



Item 8: Independent Market Monitor (IMM) 2022 State of the Market Report for the ERCOT Electricity Markets

Carrie Bivens
VP, ERCOT IMM Director

Board of Directors Meeting

ERCOT Public
June 20, 2023

2022 Energy Prices

Average real-time prices fell more than 50% from 2021

- Because of the effects of Winter Storm Uri on 2021 prices
- Nearly triple the average prices in 2020
- This represents a real-time energy value for 2022 of \$32.2 billion.
- Contributors: higher natural gas prices, sustained hotter-than-normal summer conditions, Operating Reserve Demand Curve shift

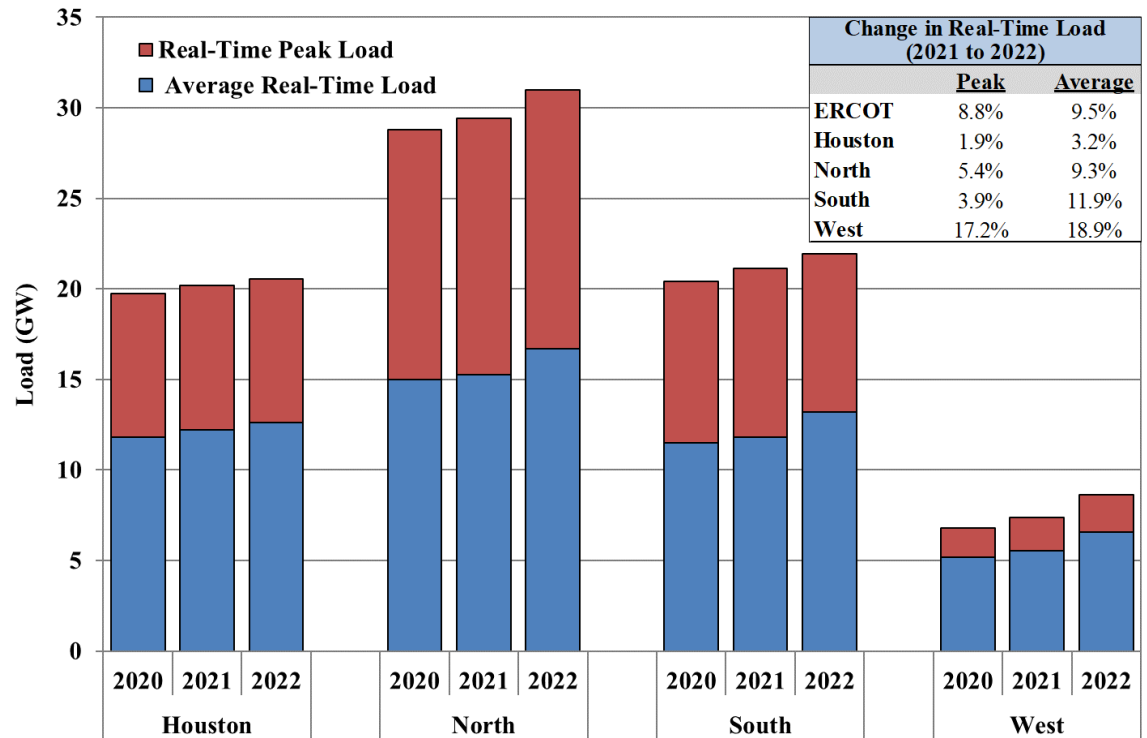
	2014	2015	2016	2017	2018	2019	2020	2021	2022
Energy Prices (\$/MWh)									
ERCOT	\$40.64	\$26.77	\$24.62	\$28.25	\$35.63	\$47.06	\$25.73	\$167.88	\$74.92
Houston	\$39.60	\$26.91	\$26.33	\$31.81	\$34.40	\$45.45	\$24.54	\$129.24	\$81.07
North	\$40.05	\$26.36	\$23.84	\$25.67	\$34.96	\$46.77	\$23.97	\$206.39	\$75.52
South	\$41.52	\$27.18	\$24.78	\$29.38	\$36.15	\$47.44	\$26.63	\$187.47	\$72.96
West	\$43.58	\$26.83	\$22.05	\$24.52	\$39.72	\$50.77	\$31.58	\$105.27	\$65.53
Natural Gas Prices (\$/MMBtu)									
ERCOT	\$4.32	\$2.57	\$2.45	\$2.98	\$3.22	\$2.47	\$1.99	\$7.30	\$5.84

Load Trends

Total ERCOT load increased in 2022

- Average load in ERCOT grew 9.5% from 2021
- The average load grew more than the peak load in all zones, especially in the South zone

Annual Load Statistics by Zone



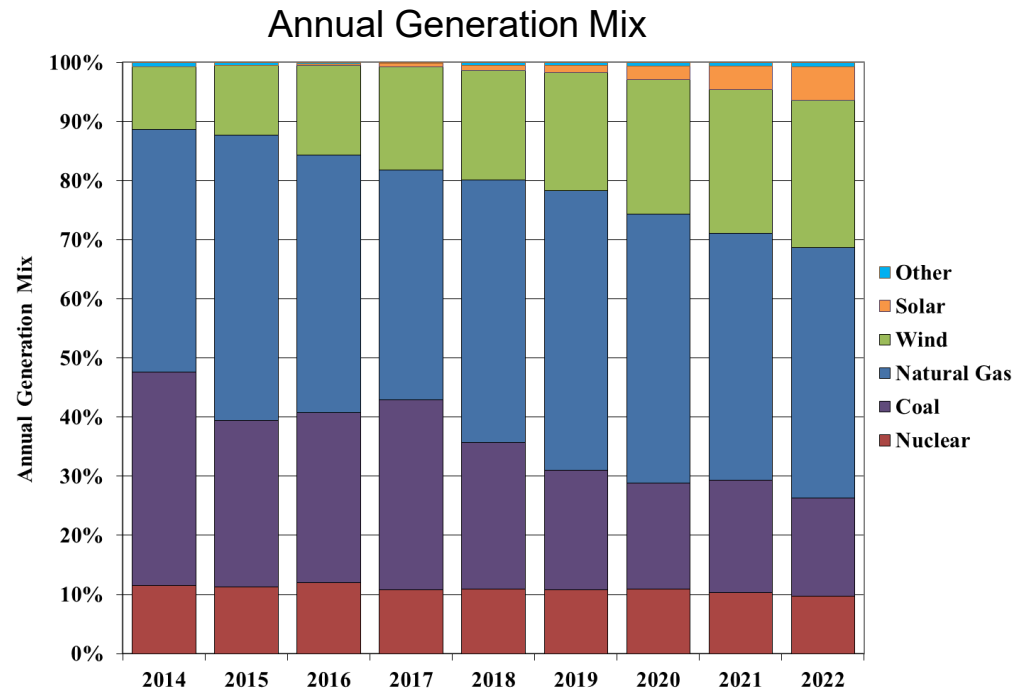
Supply Changes

Approximately 9,700 MW of new generation resources came online in 2022

- 3,100 MW of wind
- 4,200 MW of solar
- 1,700 MW of energy storage resources
- 700 MW of natural gas resources

The generation share from wind was almost 25% of the annual generation in 2022

- Solar contributed 5.6%
- Coal down from 19.0% in 2021 to 16.6% in 2022

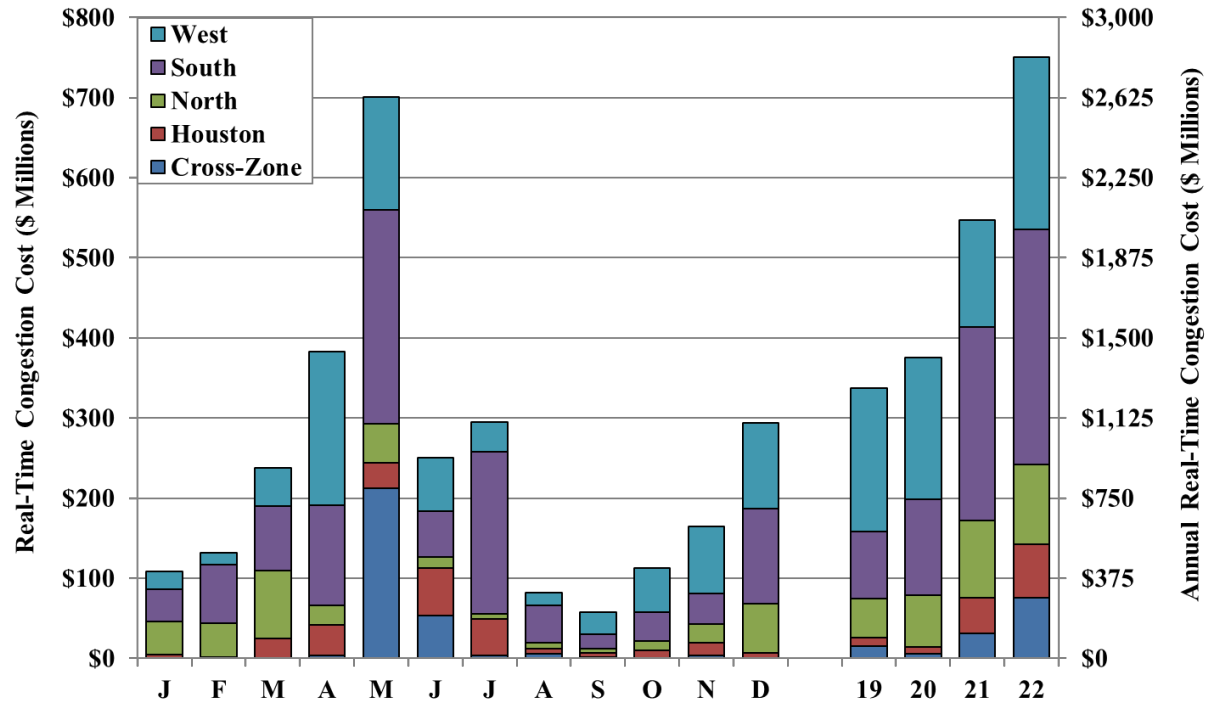


Transmission Congestion

Real-time congestion costs were up 37%, to \$2.8B

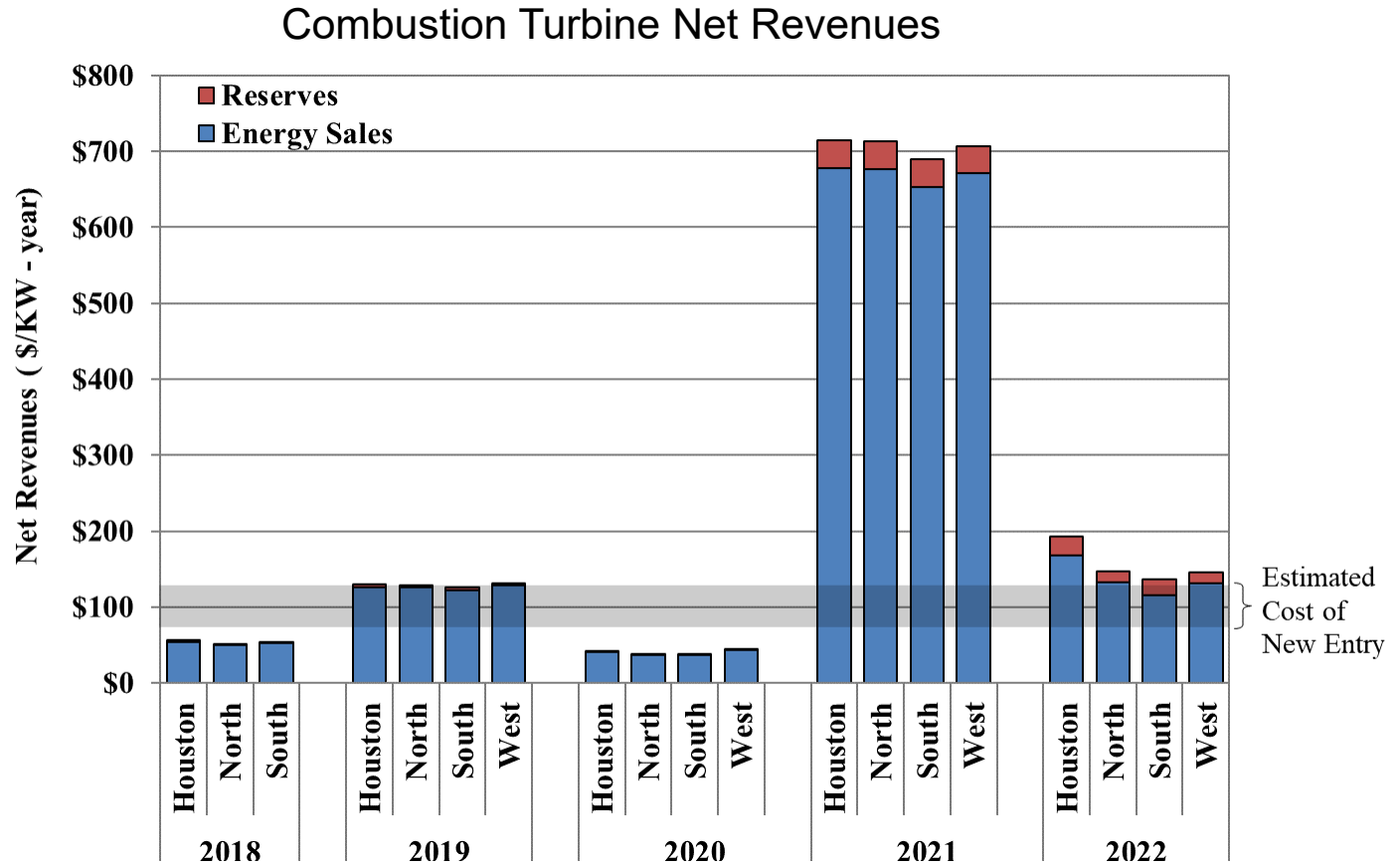
- More than \$700 million was incurred during May related to Houston congestion
- High gas prices
- GTC contribution up (\$640M, from \$400M in 2020)

Congestion Rent by Zone



Net Revenues

- Gross revenues minus production costs were above the estimated cost of new entry for a CT in all zones



Recommendations

- 5 new recommendations
- In addition, continue to prioritize implementation of RTC and single model for energy storage resources

SOM Number	Brief Description
<i>New Recommendations to Improve Market Performance</i>	
2022-1	Implement a multi-interval real-time market
2022-2	Institute 100% reliability unit commitment claw-back
2022-3	Allow transmission reconfigurations for economic benefits
2022-4	Change the linear ramp period for ERS summer deployments to 3 hours
2022-5	Change historical lookback period for ORDC mu and sigma calculations
<i>Additional Recommended Market Improvements from Prior Years</i>	
2021-1	Eliminate the “small fish” rule
2021-2	Implement an uncertainty product
2021-3	Reevaluate net metering at certain sites
2020-3	Implement smaller load zones that recognize key transmission constraints
2020-4	Implement a Point-to-Point Obligation bid fee
2019-1	Exclude fixed costs from the mitigated offer caps
2019-2	Price ancillary services based on the shadow price of procuring each service
2015-1	Modify the allocation of transmission costs by transitioning away from the 4 Coincident Peak (CP) method.

Conclusion

Full 2022 State of the Market Report can be found [here](#)