Retail Electric Rates in Deregulated and Regulated States: 2016 Update



































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The U.S. Department of Energy, Energy Information Administration (EIA) data show that between 1997 and 2016, increases in retail electric prices in states with deregulated electric markets and regulated states were about the same, though with a slightly higher percentage increase in regulated states.

The deregulated category includes states with retail choice programs. These 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. The regulated category includes those states with traditional rate regulation.

In previous reports, Texas had been excluded from the deregulated category because the portion of the state located in the Electric Reliability Council of Texas (ERCOT) – which represents most of the state – is not subject to wholesale price regulation under the Federal Energy Regulatory Commission (FERC). Texas's rates were thus excluded entirely from the report. To be consistent with general electric industry practices, Texas has been added to the list of deregulated states. Therefore, the data for deregulated states dating back to 1997 will be slightly different than what has been published in previous reports.

Weighted average retail rates for each category were calculated by dividing total annual revenue from sales to consumers in each category by total annual sales to consumers.

In most deregulated states, investor-owned utilities (IOUs) sold off their electric generating facilities as part of the implementation of the retail choice regime. Over the past few years, the percentage of customers purchasing from an alternative supplier has increased, and in over half of retail choice states a majority of total load is served by an alternative supplier, though residential load in all but a handful of states is 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).

The following chart and graph cover nineteen years of experience with retail choice programs. 1997 was chosen as the starting year as it 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 before decreasing again in 2016. Though not perfectly correlated, rate trends in deregulated states have generally tracked with shifts in the natural gas spot price.

All rates have remained generally flat since 2013. Rates in both categories increased by two-tenths of a cent, and overall rates fell across the board between 2015 and 2016.

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

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

		Deregulated <u>States</u> (in cen	Regulated <u>States</u> ts per kilowat	t-houi	National r)
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
Difference, in cents per kilowatt-hour						

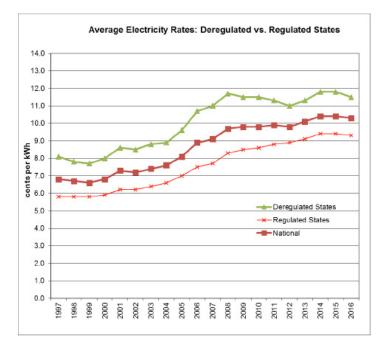
1997-2016

3.4

3.5

3.5

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 19 years that gap has narrowed by one-tenth of a cent (11.5 vs. 9.3).



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. As alluded to above, while a majority of commercial and industrial customers in most of the deregulated states have chosen alternative suppliers, the majority of residential customers have not. Consequently, the rate differential between regulated and deregulated states has decreased by a tenth of a cent since 1997, while the residential rate gap has increased by 0.2 cents, and the commercial and industrial rate gaps have decreased by half a cent and .4 cents respectively.

Difference in Revenue per Kwh, in cents: Deregulated vs. Regulated States

	Total	Residential	9	Commercial	<u>Industrial</u>
1997	2.3	2.8		2.6	1.3
1998	2.0	2.5		2.4	1.1
1999	1.9	2.3		2.3	1.0
2000	2.1	2.4		2.5	1.3
2001	2.4	2.5		3.1	1.6
2002	2.3	2.3		3.0	1.5
2003	2.4	2.4		3.0	1.5
2004	2.3	2.4		2.8	1.6
2005	2.6	2.6		3.0	1.8
2006	3.2	3.4		3.5	2.2
2007	3.3	3.6		3.7	2.3
2008	3.4	3.6		3.9	2.1
2009	3.0	3.5		3.2	2.0
2010	2.9	3.4		3.1	1.7
2011	2.4	2.9		2.5	1.4
2012	2.1	2.6		2.0	1.0
2013	2.1	2.8		2.0	1.0
2014	2.4	3.1		2.3	1.2
2015	2.4	3.2		2.4	1.1
2016	2.2	3.0		2.1	0.9

Data for Individual States

Five of the 15 states in the deregulated category are in the footprint of the New England RTO (known as ISO-New England). The table below shows that rates for all five states were already well above the national average in 1997. Over the 19-year period, Connecticut, Massachusetts, and Rhode Island experienced rate increases significantly above the national average. The graph shows that rates in these New England 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 increased in 2013 in all five states, and after a brief respite in 2014, increased dramatically in 2015, before declining again in 2016.

State Average Customer Rates, in cents per kWh

	<u>1997</u>	<u>2016</u>	<u>Difference</u>
ISO - New England			
Connecticut	10.5	17.3	6.8
Maine	9.5	12.8	3.3
Massachusetts	10.4	16.5	6.1
New Hampshire	11.6	15.7	4.1
Rhode Island	10.7	16.2	5.5
National Average	6.8	10.3	3.5

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). The table below shows that retail rates in three of the states increased more than the national average between 1997 and 2015, 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.

State Average Customer Rates, in cents per kWh

	<u>1997</u>	<u>2016</u>	<u>Difference</u>				
Eastern PJM and NYISO							
Delaware	7.0	11.2	4.2				
District of Columbia	7.4	11.9	4.5				
Maryland	7.0	12.2	5.2				
New Jersey	10.5	13.5	3.0				
Pennsylvania	8.0	10.3	2.3				
New York	11.1	14.5	3.4				
National Average	6.8	10.3	3.5				

Utilities in the three retail choice states in the Midwest operate in both PJM and the Midcontinent ISO (MISO). These states saw rate increases at or below the national average, with Illinois experiencing the lowest increase in rates of the deregulated states. Commonwealth Edison, which serves over 60 percent of the load in Illinois, is in PJM, while the rest of the Illinois utilities, almost all of Michigan, and the northern half of Ohio 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 their 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.

Until recently, Ohio utilities had been subject to transition 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.

State Average Customer Rates, in cents per kWh

	<u>1997</u>	<u>2016</u>	<u>Difference</u>
<u>Midwest</u>			
Illinois	7.7	9.2	1.5
Michigan	7.0	11.2	4.2
Ohio	6.3	9.7	3.4
National Average	6.8	10.3	3.5

Only two western states implemented retail choice: California, which comprises the California ISO, and Montana. Both states currently have very limited retail choice programs 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. This 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.

State Average Customer Rates, in cents per kWh

	<u>1997</u>	<u>2016</u>	<u>Difference</u>
Western States			
California	9.5	15.3	5.8
Montana	5.2	8.9	3.7
National Average	6.8	10.3	3.5

Texas's 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 (REPs), and thus, IOUs in the ERCOT region no longer report sales or revenue to the Energy Information Administration (EIA). Public power utilities and rural electric cooperatives were given the option to offer retail choice, but none have.

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 11.0. Since 2008, rates have consistently declined each year, and had fallen to 8.3 cents in 2016.

State Average Customer Rates, in cents per kWh

	<u>1997</u>	<u>2016</u>	<u>Difference</u>
Texas	6.2	8.3	2.1
National Average	6.8	10.3	3.5



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