LBNL concluded that substantial variables correlated with electricity prices included:

- **Transmission, Distribution, and Business Operation Costs:** Increased spending in transmission and distribution infrastructure has contributed to retail price increases, with significantly higher impacts in CAISO, ISO-NE, and NYISO. For California, wildfire costs are included in the distribution category; storms and wildfires have significantly increased retail electricity prices in some states. Drivers of distribution and transmission investment include expansion; adaptation, hardening, and resilience; and replacement initiatives. Growth in costs has partially been driven by elevated equipment prices above the pace of inflation, due to supply chain constraints.
- **Wind and solar growth under state Renewable Portfolio Standard programs:** State policies requiring renewable energy deployment were correlated with higher prices. Wind and solar growth that were not subject to the same policies did not have a measurable impact on prices. In particular, net metering (NEM) solar penetration was correlated with increased prices, with an impact as high >2 cents/kWh in California. This is consistent with E3's assessment of cost shift associated with NEM solar, as many utility rate structures do not charge NEM customers the fair share of the fixed infrastructure costs required to serve them.
- **Natural Gas Dependency:** Electricity prices are sensitive to natural gas prices, depending on the amount of gas-dependent generation within each state. Particularly between 2019-2025, natural gas prices fluctuated substantially with the Ukraine-Russia war, causing similar fluctuations in retail electricity prices.
- **Load Growth:** In most states, load growth was associated with declining average retail prices between 2019-2025, with prices increasing in states with load decline. In general, load growth can spread fixed costs over large, high utilization customers as discussed in Rate Design Primer. However, PJM was the exception to this trend, with load growth being attributed as a factor in PJM's recent capacity price increases. The impact of load growth on PJM capacity prices is further discussed in the PJM 2025/2026 Case Study section.

LBNL's study offers a valuable overview of macro-trends in electricity prices and highlights correlations between prices and specific variables. Focusing on retail electricity prices is important because they reflect the combined effect of multiple cost factors as discussed above. By contrast, isolating a single component, such as locational marginal prices, offers a much narrower and limited perspective and can be highly sensitive to localized factors, such as fuel price volatility, congestion and weather.[50]

The Charles River Associates report found a similar trend. In analyzing recent average US electricity price trends, prices have increased by 30% over the last five years (inclusive of inflation), but these price increases have primarily been observed in states in the Northeast and California.[51] To determine the cause of price increases in the Northeast and California, CRA compiled data from utility annual financial reports. In California, CRA found that price increases have primarily been driven by increases in wildfire spending and their Net Energy Metering rooftop solar program. In the Northeast, price increases have primarily been driven by purchased power and operations and maintenance (O&M) costs, specifically for utilities that do not own generation. As noted in the primer, customers in wholesale markets are subject to higher volatility than customers of vertically integrated utilities. For example, in the Northeast, retail customers in Pennsylvania and Maryland faced the highest rate increases, in part due to PJM capacity price increases, whereas customers of Dominion Energy (a utility that owns generation) only experienced a minor rate impact.

[50] Saul, J., Nicoletti, L., Pogkas, D., Bass, D., & Malik, N. (2025, September 29). AI data centers are sending power bills soaring [Interactive graphic]. Bloomberg. https://www.bloomberg.com/graphics/2025-ai-data-centers-electricity-prices/

[51] DeCourcey, M., & Saraswat, M. (2026, February 2). Retail rate trends in the US (Report prepared for the Edison Electric Institute). Charles River Associates. https://media.crai.com/wp-content/uploads/2026/02/02092628/Retail-rate-trends-in-the-US.pdf