

Retail Electric Rates in Deregulated and Regulated States

2017 UPDATE



PREPARED BY: PAUL ZUMMO, DIRECTOR, POLICY RESEARCH AND ANALYSIS

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Retail Electric Rates in Deregulated and Regulated States: 2017 Update

Data from the U.S. Department of Energy, Energy Information Administration show that between 1997 and 2017, increases in retail electric prices in states with deregulated electric markets and regulated states were about the same, though customers in regulated states saw a slightly higher percentage increase in rates.

This report calculated the weighted average retail rates for regulated and deregulated states.

Deregulated states allow end-use customers to choose their electricity provider (retail choice) and no longer have rate caps or other forms of regulatory protections that limit customers' exposure to wholesale market prices. Deregulated states are California, Connecticut, the District of Columbia, Delaware, Illinois, Massachusetts, Maryland, Maine, Michigan, Montana, New Hampshire, New Jersey, New York, Ohio, Pennsylvania, Rhode Island, and Texas. Regulated states have traditional rate regulation.

In most deregulated states, investor-owned utilities (IOUs) sold their electric generating facilities as part of the implementation of retail choice. While the majority of industrial and large commercial customers purchase electricity from an alternative supplier, residential customer participation in retail choice has fluctuated in recent years. In most retail choice states, residential customers are still served predominantly by the incumbent utility. The distribution utility purchases power from the wholesale market to serve the remaining customers not purchasing from an alternative supplier. This is generally called default or provider-of-last-resort service. Texas is unique in that all customers in retail choice regions of the state must purchase from an alternative supplier. Except for part of Montana, all of the retail choice states are located in regions where wholesale electricity prices are set through centralized wholesale markets run by regional transmission organizations (RTOs) and Independent System Operators (ISOs).

Table 1 and Figure 1 cover twenty years of experience with retail choice programs. The starting year, 1997, represents the last year with essentially no retail choice activity. The decline in rates in deregulated states in 1998 and 1999 most likely reflects the effect of mandated rate decreases in retail choice states, but the decline was short-lived as rates began rising again in 2000.

Rates for both deregulated and regulated states increased steadily for the first half of the previous decade, then increased dramatically in deregulated states between 2005 and 2006 as more rate caps came off and natural gas prices increased. Rates in regulated states also increased, though at a slightly slower pace. Due to the decline in natural gas prices, rates in deregulated states declined from 2008-2012; however, rates in deregulated states began increasing again after 2012,

and have remained basically flat since 2014. Though not perfectly correlated, rate trends in deregulated states have generally tracked with shifts in the natural gas spot price.

All rates have remained relatively steady since 2014, though there was an increase across all categories from 2016 to 2017.

Table 1. Average Revenue per Kilowatt-hour: Deregulated vs. Regulated States

	Deregulated States	Regulated States	National
	(in cents per kilowatt-hour)		
1997	8.1	5.8	6.8
1998	7.8	5.8	6.7
1999	7.7	5.8	6.6
2000	8.0	5.9	6.8
2001	8.6	6.2	7.3
2002	8.5	6.2	7.2
2003	8.8	6.4	7.4
2004	8.9	6.6	7.6
2005	9.6	7.0	8.1
2006	10.7	7.5	8.9
2007	11.0	7.7	9.1
2008	11.7	8.3	9.7
2009	11.5	8.5	9.8
2010	11.5	8.6	9.8
2011	11.3	8.8	9.9
2012	11.0	8.9	9.8
2013	11.3	9.1	10.1
2014	11.8	9.4	10.4
2015	11.8	9.4	10.4
2016	11.5	9.3	10.3
2017	11.8	9.6	10.5

Difference, in cents per kilowatt-hour

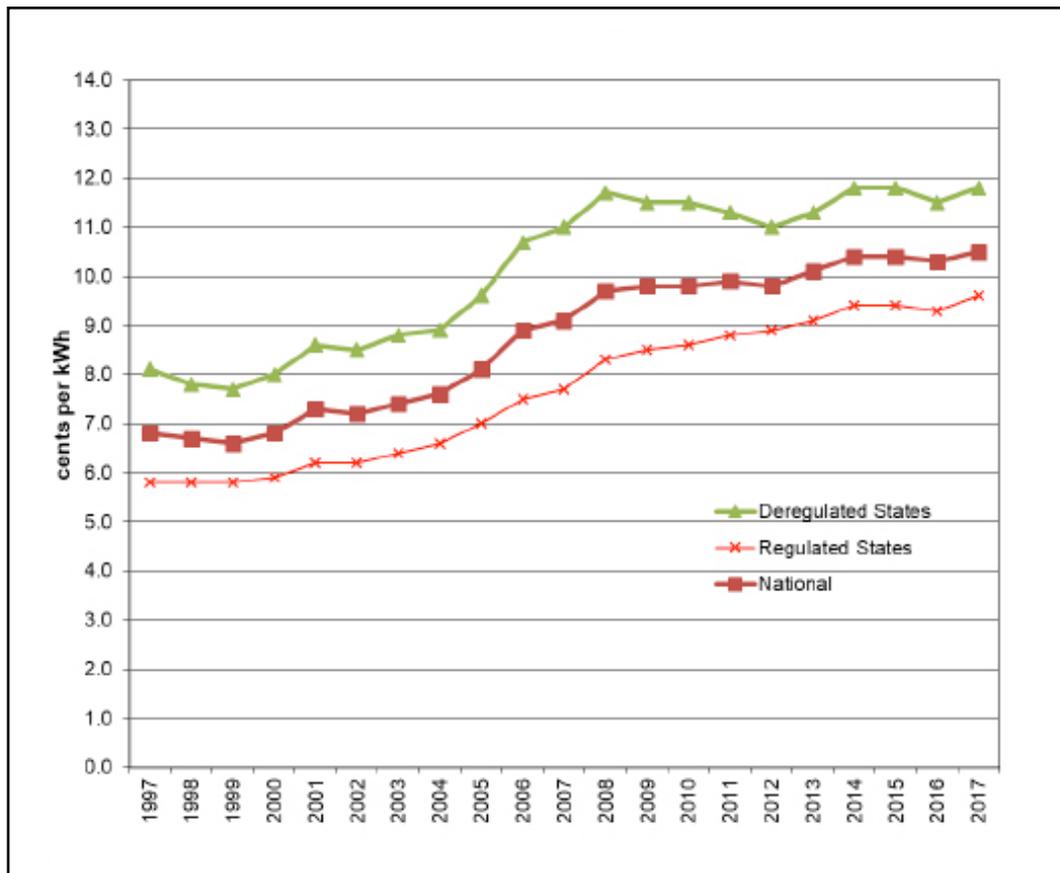
1997-2017	3.7	3.8	3.7
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Source: Energy Information Administration, Forms EIA-861 and EIA-826.

States that implemented retail choice electric plans were generally high cost states, and the hope was that competition by electric suppliers would result in lower rates. In 1997, the states in the deregulated category had weighted average rates

that were 2.3 cents per kWh above rates in the regulated states (8.1 vs. 5.8). After 20 years, that gap has narrowed by one-tenth of a cent to 2.2 cents per kWh (11.8 vs. 9.6).

Figure 1. Average Electricity Rates, Deregulated vs. Regulated States, 1997-2017



Though the gap has narrowed in both percentage and nominal terms, the original promise of greatly reduced prices has not materialized. Moreover, most of the gains achieved in deregulated states has been in the commercial and industrial sectors. While a majority of commercial and industrial customers in deregulated states have chosen alternative suppliers, most residential customers have not.

As shown in Table 2, residential rates have increased by the same amount since 1997 in both regulated and deregulated states.

Table 2. Residential Revenue per Kilowatt-hour: Deregulated vs. Regulated States

	Deregulated States	Regulated States	All States Combined
	(in cents per kilowatt-hour)		
1997	10.1	7.2	8.4
1998	9.7	7.2	8.3
1999	9.5	7.2	8.2
2000	9.6	7.3	8.2
2001	10.0	7.5	8.6
2002	9.8	7.5	8.4
2003	10.1	7.7	8.7
2004	10.3	8.0	8.9
2005	11.0	8.3	9.4
2006	12.4	9.0	10.4
2007	12.8	9.2	10.7
2008	13.4	9.8	11.3
2009	13.6	10.1	11.5
2010	13.6	10.1	11.5
2011	13.4	10.5	11.7
2012	13.4	10.8	11.9
2013	13.8	10.9	12.1
2014	14.3	11.3	12.5
2015	14.5	11.3	12.7
2016	14.3	11.3	12.5
2017	14.6	11.7	12.9
Difference, in cents per kilowatt-hour			
1997-2017	4.5	4.5	4.5

Source: Energy Information Administration, Forms EIA-861 and EIA-826.

State and Regional Trends for Deregulated States

NEW ENGLAND

Five of the 15 deregulated states are in the footprint of the New England RTO (known as ISO-New England). Table 3 shows that rates for all five states were already well above the national average in 1997. Over the 20-year period, all states except Maine experienced rate increases above the national average, while rates in Connecticut have increased at double the rate of the national average. Rates in these states declined between 2008 and 2012, most likely due to steep drops in natural gas prices, as the New England region relies heavily on natural gas for generation. Rates began increasing in 2013, and have since generally followed trends in the national average.

Table 3. ISO - New England State Average Customer Rates, in cents per kWh

	<u>1997</u>	<u>2017</u>	<u>Difference</u>
Connecticut	10.5	17.6	7.1
Maine	9.5	12.9	3.4
Massachusetts	10.4	16.1	5.7
New Hampshire	11.6	16.2	4.6
Rhode Island	10.7	16.4	5.7
National Average	6.8	10.5	3.7

MID-ATLANTIC AND NEW YORK

Four retail choice states and the District of Columbia are in the PJM RTO, and the state of New York comprises the New York RTO (known as NYISO). Table 4 shows that retail rates in three of the states increased more than the national average between 1997 and 2017, while rates in New York increased at almost the same rate. Rates in Pennsylvania and New Jersey have increased less than the national average, though most Pennsylvania customers were still subject to rate caps until 2011. Rates for this state increased slightly as the rate caps came off in 2010 and 2011.

Table 4. Eastern PJM and NYISO State Average Customer Rates, in cents per kWh

	<u>1997</u>	<u>2017</u>	<u>Difference</u>
Delaware	7.0	11.0	4.0
District of Columbia	7.4	11.8	4.4
Maryland	7.0	12.0	5.0
New Jersey	10.5	13.4	2.9
Pennsylvania	8.0	10.2	2.2
New York	11.1	14.8	3.7
National Average	6.8	10.5	3.7

State and Regional Trends for Deregulated States

MIDWEST

Utilities in two of the three retail choice states in the Midwest operate in both PJM and the Midcontinent ISO (MISO). While Michigan's rates increased more than the national average, Illinois and Ohio's rates increased less than the national average. Ohio is located within PJM. Commonwealth Edison, which serves over 60 percent of the load in Illinois, is in PJM, while the rest of utilities in Illinois and almost all of Michigan are in MISO. Rate caps in Illinois expired after 2006, and the state implemented an auction process to procure supply.

Unlike IOUs in most retail choice states, Michigan utilities did not sell their generating assets, and consequently only depend on wholesale power markets for a portion of customers' power needs. Under the terms of a 2008 law, participation in retail choice programs is capped at ten percent of an IOU's retail sales. Almost no residential load in Michigan is served by an alternative supplier.

Ohio utilities initially had been subject to transitional rate regulation and were required to offer customers a rate approved by the Public Utilities Commission of Ohio (PUCO) under a cost-plus-based electricity plan. Beginning in 2012 a large share of IOU load was bid at competitive auctions, and most customers had switched to alternative suppliers. Because a large portion of Ohio ratepayers are now directly exposed to wholesale market prices, Ohio is considered a deregulated state.

Table 5. Midwest State Average Customer Rates, in cents per kWh

	<u>1997</u>	<u>2017</u>	<u>Difference</u>
Illinois	7.7	9.3	1.6
Michigan	7.0	11.4	4.4
Ohio	6.3	9.7	3.4
National Average	6.8	10.5	3.7

WEST

Only two western states implemented retail choice: California, which comprises the California ISO, and Montana. Both states have limited retail choice programs, which are applicable almost exclusively to large commercial and industrial customers.

Following the California energy crisis in 2000-2001, retail choice was suspended in the state, and the only customers that could choose their providers were those who were on retail choice plans at the time of the suspension. An October 2009 law allowed retail choice for commercial and industrial customers up to the level achieved prior to the suspension of retail choice, and in April 2010, the state Public Utilities Commission set the level at 11 percent of total retail sales. The state's rates have increased significantly since 1997.

Montana is the only retail choice state not entirely in an RTO, but the state's IOU sold off all its generation, so the utility must purchase power in wholesale power markets, including RTO-operated markets. Montana enacted a law in 2007 to end retail choice for all but large customers with more than 5 megawatts of load and those customers on retail choice plans as of October 2007.

Table 6. Western State Average Customer Rates, in cents per kWh

	<u>1997</u>	<u>2017</u>	<u>Difference</u>
California	9.5	16.1	6.6
Montana	5.2	9.0	3.8
National Average	6.8	10.5	3.7

State and Regional Trends for Deregulated States

TEXAS

Texas experience with deregulation is somewhat unique. Retail choice began in 2002 in the ERCOT portion of the state. Major IOUs were required to offer retail choice and to break up their business services. All end-use customers in the state are served by Retail Electric Providers, and thus, IOUs in the ERCOT region no longer report sales or revenue to the Energy Information Administration. Public power utilities and rural electric cooperatives were given the option to offer retail choice, but only one, Lubbock Power & Light, is planning to offer retail choice to its customers.

Rates in Texas increased dramatically in the wake of retail choice implementation. In 2002, the average retail rate was 6.6 cents, and by 2008 rates had increased to 11 cents. Since 2008, rates have consistently declined each year, and had fallen to 8.3 cents in 2016, before increasing again to 8.6 cents per kWh in 2017.

Table 7. Average Customer Rates in Texas, in cents per kWh

	<u>1997</u>	<u>2017</u>	<u>Difference</u>
Texas	6.2	8.6	2.4
National Average	6.8	10.5	3.7

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2541 Crystal Dr.
Arlington, VA 22202
202/467-2900

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