

# Retail Electricity Prices on the Rise

- The wave of “electricity restructuring” since the mid-1990s has failed to lower consumer electricity bills.<sup>1</sup>
- Despite flattened electricity demand,<sup>2</sup> retail prices for residential customers have continued to rise (**Figure 1**) while commercial and industrial retail prices stabilized after 2010.
- Other residential energy costs fell significantly (**Figure 2**) providing savings to households.

Figure 1 - Average Electricity Retail Price in U.S. 50 States + D.C.

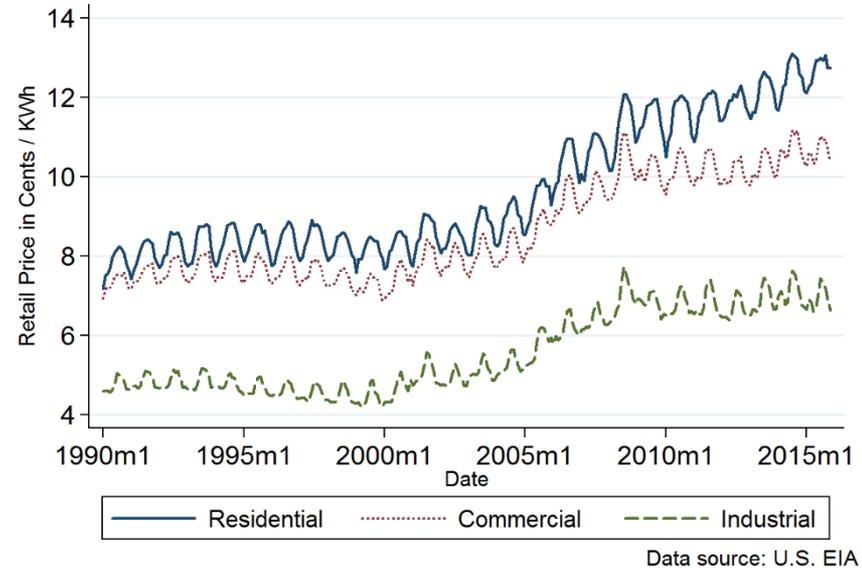
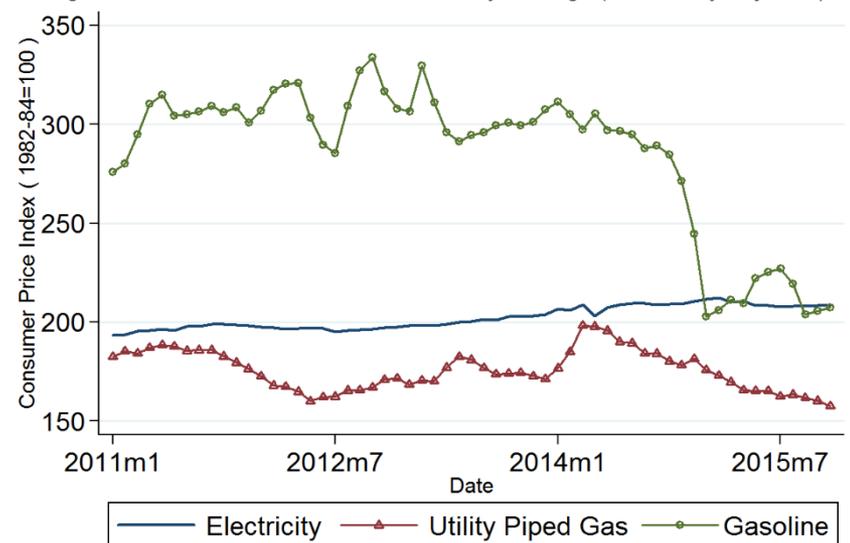


Figure 2 - Consumer Price Index - U.S. City Average (Seasonally Adjusted)



## Sources used in this snapshot:

1. Borenstein, Severin and James Bushnell (2015). “The U.S. Electricity Industry after 20 Years of Restructuring.” UC Berkeley Energy institute at Haas Working Paper 252R.
2. U.S. EIA (2016). “[Total electricity sales fell in 2015 for 5th time in past 8 years.](#)” Today in Energy, dated March 14, 2016.
3. Su, Xuejuan (2015). “Have customers benefited from electricity retail competition?” Journal of Regulatory Economics: 47: 146-182.
4. U.S. EIA (2015). “[Growth in residential electricity prices highest in 6 years, but expected to slow in 2015.](#)” Today in Energy, dated March 16, 2015.
5. Pfund, Nancy and Anand Chhabra (2015). “Renewables are driving up electricity prices. Wait, what?” DBL Investors.
6. Tra, Constant I. (2016). “Have renewable portfolio standards raised electricity rates? Evidence from U.S. Electric Utilities.” *Contemporary Economic Policy* 34(1): 184-189.



# Changes in Retail Prices Differ Across States

Our **preliminary** estimates suggest that prices increase more significantly in some states than in others (**Table 1**).

- **The top five** states all have competitive wholesale markets and relatively aggressive targets for renewables; four of them have retail competition.
- **Only two** of the bottom five states are part of competitive wholesale markets, and have relatively low targets for renewables.

**Table 1: Changes in Residential Retail Prices Relative to U.S. Average (Cents/KWh)**

State: Changes in Rates <sup>1</sup>	Wholesale Electricity Market <sup>2</sup>	Residential Retail Choice <sup>3</sup>	Renewable Portfolio <sup>4</sup>
<b>TOP FIVE STATES</b>			
<b>NY</b> 5.57***	NYISO	Yes	29% by 2015
<b>CA</b> 5.07***	CAISO	No	50% by 2030
<b>TX</b> 3.07*	ERCOT	Yes	5,880 MW by 2015
<b>CT</b> 2.21*	ISO-NE	Yes	27% by 2020
<b>NH</b> 1.68	ISO-NE	Yes	24.8% by 2025
<b>BOTTOM FIVE STATES</b>			
<b>ID</b> - 4.94***	N/A	No	No
<b>ND</b> - 4.68***	MISO	No	10% by 2015
<b>WV</b> - 4.40***	PJM	No	No
<b>MT</b> - 4.23***	N/A	No	15% by 2015
<b>OR</b> - 4.21***	N/A	No	25% by 2025

Note: 1. We estimate the average changes in residential retail electricity price in each state relative to U.S. average between 1990 and 2015. \*\*\*  $p < 1\%$ , \*  $p < 10\%$ . 2. [ISO/RTO Council](#) 3. [American Coalition of Competitive Energy Suppliers](#) 4. [DSIRE](#) (Renewable Portfolio Standard Policies as of Oct 15).



# Retail Prices Buck the Wholesale Price Trend

Retail prices have also **decoupled** from wholesale prices, while the latter follows the natural gas price closely.

- In Texas (**Figure 3**), the correlation between wholesale and residential retail electricity prices is near zero between 2011 and 2015, and the correlation between wholesale electricity and natural gas prices is around 42%.
- In New York (**Figure 4**), this wholesale electricity and natural gas price correlation is at 93.6% but retail prices only correlate with wholesale prices at 38%.

Studies have also shown that retail competition does not seem to deliver lower electricity prices to retail customers in the long run.<sup>3</sup> **Why??**

Figure 3 - Electricity Price vs Natural Gas Price in Texas since 2011

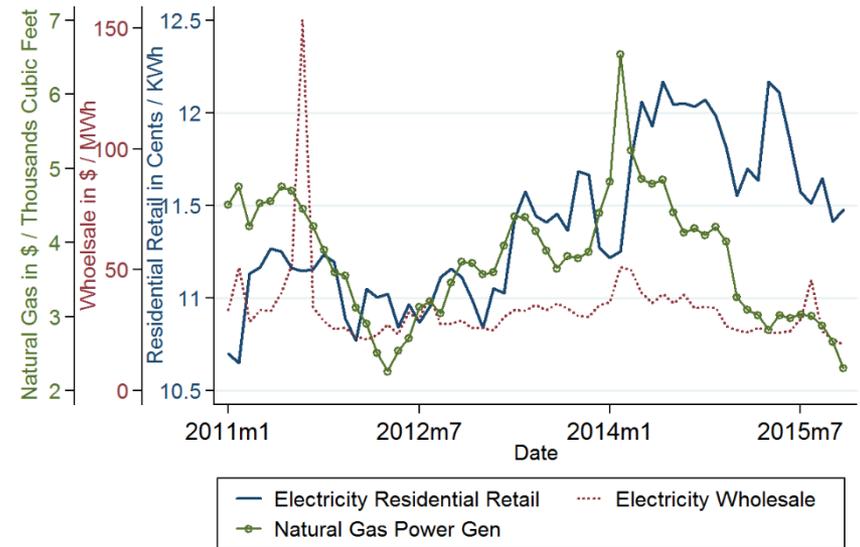
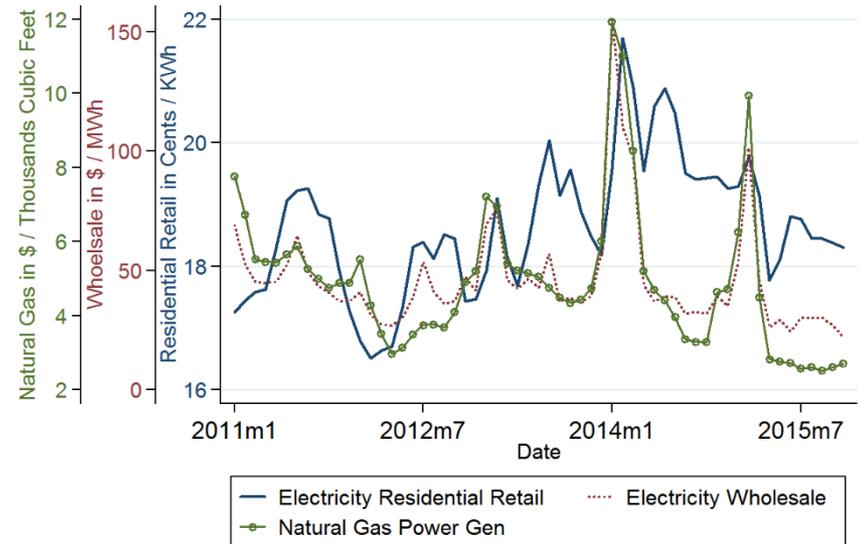


Figure 4 - Electricity Price vs Natural Gas Price in New York since 2011



Data Source:

Electricity residential retail and natural gas – U.S. EIA

Electricity Wholesale – SNL



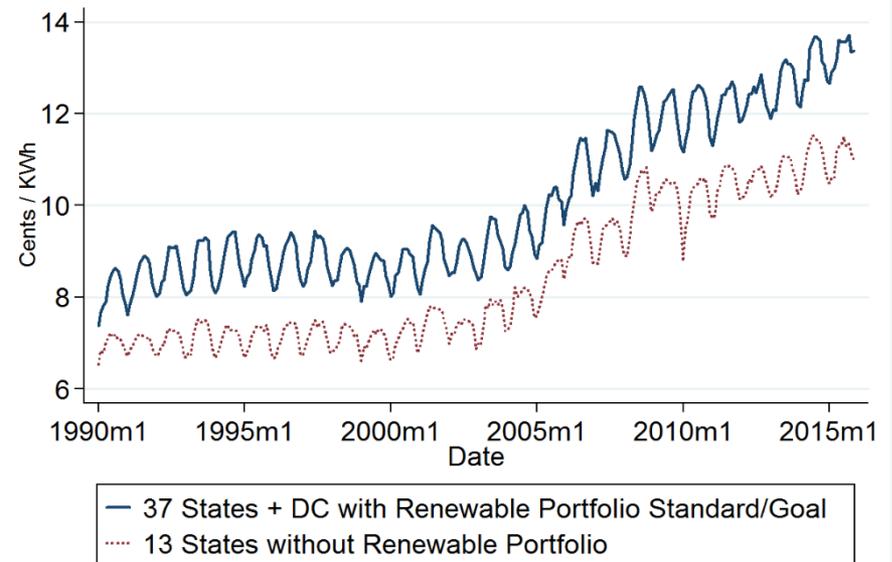
# Are Renewables Driving up Retail Prices?

The EIA noted that “rising requirements to generate electricity from renewable energy sources” may contribute to higher retail prices.<sup>4</sup>

Residential prices have been increasing at a faster pace in states with renewable energy mandates than those without one (**Figure 5**). Also residential prices increased more than commercial and industrial prices.

Recent studies provide inconsistent or sometimes contrary evidence on increasing renewable energy and its cost impacts to retail prices.<sup>5,6</sup>

Figure 5 - Average Retail Residential Prices by State Renewable Portfolio Status



CEE research provides clues to some of the drivers in some states: aggressive RPS programs that require additional investment in T&D, forced cycling of thermal plants, low natural gas prices eroding incentives to invest in new capacity, and out-of-market uplift payments. We are investigating:

- **Key factors that drive up retail electricity prices; and through what channel or mechanism.**
- **If this trend of increasing retail prices will be sustained.**

Contact [CEE](#) if you want to get involved.