to the same period a year ago



Average of Daily Prices - Houston Ship Channel City-Gate									
	2012	2013	2014	2015	2016	2017	2018	2019	2020
Jan	\$ 2.66	\$ 3.28	\$ 4.52	\$ 2.92	\$ 2.21	\$ 3.22	\$ 4.06	\$ 3.02	\$ 1.91
Feb	\$ 2.46	\$ 3.24	\$ 6.07	\$ 2.68	\$ 1.89	\$ 2.79	\$ 2.63	\$ 2.67	\$ 1.85
Mar	\$ 2.11	\$ 3.76	\$ 4.75	\$ 2.69	\$ 1.68	\$ 2.88	\$ 2.67	\$ 2.88	\$ 1.69
Apr	\$ 1.88	\$ 4.14	\$ 4.58	\$ 2.56	\$ 1.86	\$ 3.12	\$ 2.83	\$ 2.56	\$ 1.66
May	\$ 2.38	\$ 4.06	\$ 4.45	\$ 2.80	\$ 1.85	\$ 3.24	\$ 2.81	\$ 2.53	\$ 1.70
Jun	\$ 2.42	\$ 3.81	\$ 4.61	\$ 2.71	\$ 2.46	\$ 3.05	\$ 3.00	\$ 2.29	\$ 1.56
Jul	\$ 2.90	\$ 3.61	\$ 4.05	\$ 2.82	\$ 2.71	\$ 2.97	\$ 2.90	\$ 2.24	\$ 1.70
Aug	\$ 2.85	\$ 3.40	\$ 3.92	\$ 2.74	\$ 2.73	\$ 2.86	\$ 3.01	\$ 2.10	\$ 2.23
Sep	\$ 2.82	\$ 3.63	\$ 3.92	\$ 2.61	\$ 2.93	\$ 2.94	\$ 2.99	\$ 2.45	\$ 1.99
Oct	\$ 3.23	\$ 3.63	\$ 3.72	\$ 2.35	\$ 3.08	\$ 2.93	\$ 3.48	\$ 2.18	
Nov	\$ 3.45	\$ 3.56	\$ 4.01	\$ 2.05	\$ 2.47	\$ 2.94	\$ 4.11	\$ 2.46	
Dec	\$ 3.30	\$ 4.21	\$ 3.27	\$ 1.92	\$ 3.47	\$ 2.76	\$ 3.92	\$ 2.08	
Avg	\$2.71	\$3.69	\$4.32	\$2.57	\$2.45	\$2.97	\$3.20	\$2.45	\$1.81

Mexico

October 2020

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Insights of the Month, Part 1

Federal government gives protection to CFE and PEMEX



President López Obrador issued a statement to the energy sector regulators (CRE, CENACE, CNH and CENAGAS) [in which he requested, through 17 points, to strengthen CFE and PEMEX](#).¹ A summary of the memo's 17 points is below:

1. **No increase in the price of fuel and electricity.**
2. **Achieve energy self-sufficiency.**
3. Do not export oil, nor import gasoline and diesel.
4. Increase crude production to 1.8 million barrels per day in 2020.
5. Rehabilitate 6 refineries.
6. Building of the La Cangrejera refining train.
7. **Reconstruction and construction of power plants to supply the peninsula (Baja California, Baja California Sur and Yucatan).**
8. **Promote the generation of hydroelectric plants.**
9. **PEMEX and CFE should recognize the contracts of the past administrations.**
10. If corruption exists, complaints will be made.
11. Eliminate the granting of subsidies to private parties.
12. **Privilege the dispatch of CFE and later private plants (without regard to economic merit).**
13. **CFE must apply a plan for the use and sale of gas acquired by the previous government and avoid excessive payments.**
14. Stop the granting of permits or concessions to private parties.
15. Support PEMEX in the energy distribution policy to avoid losing market share.
16. **In oil extraction, refining and electricity generation, association with private parties will not be ruled out if it does not affect the national interest.**
17. PEMEX and CFE must banish corruption, influence and impunity to make their administration more efficient.

Notes on acronyms used in this section: CFE: is, in English, the Federal Electricity Commission; CENACE: is in English, the National Center for Energy Control; CNH: National Hydrocarbons Commission; CENAGAS: National Center for Natural Gas Control

1. "Pide AMLO a reguladores privilegiar a Pemex y CFE," El Financiero, 8/4/2020

Insights of the Month, Part 2



The Mexican Institute for Competitiveness (IMCO) mentions that the support sought by President López Obrador to strengthen CFE would have as a consequence:

- a) Losses from investments in segments where CFE is inefficient
- b) More expensive electricity
- c) Violations of current legislation for the energy sector
- d) Non-compliance of Mexico with international commercial treaties
- e) Negative precedent for the investment environment in the country in a context of pressured public finances
- f) Violations of the right to the environment and the health of citizens. According to the IMCO, to prevent this situation, the autonomous regulatory bodies of the energy sector are an indispensable pillar for the proper functioning of the energy markets



KEY TAKEAWAY: Many of the points established by the President are anti-constitutional and violate the right of an open energy market, since it is intended to strengthen inefficient governmental institutions. These changes will translate to an increase in fuel prices and electricity rates for customers, as well as a loss of investment in the country and a reduction in jobs.

Monthly CFE¹ Rates

CFE rates decrease in October, both M-o-M & Y-o-Y

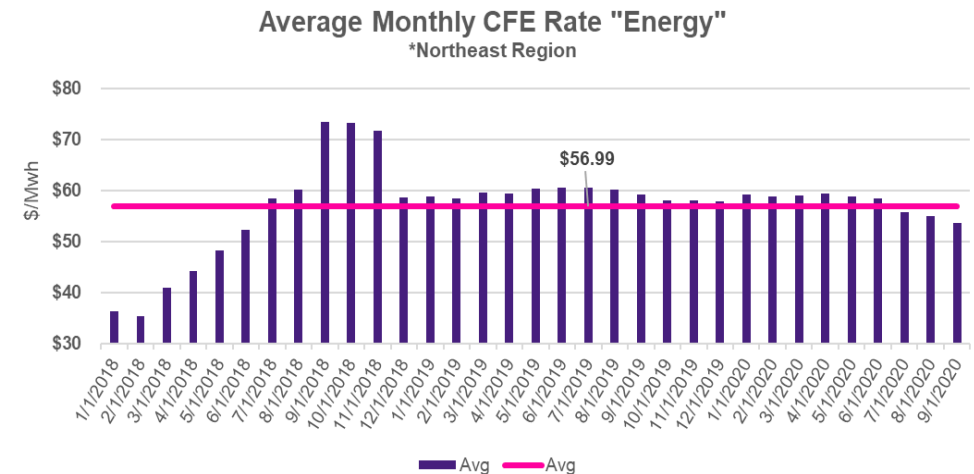


Where are CFE energy prices trending?

- Monthly GDMTH² energy prices were unchanged from the previous month and down ~7.45% YoY in the Northeast³ region
- The increase in CFE's rates was due to the increase in the price of fuel

Where are CFE capacity prices trending?

- Monthly GDMTH capacity prices were unchanged from the previous month and down ~6.1% YoY in the West⁴ region



Average Monthly CFE GDMTH Capacity- West*			
USD/MWh			
	2018	2019	2020
Jan	\$ 8,434	\$ 15,643	\$ 15,689
Feb	\$ 8,902	\$ 15,537	\$ 15,571
Mar	\$ 10,227	\$ 15,841	\$ 15,672
Apr	\$ 11,246	\$ 15,784	\$ 15,772
May	\$ 12,481	\$ 16,094	\$ 15,601
Jun	\$ 13,727	\$ 16,156	\$ 15,452
Jul	\$ 15,644	\$ 16,189	\$ 15,084
Aug	\$ 17,803	\$ 16,061	\$ 14,855
Sep	\$ 20,212	\$ 15,716	\$ 14,433
Oct	\$ 20,165	\$ 15,379	\$ 14,435
Nov	\$ 19,714	\$ 15,363	
Dec	\$ 15,676	\$ 15,357	
Avg	\$ 14,519	\$ 15,760	\$ 15,256

Note: CFE prices are issued in MXN/kWh, For publication this chart is presented in USD/MWh, for which an average annual exchange rate of \$22 MXN is used. This rate can change monthly.

¹ CFE is, in English, the Federal Electricity Commission

² GDMTH is the rate classification most used in medium voltage.

³ The Northeast region includes the states of Nuevo Leon and Tamaulipas.

⁴ The West region includes the states of Nayarit, Jalisco, Zacatecas, Aguascalientes, Colima, Michoacan, San Luis Potosí, Queretaro

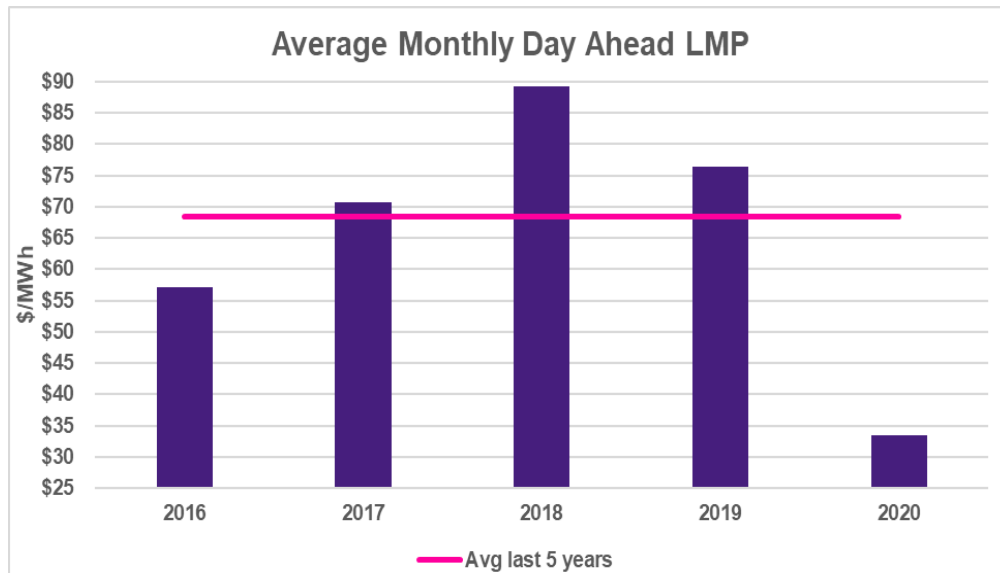
Average Monthly Day Ahead LMP

Prices rebound in August on seasonal trends



Where are index prices trending?

- Day Ahead LMPs averaged \$33.47/MWh in August, which is 25% higher M-o-M due to seasonal demand and increased fuel prices
- In Q3 2020, LMPs averaged \$51.49/MWh, down a staggering 44% compared to the same period ago when prices averaged \$92.77/MWh
- This is due to the rebound in industrial sector activity and increasing cooling demand



Average Monthly Day Ahead LMP USD/MWh					
	2016	2017	2018	2019	2020
Jan		\$ 46.36	\$ 60.47	\$ 61.59	\$ 29.62
Feb		\$ 47.03	\$ 67.99	\$ 78.43	\$ 31.70
Mar		\$ 53.59	\$ 64.59	\$ 81.47	\$ 27.04
Apr		\$ 72.16	\$ 78.05	\$ 92.96	\$ 21.69
May	\$ 56.49	\$ 77.63	\$ 108.53	\$ 96.22	\$ 28.85
Jun	\$ 64.42	\$ 103.41	\$ 116.31	\$ 84.62	\$ 36.24
Jul	\$ 68.73	\$ 76.93	\$ 125.08	\$ 83.11	\$ 41.14
Aug	\$ 58.22	\$ 91.57	\$ 137.61	\$ 92.77	\$ 51.49
Sep	\$ 63.43	\$ 73.22	\$ 103.18	\$ 87.93	
Oct	\$ 63.24	\$ 74.94	\$ 78.63	\$ 66.80	
Nov	\$ 40.17	\$ 74.19	\$ 69.15	\$ 54.97	
Dec	\$ 42.90	\$ 58.09	\$ 60.69	\$ 36.12	
Avg	\$57.20	\$70.76	\$89.19	\$76.42	\$ 33.47

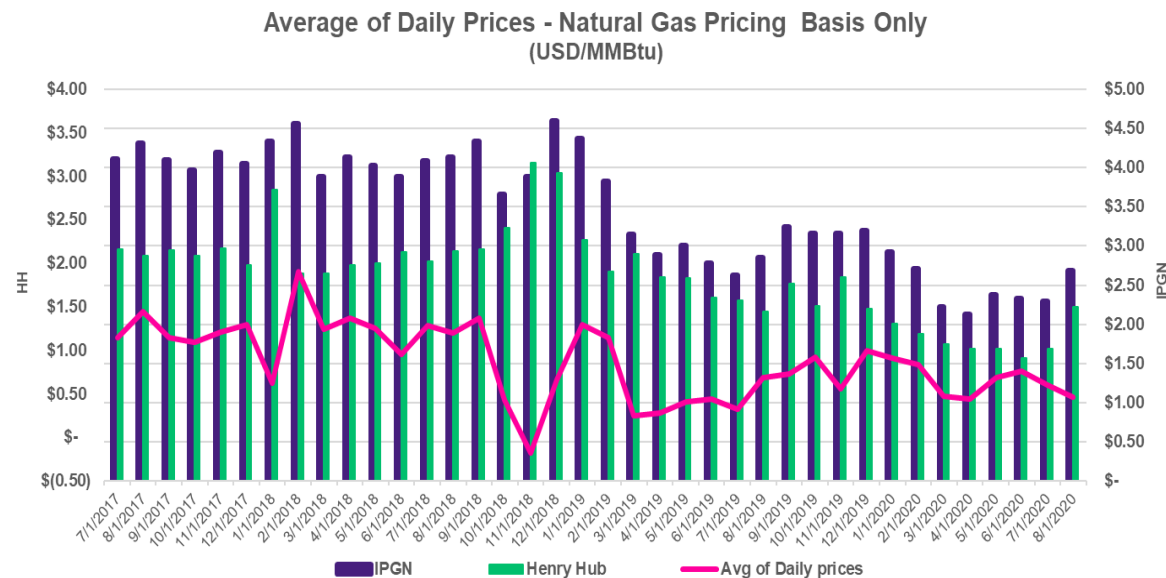
Source: S&P Global Platt and CENACE. The published average price considers the 9 regions of the country. In turn, the misalignment of information is due to its publication by CENACE.

Natural Gas Price Index (IPGN)¹



Where are index prices trending?

- NGPI daily prices averaged \$0.65/MMBtu in August – down ~22% M-o-M and ~32% Y-o-Y
- For August, the differential between the NGPI and Inside FERC Henry Hub Index averaged \$0.47/MMBtu – representing a 32% drop compared to a year ago



Average of Daily Prices - Natural Gas Pricing Basis Only				
	USD/Mmbtu			
	2017	2018	2019	2020
Jan		\$0.63	\$1.30	\$0.91
Feb		\$1.90	\$1.15	\$0.84
Mar		\$1.24	\$0.25	\$0.47
Apr		\$1.37	\$0.28	\$0.44
May		\$1.25	\$0.41	\$0.68
Jun		\$0.96	\$0.45	\$0.76
Jul	\$1.15	\$1.29	\$0.32	\$0.60
Aug	\$1.44	\$1.20	\$0.68	\$0.47
Sep	\$1.14	\$1.37	\$0.73	
Oct	\$1.10	\$0.43	\$0.92	
Nov	\$1.21	(\$0.18)	\$0.55	
Dec	\$1.29	\$0.67	\$1.00	
Avg	\$1.22	\$1.01	\$0.67	\$0.65

Source:
NGI, S&P
Global Platt