# National Electric Rate Study

Ranking of typical residential, commercial and industrial electric bills

2016 Study



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**Lincoln Electric System** 

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#### 2016 National Rate Study Summary

 The methodology changed for the 2016 report due declining survey response rates and to account for recommended changes in the sampling method used based on an assessment of the utilities included (see Detail section for list of added and omitted cities).



- The National Electric Rate
  Study ranks residential,
  commercial and industrial electric rates of 100 cities across the nation. (1= Lowest
  Bill, 100 = Highest Bill)
- Rates used are those approved to be in effect January 1, 2016, including seasonal differences.
- Lincoln Electric System (LES) bills are calculated with rates that went into effect January 1, 2016 and include surcharges and other non-sales tax charges (if known).
- Bills for investor-owned utilities were collected from Edison Electric Institute's 2016 Typical Winter Bills report. Bills for municipal/public power utilities were calculated using each respective utility's published rate tariffs. This is a departure from the previous National Rate Surveys where surveys were sent out to the utilities themselves. Average bills are calculated using rates from a 12-month period to include seasonal rates. All bill data applies to one month of service.
- **Lincoln ranks 13**<sup>th</sup> **overall**, 13<sup>th</sup> in residential and 13<sup>th</sup> in commercial and industrial combined. LES ranks in the top ten in 7 of 12 categories. Lincoln was 11<sup>th</sup> last year. With the new sample methodology, the inclusion of Amarillo, TX puts the city in the Top 10 while Greensboro, NC—in the Top 10 in the 2015 study—was removed in the 2016 study.
- Overall, there are more electric rate decreases (59 percent) than increases (36 percent). Of the public power utilities, 50 percent reported increases, and 38 percent reported decreases. Of the investor-owned utilities, 32 percent reported increases, and 66 percent reported decreases.
- Looking at the real price of electricity (rates after adjustment for inflation), Lincoln's real price decreased by 1.5 percent.

#### 2016 National Rate Study Summary

- **LES residential customers** using 1,000 kWh pay \$93.62, which is 29 percent less than the study average of \$131.53, while LES industrial customers using 1,000 kW and 400,000 kWh pay \$29,969, 22 percent less than the study average of \$38,537.
- Regionally, LES' annual bills are the second lowest. Only Des Moines, ranked 5th lowest nationally, has a lower regional ranking than Lincoln. The region includes the following eight cities:
  - Colorado Springs, Colorado
  - Des Moines, Iowa
  - Kansas City, Kansas
  - Wichita, Kansas
  - Minneapolis, Minnesota
  - Kansas City, Missouri
  - Lincoln, Nebraska
  - Omaha, Nebraska

#### 2016 National Rate Study Contents

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#### 2016 National Rate Study Detail

Lincoln Electric System has ranked U.S. cities (served by Municipal/Public Power or Investorowned Utilities) from the lowest (number 1) to the highest (number 100) based on average monthly electric bills by various categories of typical usage for residential, commercial, and industrial rates in effect January 1, 2016. Average bills are calculated using rates from the 12-month period to include seasonal rates. All bill data applies to one month of service.

#### Kilowatt-Hour Usages Ranked

The kilowatt–hour (kWh) usage levels used in the ranking of average residential bills were:

- 500 kWh
- 1.000 kWh

The average commercial bills were stratified by kilowatt (kW) and kilowatt-hour (kWh). The categories used in the ranking are as follows:

- 40 kW and 10,000 kWh (35% Load Factor)
- 40 kW and 14,000 kWh (49% Load Factor)
- 500 kW and 150,000 kWh (42% Load Factor)
- 500 kW and 180,000 kWh (50% Load Factor)

The average industrial bills were stratified by kilowatt (kW) and kilowatt-hour (kWh). The categories used in the ranking are as follows:

- 75 kW and 15,000 kWh (28% Load Factor)
- 75 kW and 30,000 kWh (56% Load Factor)
- 75 kW and 50,000 kWh (93% Load Factor)
- 1,000 kW and 200,000 kWh (28% Load Factor)
- 1,000 kW and 400,000 kWh (56% Load Factor)
- 1,000 kW and 650,000 kWh (90% Load Factor)

#### Selection Criteria for Cities Included in the Ranking

From 1984 to 2015, LES originally selected cities to be included in the ranking based on criteria shown below:

Cities with a population greater than 100,000.

#### 2016 National Rate Study Detail

- Minimum of one city from every state. (If a state did not have a city meeting the population criteria, the state's largest city was selected.)
- Maximum of three cities from any state. (If a state had more than three cities meeting the
  population criteria, three were selected at random; however, cities served by the same utility
  were not selected when possible.)

#### Overview of the New Rate Study Methodology

For 2016 it was proposed to review whether certain cities continued to meet the selection criteria. A review process was undertaken to realign the sample methodology as well as the data collection process. This resulted in several changes:

- In the past, surveys were sent out to utilities to fill out and return asking for typical bill
  information segmented out by the 12 billing categories used in the report. Over the years the
  response rate for these surveys had declined and their entries replaced with a rate model
  constructed from that utility's published rate schedule. It was decided that the few remaining
  surveyed would be replaced with their own rate models and that the survey would instead be
  conducted as a study going forward.
- Due to the consolidation of many utilities, especially in states with a large number of investorowned utilities, a number of cities in a given state were served by the same utility with the same rates. These extra utilities were removed from the rate study and only the largest city of the group was kept.
- A new list of utilities for sampling was proposed and discussed with LES management and a number of new utilities were added to round out the survey. This was both to replace some of the utilities removed from the sample and to update the report for a better balance of cities.

Cities A	Added to	Rate	Study
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Amarillo, TX

Charleston, WV

Sacramento, CA

Myrtle Beach, SC

Fairbanks, AK

#### **Cities Removed From Rate Study**

Mobile, AL

New Haven, CT

Waterbury, CT

Columbus, GA

Savannah, GA

Rockford, IL

Saint Paul, MN

Greensboro, NC

Paterson, NJ

Dallas, TX

Norfolk, VA

#### 2016 National Rate Study Detail

#### Source of Rate Data

LES obtained the majority of the data for investor-owned utilities from the Rate Regulation Department of the Edison Electric Institute (EEI) publication, *Typical Bills and Average Rates Report*, *Winter 2016*, bills as of January 1, 2016. The data for municipal/public power utilities and investor-owned utilities not included in the EEI publication was obtained by modeling each utility's typical bills from their published rate schedules. We performed no additional procedures to verify either the data obtained from the municipal/public power utilities survey or the EEI publication.

Detailed results of the rankings and utilities included can be found in the Schedules section of the report.

#### Table 1 2016 National Rate Study

#### **LES Ranking** as compared to surveyed cities

	Annuay # of	<u>Sı</u>	ırvey Ra	<u>ank</u>
Category Residential	Approx. # of Customers	<u>2016</u>	<u>2015</u>	Change
1. 500 kWh 2. 1,000 kWh	19,600 12,400	16 9	17 5	1 -4
Residential Survey Rank		13	10	-3
Commercial and Industrial				
<ol> <li>40 kW and 10,000 kWh (35% Load Factor)</li> <li>40 kW and 14,000 kWh (49% Load Factor)</li> <li>500 kW and 150,000 kWh (42% Load Factor)</li> </ol>	2 27 11	3 8 38	3 6 35	0 -2 -3
<ul><li>6. 500 kW and 180,000 kWh (50% Load Factor)</li><li>7. 75 kW and 15,000 kWh (28% Load Factor)</li><li>8. 75 kW and 30,000 kWh (56% Load Factor)</li></ul>	10 8 54	28 1 6	23 3 4	-5 2 -2
9. 75 kW and 50,000 kWh (93% Load Factor) 10. 1,000 kW and 200,000 kWh (28% Load Factor) 11. 1,000 kW and 400,000 kWh (56% Load Factor) 12. 1,000 kW and 650,000 kWh (90% Load Factor)	7 0 7 4	3 54 21 8	2 52 17 6	-1 -2 -4 -2
Commercial and Industrial Survey Rank:	·	13	12	-1
Overall Survey Rank:		13	11	-2

#### Notes:

- Ranks are from 1 (lowest rank) to 100 (highest rank) Positive change indicates an improvement in rank

#### Table 2 2016 National Rate Study

#### **Highest and Lowest Overall Ranks**

Overall Survey Rank	2016 Average Rank <sup>1</sup>	City (2015 Rank)	Average Bill Difference from 2015
- Tunn	7tt orago rtame	ony (2010 Hann)	
1	3.3	Tulsa, OK (1)	-2%
2	4.8	Tacoma, WA (2)	3%
3	6.2	Oklahoma City, OK (12)	-15%
4	6.8	Boise, ID (3)	-1%
5	8.9	Des Moines, IA (4)	-1%
6	10.2	Amarillo, TX (*)	*
7	10.3	Davenport, IA (6)	-1%
8	11.0	Buffalo, NY (21)	-22%
9	11.1	Seattle, WA (5)	1%
10	12.1	Baton Rouge, LA (20)	-11%
Overall Survey	2016		Average Bill
Rank	Average Rank <sup>1</sup>	City (2015 Rank)	Difference from 2015
Rank	Average Rank <sup>1</sup>		2015
<b>Rank</b> 91	Average Rank <sup>1</sup> 91.0	Anchorage, AK (82)	<b>2015</b> 13%
91 92	<b>Average Rank<sup>1</sup></b> 91.0 91.8	Anchorage, AK (82) Bridgeport, CT (93)	2015
91 92 93	91.0 91.8 92.5	Anchorage, AK (82) Bridgeport, CT (93) Fairbanks, AK (*)	2015 13% -28% *
91 92	<b>Average Rank<sup>1</sup></b> 91.0 91.8	Anchorage, AK (82) Bridgeport, CT (93) Fairbanks, AK (*) Pawtucket, RI (91)	2015 13% -28%
91 92 93 94	91.0 91.8 92.5 94.6	Anchorage, AK (82) Bridgeport, CT (93) Fairbanks, AK (*) Pawtucket, RI (91) San Francisco, CA (86)	2015 13% -28% * -24%
91 92 93 94 95	91.0 91.8 92.5 94.6 94.7	Anchorage, AK (82) Bridgeport, CT (93) Fairbanks, AK (*) Pawtucket, RI (91)	2015  13% -28%  * -24% 3%
91 92 93 94 95 96	91.0 91.8 92.5 94.6 94.7 94.8	Anchorage, AK (82) Bridgeport, CT (93) Fairbanks, AK (*) Pawtucket, RI (91) San Francisco, CA (86) Cambridge, MA (89)	2015  13% -28%  * -24% 3% -19%
91 92 93 94 95 96 97	91.0 91.8 92.5 94.6 94.7 94.8 96.4	Anchorage, AK (82) Bridgeport, CT (93) Fairbanks, AK (*) Pawtucket, RI (91) San Francisco, CA (86) Cambridge, MA (89) New York City, NY (88)	2015  13% -28%  * -24% 3% -19% -6%
91 92 93 94 95 96 97 98	91.0 91.8 92.5 94.6 94.7 94.8 96.4 97.0	Anchorage, AK (82) Bridgeport, CT (93) Fairbanks, AK (*) Pawtucket, RI (91) San Francisco, CA (86) Cambridge, MA (89) New York City, NY (88) Boston, MA (92)	2015  13% -28%  * -24% 3% -19% -6% -19%

<sup>&</sup>lt;sup>1</sup> Average ranking of the 12 categories

<sup>\*</sup> Denotes new city added to study

### Table 3 2016 National Rate Study

#### **Major Rate Changes - Increases**

- No single driver explains the top 10 bill increases, with reasons ranging from rate requests to recover investment and upgrade costs to the restructuring of how rates are calculated.

					rage Bill es from 2015
	Average Bill Difference from Overall Rank				Commercial
City	2015	2016	2015	Residential	and Industrial
Wilmington, DE	17%	70	34	12%	18%
Anchorage, AK	13%	91	82	12%	14%
Overland Park, KS	11%	67	43	11%	11%
Louisville, KY	10%	48	25	7%	11%
Tucson, AZ	10%	75	61	9%	10%
Milwaukee, WI	10%	71	57	11%	9%
Wheeling, WV	9%	26	9	18%	7%
Kansas City, MO	9%	54	33	10%	8%
Lexington, KY	8%	32	18	5%	9%
Los Angeles, CA	8%	86	81	22%	5%

#### **Major Rate Changes - Decreases**

- The top 10 bill decreases are driven in large part by fuel cost adjustments dropping from their previous 2015 increases.

					rage Bill es from 2015
	Average Bill Difference from	Overall	Rank		Commercial
City	2015	2016	2015	Residential	and Industrial
Springfield, MA	-37%	90	94	-8%	-43%
Bridgeport, CT	-28%	92	93	-13%	-31%
Pawtucket, RI	-24%	94	91	-7%	-27%
Buffalo, NY	-22%	8	21	-20%	-23%
Cambridge, MA	-19%	96	89	-8%	-21%
Boston, MA	-19%	98	92	-11%	-20%
Honolulu, HI	-18%	100	95	-18%	-18%
Columbus, OH	-16%	55	73	-16%	-16%
Hempstead, NY	-15%	89	87	-13%	-16%
Oklahoma City, OK	-15%	3	12	-11%	-16%

#### Table 4 2016 National Rate Study

#### 10 Lowest and Highest Bills

Residential: 500 kWh

	10 Lowest F	Bills			10 Highest	Bills	
Rank	<u>City</u>	<u>Bill</u>	<u>Change</u>	Rank	<u>City</u>	<u>Bill</u>	Change
1	Seattle, WA	\$34.67	-11.5%	91	Manchester, NH	\$94.99	-2.0%
2	Tulsa, OK	\$44.78	4.5%	92	Fairbanks, AK	\$105.90	*
3	Spokane, WA	\$44.84	1.1%	93	Boston, MA	\$109.32	-11.2%
4	Austin, TX	\$45.26	-5.5%	94	Springfield, MA	\$110.82	-8.0%
5	Tacoma, WA	\$47.57	8.2%	95	Los Angeles, CA	\$111.36	44.1%
6	Denver, CO	\$48.81	-14.0%	96	Cambridge, MA	\$112.96	-8.2%
7	Baton Rouge, LA	\$48.85	-9.1%	97	San Diego, CA	\$115.35	2.6%
8	Huntsville, AL	\$49.52	-4.6%	98	Bridgeport, CT	\$120.98	-13.1%
9	Duluth, MN	\$49.70	2.0%	99	New York City, NY	\$127.20	-9.2%
10	Boise, ID	\$50.46	-1.2%	100	Honolulu, HI	\$129.34	-17.6%

#### Residential: 1,000 kWh

				,			
	10 Lowest B	ills			10 Highest	Bills	
Rank	<u>City</u>	<u>Bill</u>	Change	Rank	<u>City</u>	<u>Bill</u>	Chang
1	Spokane, WA	\$83.63	0.7%	91	Pawtucket, RI	\$178.56	-6.8
2	Tacoma, WA	\$84.65	2.7%	92	Fairbanks, AK	\$194.30	
3	Seattle, WA	\$88.22	-10.5%	93	Boston, MA	\$212.21	-11.59
4	Tulsa, OK	\$89.34	6.2%	94	Cambridge, MA	\$219.03	-8.5
5	Huntsville, AL	\$90.16	-5.0%	95	Springfield, MA	\$219.63	-8.0
6	Baton Rouge, LA	\$91.56	-9.8%	96	Bridgeport, CT	\$224.70	-13.99
7	Springfield, MO	\$92.92	-3.8%	97	New York City, NY	\$237.76	-9.79
8	New Orleans, LA	\$93.27	-3.0%	98	San Francisco, CA	\$250.78	0.09
9	Lincoln, NE	\$93.62	-0.5%	99	Honolulu, HI	\$252.43	-18.09
10	Oklahoma City, OK	\$94.55	-11.6%	100	San Diego, CA	\$311.66	-0.29

#### Commercial: 40 kW and 10,000 kWh

	10 Lowest Bills 10 H					lighest Bills		
Rank	<u>City</u>	<u>Bill</u>	Change	Rank	<u>City</u>	<u>Bill</u>	Change	
1	Seattle, WA	\$716	-10.4%	91	Springfield, MA	\$1,785	-39.7%	
2	Boise, ID	\$753	-0.2%	92	Anchorage, AK	\$1,825	11.8%	
3	Lincoln, NE	\$773	-1.5%	93	Bridgeport, CT	\$1,855	-16.4%	
4	Buffalo, NY	\$779	-20.6%	94	Cambridge, MA	\$2,016	-8.0%	
5	Tacoma, WA	\$790	-2.2%	95	San Francisco, CA	\$2,055	3.5%	
6	Tulsa, OK	\$804	6.3%	96	Pawtucket, RI	\$2,164	-17.9%	
7	Oklahoma City, OK	\$805	-13.1%	97	Boston, MA	\$2,186	-8.7%	
8	Colorado Springs, CO	\$837	-2.5%	98	New York City, NY	\$2,278	-4.7%	
9	Des Moines, IA	\$846	-0.1%	99	Honolulu, HI	\$2,402	-16.9%	
10	Davenport, IA	\$846	-0.4%	100	San Diego, CA	\$2,438	-5.2%	

#### Commercial: 40 kW and 14,000 kWh

	10 Lowest Bi	lls			10 Highest I	Bills	
Rank	<u>City</u>	<u>Bill</u>	Change	Rank	<u>City</u>	<u>Bill</u>	Change
1	Buffalo, NY	\$886	-25.4%	91	Anchorage, AK	\$2,266	13.5%
2	Oklahoma City, OK	\$956	-15.0%	92	Bridgeport, CT	\$2,385	-16.2%
3	Boise, ID	\$957	-0.2%	93	Fairbanks, AK	\$2,481	*
4	Seattle, WA	\$1,002	-10.4%	94	Cambridge, MA	\$2,564	-10.4%
5	Des Moines, IA	\$1,047	-0.5%	95	San Francisco, CA	\$2,620	2.6%
6	Davenport, IA	\$1,048	-0.8%	96	New York City, NY	\$2,699	-4.9%
7	Tulsa, OK	\$1,050	5.0%	97	Boston, MA	\$2,736	-10.6%
8	Lincoln, NE	\$1,057	-1.6%	98	San Diego, CA	\$2,814	-4.6%
9	Charlotte, NC	\$1,092	0.0%	99	Pawtucket, RI	\$2,856	-18.8%
10	Reno, NV	\$1,092	1.8%	100	Honolulu, HI	\$3,133	-17.9%

2016 National Rate Study Tables

#### Table 4 2016 National Rate Study

#### 10 Lowest and Highest Bills

#### Commercial: 500 kW and 150,000 kWh

	10 Lowest B	ills			10 Highest	Bills	
Rank	<u>City</u>	Bill	Change	Rank	<u>City</u>	<u>Bill</u>	Change
1	Tulsa, OK	\$8,714	-7.3%	91	Springfield, MA	\$24,476	-41.9%
2	Buffalo, NY	\$9,449	-18.4%	92	Anchorage, AK	\$25,062	13.1%
3	Des Moines, IA	\$9,575	-0.8%	93	Pawtucket, RI	\$25,371	-35.8%
4	Tacoma, WA	\$9,979	3.8%	94	Cambridge, MA	\$25,632	-31.4%
5	Oklahoma City, OK	\$10,124	-15.1%	95	Fairbanks, AK	\$25,643	*
6	Davenport, IA	\$10,202	-1.4%	96	San Francisco, CA	\$28,906	3.8%
7	Boise, ID	\$10,655	-0.3%	97	Boston, MA	\$29,436	-28.8%
8	Seattle, WA	\$11,285	6.2%	98	New York City, NY	\$30,678	-4.9%
9	Raleigh, NC	\$11,321	-3.9%	99	San Diego, CA	\$30,996	-5.1%
10	Baton Rouge, LA	\$11,676	-11.5%	100	Honolulu, HI	\$36,370	-17.7%

#### Commercial: 500 kW and 180,000 kWh

10 Lowest Bills					10 Highest Bills			
Rank	<u>City</u>	Bill	<u>Change</u>	Rank	<u>City</u>	<u>Bill</u>	Change	
1	Tulsa, OK	\$9,719	-8.5%	91	Springfield, MA	\$27,896	-43.3%	
2	Buffalo, NY	\$10,219	-21.4%	92	Anchorage, AK	\$28,370	14.0%	
3	Des Moines, IA	\$10,876	-0.9%	93	Fairbanks, AK	\$29,352	*	
4	Tacoma, WA	\$11,215	3.8%	94	Cambridge, MA	\$29,409	-32.9%	
5	Oklahoma City, OK	\$11,256	-16.1%	95	Pawtucket, RI	\$29,710	-36.4%	
6	Davenport, IA	\$11,629	-1.6%	96	San Francisco, CA	\$31,816	3.3%	
7	Boise, ID	\$12,180	-0.3%	97	Boston, MA	\$33,161	-30.5%	
8	Amarillo, TX	\$12,654	*	98	San Diego, CA	\$33,806	-4.7%	
9	Seattle, WA	\$13,310	6.2%	99	New York City, NY	\$33,832	-5.0%	
10	Baton Rouge, LA	\$13,396	-12.0%	100	Honolulu, HI	\$41,040	-18.6%	

#### Industrial: 75 kW and 15,000 kWh

	10 Lowest Bill	S			10 Highest	Bills	
Rank	<u>City</u>	<u>Bill</u>	Change	Rani	<u>City</u>	<u>Bill</u>	<u>Change</u>
1	Lincoln, NE	\$1,128	-1.5%	91	Anchorage, AK	\$2,970	10.8%
2	Seattle, WA	\$1,187	6.0%	92	San Francisco, CA	\$3,205	4.4%
3	Tulsa, OK	\$1,191	6.5%	93	Pueblo, CO	\$3,241	4.6%
4	Boise, ID	\$1,225	-1.2%	94	Pawtucket, RI	\$3,264	-17.5%
5	Tacoma, WA	\$1,230	3.8%	95	Cambridge, MA	\$3,287	-6.2%
6	Colorado Springs, CO	\$1,245	-2.5%	96	Fairbanks, AK	\$3,354	*
7	Oklahoma City, OK	\$1,301	-12.3%	97	New York City, NY	\$3,411	-5.1%
8	Buffalo, NY	\$1,314	-18.0%	98	Honolulu, HI	\$3,725	-16.4%
9	Baton Rouge, LA	\$1,364	-9.7%	99	Boston, MA	\$3,772	-6.2%
10	Des Moines, IA	\$1,380	0.0%	100	San Diego, CA	\$4,118	-5.7%

#### Industrial: 75 kW and 30,000 kWh

	10 Lowest Bi	ills			10 Highest Bills					
Rank	<u>City</u>	<u>Bill</u>	Change	Rank	City	<u>Bill</u>	Change			
1	Buffalo, NY	\$1,714	-27.7%	91	Anchorage, AK	\$4,624	14.3%			
2	Tacoma, WA	\$1,848	4.0%	92	Fairbanks, AK	\$4,716	*			
3	Oklahoma City, OK	\$1,867	-16.2%	93	New York City, NY	\$4,963	-5.4%			
4	Boise, ID	\$1,992	-1.4%	94	Bridgeport, CT	\$5,082	-14.7%			
5	Tulsa, OK	\$2,009	-1.5%	95	San Francisco, CA	\$5,320	2.3%			
6	Lincoln, NE	\$2,057	0.3%	96	Cambridge, MA	\$5,344	-11.2%			
7	Raleigh, NC	\$2,132	-3.0%	97	San Diego, CA	\$5,528	-4.5%			
8	Des Moines, IA	\$2,135	-0.5%	98	Pawtucket, RI	\$5,833	-19.5%			
9	Davenport, IA	\$2,136	-0.9%	99	Boston, MA	\$5,834	-10.6%			
10	Seattle, WA	\$2,199	6.2%	100	Honolulu, HI	\$6,467	-18.5%			

2016 National Rate Study Tables

#### Table 4 2016 National Rate Study

#### 10 Lowest and Highest Bills

#### Industrial: 75 kW and 50,000 kWh

	10 Lowest Bi	lls			10 Highest Bills					
Rank	<u>City</u>	<u>Bill</u>	Change	Rar	nk <u>City</u>	<u>Bill</u>	Change			
1	Buffalo, NY	\$2,248	-33.8%	91	Anchorage, AK	\$6,829	16.5%			
2	Oklahoma City, OK	\$2,623	-18.5%	92	Springfield, MA	\$6,867	-46.6%			
3	Lincoln, NE	\$2,667	0.4%	93	New York City, NY	\$7,033	-5.6%			
4	Tacoma, WA	\$2,672	4.1%	94	Bridgeport, CT	\$7,360	-15.0%			
5	Denver, CO	\$2,910	-16.4%	95	San Diego, CA	\$7,408	-3.6%			
6	Tulsa, OK	\$2,929	-3.3%	96	Cambridge, MA	\$8,087	-13.6%			
7	Richmond, VA	\$3,014	-7.9%	97	San Francisco, CA	\$8,140	1.3%			
8	Raleigh, NC	\$3,015	-4.9%	98	Boston, MA	\$8,583	-13.0%			
9	Boise, ID	\$3,016	-1.5%	99	Pawtucket, RI	\$9,259	-20.3%			
10	Cedar Rapids, IA	\$3,059	-9.3%	100	Honolulu, HI	\$10,122	-19.5%			

#### Industrial: 1,000 kW and 200,000 kWh

			acaran .	, , , , , , , , , , , , , , , , , , ,	• • • • •						
	10 Lowest B	ills			10 Highest Bills						
Rank	<u>City</u>	<u>Bill</u>	Change	Rank	<u>City</u>	<u>Bill</u>	Change				
1	Tulsa, OK	\$13,771	-4.7%	91	Fairbanks, AK	\$38,894	*				
2	Des Moines, IA	\$14,337	-2.5%	92	Anchorage, AK	\$39,055	11.0%				
3	Oklahoma City, OK	\$14,816	-13.1%	93	Cambridge, MA	\$39,418	-27.0%				
4	Davenport, IA	\$15,473	-1.1%	94	Burlington, VT	\$39,449	0.6%				
5	Tacoma, WA	\$15,788	3.6%	95	Pueblo, CO	\$42,047	4.8%				
6	Seattle, WA	\$15,820	6.0%	96	New York City, NY	\$45,087	-5.1%				
7	Buffalo, NY	\$15,892	-11.7%	97	Boston, MA	\$46,215	-24.5%				
8	Boise, ID	\$15,976	-1.4%	98	San Francisco, CA	\$46,263	5.2%				
9	Jackson, MS	\$16,473	-13.2%	99	San Diego, CA	\$52,589	-5.8%				
10	Baton Rouge, LA	\$17,022	-10.2%	100	Honolulu, HI	\$56,324	-15.6%				
				1							

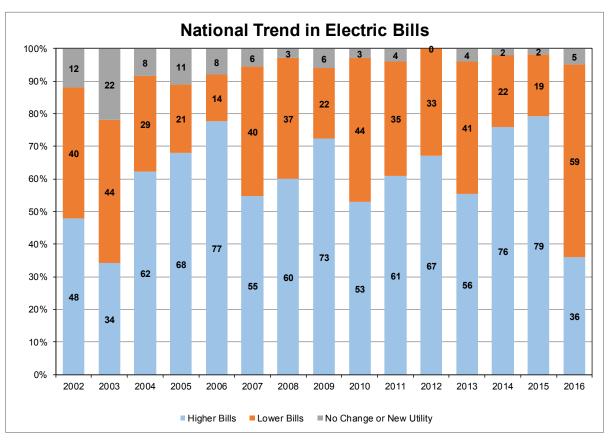
#### Industrial: 1,000 kW and 400,000 kWh

	10 Lowest B	ills			10 Highest	Bills	
Rank	<u>City</u>	<u>Bill</u>	Change	Rank	<u>City</u>	<u>Bill</u>	Change
1	Tulsa, OK	\$20,472	-9.4%	91	Springfield, MA	\$59,650	-44.3%
2	Buffalo, NY	\$21,023	-23.5%	92	Anchorage, AK	\$61,106	14.5%
3	Oklahoma City, OK	\$21,374	-17.0%	93	Fairbanks, AK	\$63,619	*
4	Des Moines, IA	\$23,013	-2.2%	94	Cambridge, MA	\$64,598	-33.3%
5	Tacoma, WA	\$24,027	3.9%	95	San Francisco, CA	\$64,630	3.1%
6	Davenport, IA	\$24,985	-1.7%	96	Pawtucket, RI	\$65,182	-36.7%
7	Boise, ID	\$25,012	-1.8%	97	New York City, NY	\$65,786	-5.5%
8	Jackson, MS	\$27,941	-17.6%	98	Boston, MA	\$71,053	-31.5%
9	Baton Rouge, LA	\$28,283	-12.2%	99	San Diego, CA	\$71,321	-4.5%
10	Birmingham, AL	\$28,446	-4.9%	100	Honolulu, HI	\$87,459	-19.2%

#### Industrial: 1,000 kW and 650,000 kWh

	10 Lowest B	ills			10 Highest Bills						
Rank	City	<u>Bill</u>	Change	Rank	City	<u>Bill</u>	Change				
1	Buffalo, NY	\$27,438	-30.2%	91	Springfield, MA	\$88,144	-46.9%				
2	Tulsa, OK	\$28,847	-12.0%	92	Anchorage, AK	\$88,670	16.5%				
3	Oklahoma City, OK	\$29,572	-19.3%	93	Hempstead, NY	\$88,987	-16.3%				
4	Des Moines, IA	\$33,125	-2.1%	94	New York City, NY	\$91,659	-9.7%				
5	Tacoma, WA	\$34,325	4.0%	95	Fairbanks, AK	\$94,524	*				
6	Davenport, IA	\$36,142	-2.0%	96	San Diego, CA	\$94,738	-3.6%				
7	Boise, ID	\$36,307	-2.0%	97	Cambridge, MA	\$96,073	-36.1%				
8	Lincoln, NE	\$36,622	0.3%	98	Pawtucket, RI	\$101,346	-37.8%				
9	Lexington, KY	\$36,633	0.4%	99	Boston, MA	\$102,101	-34.8%				
10	Richmond, VA	\$36,790	-8.0%	100	Honolulu, HI	\$126,377	-21.0%				

#### Chart A 2016 National Rate Study



#### Rate Changes for the 2016 Survey

		al/Public wer	Investor	-owned	Overall				
	# Utilities	Percent	# Utilities	Percent	# Utilities	Percent			
Average Increases	12 50		24	32	36	36			
Average Decreases	9	38	50	66	59	59			
No Change	0	0	0	0	0	0			
New Utility	3	13	2	3	5	5			
	24 100		76	100	100	100			

#### Residential Rate Changes

		al/Public wer	Investor	-owned	Overall				
	# Utilities	Percent	# Utilities	Percent	# Utilities	Percent			
Average Increases	11 46		30	39	41	41			
Average Decreases	8 33		44	58	52	52			
No Change	2	8	0	0	2	2			
New Utility	3	3 13		3	5	5			
	24 100		76	100	100	100			

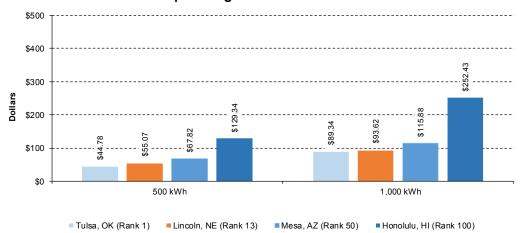
#### Commercial / Industrial Rate Changes

	-	al/Public wer	Investor	-owned	Overall				
	# Utilities	Percent	# Utilities	Percent	# Utilities	Percent			
Average Increases	12 50		24	32	36	36			
Average Decreases	9	9 38		66	59	59			
No Change	0	0	0	0	0	0			
New Utility	3	13	2	3	5	5			
	24 100		76	100	100	100			

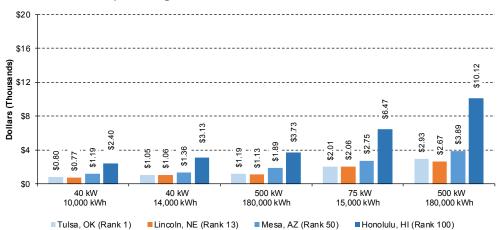
<sup>\*2016</sup> shows the difference between average monthly bills from 2016 and 2015. Before 2011, winter bills were compared.

#### Chart B 2016 National Rate Study

#### Sample Ranges of Residential Bills



#### Sample Ranges of Commercial and Industrial Bills



#### Sample Ranges of Commercial and Industrial Bills

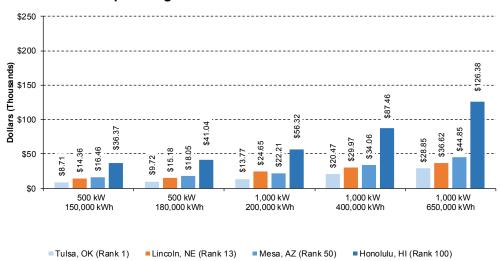
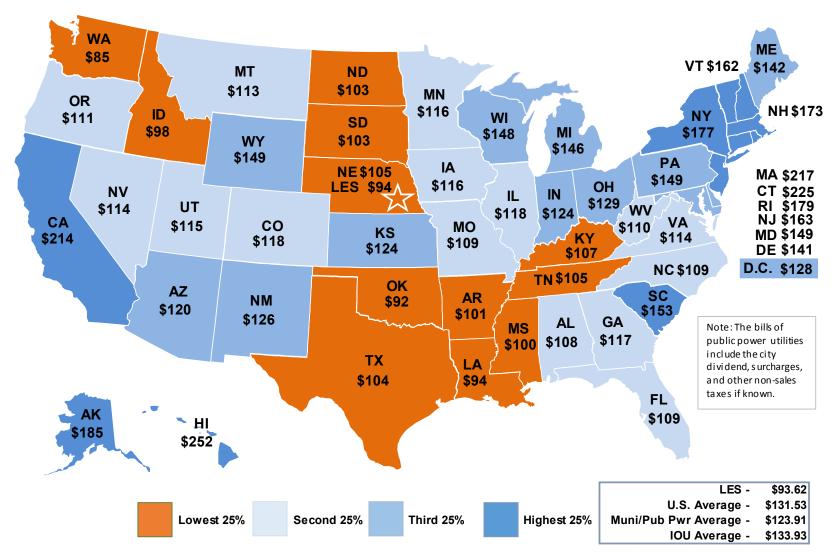


Chart C 2016 National Rate Study

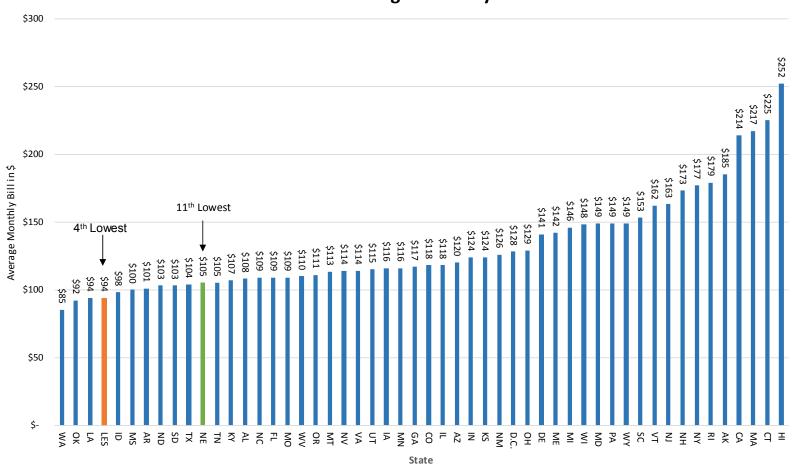
#### Average Bill per State\*: Residential 1,000 kWh



<sup>\*</sup>Note: state averages only reflect cities that are included in the LES National Rate Study

#### Chart D 2016 National Rate Study

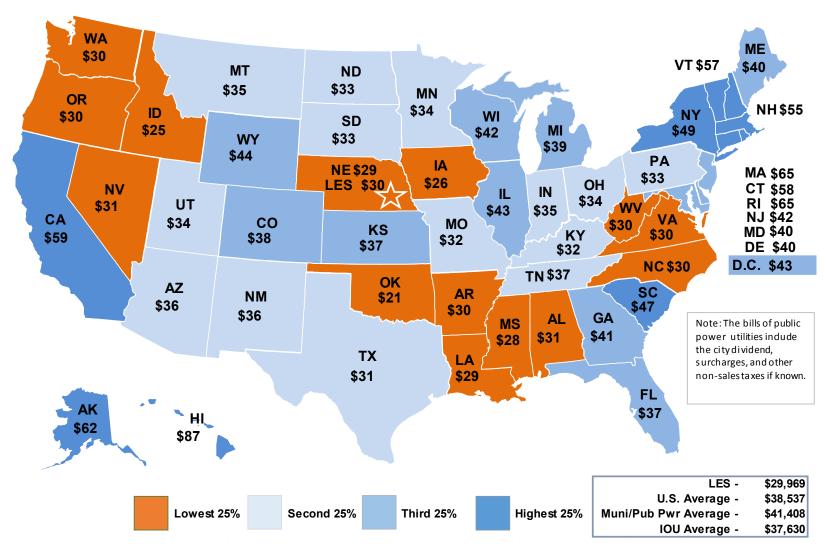
## Lowest to Highest Residential Bill Comparison - 1,000 kWh 12-Month Average: January 2016



Note: state averages only reflect cities that are included in the LES National Rate Study

Chart E 2016 National Rate Study

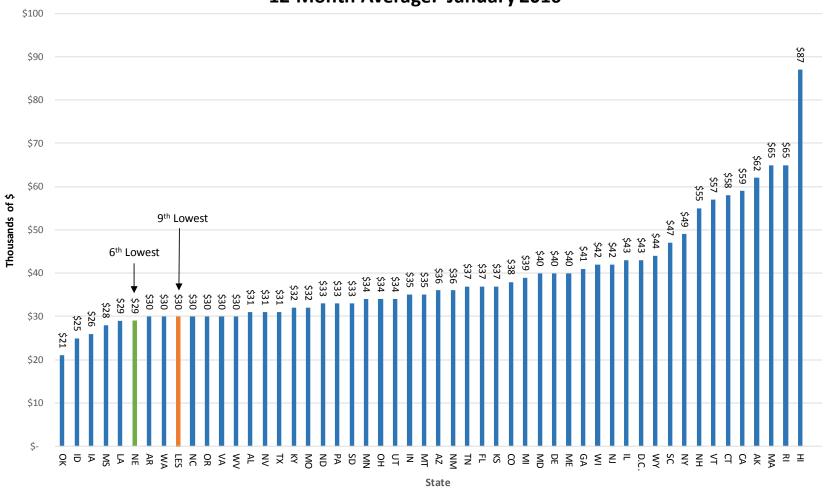
#### Average Bill per State\*: Industrial 1,000 kW and 400,000 kWh (Thousands of \$)



<sup>\*</sup>Note: state averages only reflect cities that are included in the LES National Rate Study

Chart F 2016 National Rate Study

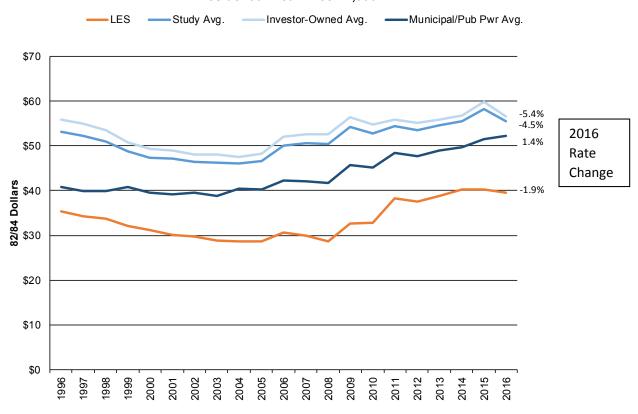
## Lowest to Highest Industrial Bill Comparison - 1,000 kW & 400,000 kWh 12-Month Average: January 2016



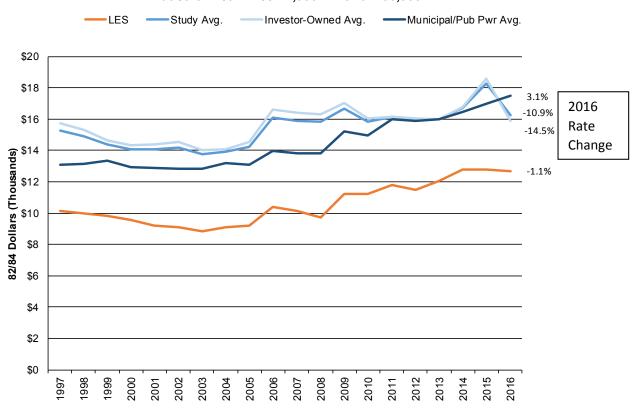
Note: state averages only reflect cities that are included in the LES National Rate Study

Chart G 2016 National Rate Study

#### Residential Real Price - 1,000 kWh



#### Industrial Real Price - 1,000 kW and 400,000 kWh



#### M - Municipal or Public Power District

#### I - Investor-owned utility

					40 kW	40 kW	500 kW		00 kW
STATE	CITY	500 kWh	1,000 kWh	1	0,000 kWh	14,000 kWh	150,000 kWh	180,	000 kWh
Alabama	Birmingham (I)	\$ 71.49	\$ 126.03	\$	1,365	\$ 1,724	\$ 18,767	\$	21,527
	Huntsville (M)	49.52	90.16		946	1,319	14,127		15,718
Alaska	Anchorage (M)	91.21	175.87		1,825	2,266	25,062		28,370
	Fairbanks (M)	105.90	194.30		1,778	2,481	25,643		29,352
Arizona	Mesa (M)	67.82	115.88		1,192	1,363	16,457		18,045
	Phoenix (I)	66.99	125.49		1,484	1,736	15,870		17,163
	Tucson (I)	63.06	117.85		1,398	1,944	18,329		20,061
Arkansas	Little Rock (I)	54.22	101.46		888	1,155	12,722		14,047
California	Los Angeles (M)	111.36	162.58		1,604	2,038	21,615		24,825
	Sacramento (M)	74.02	130.03		1,418	1,859	19,078		22,373
	San Diego (I)	115.35	311.66		2,438	2,814	30,996		33,806
	San Francisco (I)	91.64	250.78		2,055	2,620	28,906		31,816
Colorado	Colorado Springs (M)	65.33	115.63		837	1,163	15,176		16,324
	Denver (I)	48.81	98.20		1,028	1,158	13,204		14,181
	Pueblo (I)	89.87	140.97		1,586	1,822	23,739		25,340
Connecticut	Bridgeport (I)	120.98	224.70		1,855	2,385	23,752		27,366
Delaware	Wilmington (I)	76.41	141.13		1,205	1,444	17,065		18,906
District of Columbia	Washington (I)	68.49	127.99		1,315	1,802	19,536		22,292
Florida	Jacksonville (M)	66.22	126.09		1,226	1,714	18,797		21,124
	Miami (I)	51.54	95.30		975	1,187	13,295		14,732
	Tampa (I)	60.81	106.22		1,042	1,275	14,130		15,880
Georgia	Atlanta (I)	63.17	116.88		1,432	1,611	16,715		18,052
Hawaii	Honolulu (I)	129.34	252.43		2,402	3,133	36,370		41,040
Idaho	Boise (I)	50.46	97.90		753	957	10,655		12,180
Illinois	Chicago (I)	65.03	115.83		1,005	1,298	14,481		16,681
	Springfield (M)	63.12	120.49		1,444	1,879	20,616		23,547
Indiana	Evansville (I)	83.40	155.77		1,221	1,624	13,768		15,559
	Gary (I)	64.27	117.55		1,317	1,633	16,064		18,017
	Indianapolis (I)	60.82	99.13		1,086	1,471	14,040		15,657

2016 National Rate Study Schedules

#### M - Municipal or Public Power District

					4	0 kW	40 kW	500 kW		500 kW
STATE	CITY	500 kWh		1,000 kWh	10,0	00 kWh	14,000 kWh	150,000 kWh	1	80,000 kWh
lowa	Cedar Rapids (I)	\$ 78.02	\$	137.16	\$	1,140	\$ 1,578	\$ 16,468	\$	19,752
	Davenport (I)	56.63	;	104.75		846	1,048	10,202		11,629
	Des Moines (I)	56.70	)	104.91		846	1,047	9,575		10,876
Kansas	Kansas City (M)	62.69	)	112.10		1,111	1,360	16,137		17,554
	Overland Park (I)	70.73	}	127.46		1,257	1,547	16,098		18,104
	Wichita (I)	74.68	;	133.45		1,226	1,601	16,412		17,664
Kentucky	Lexington (I)	56.94		102.27		1,085	1,508	13,957		14,872
	Louisville (I)	61.50	)	110.96		1,110	1,542	16,632		17,905
Louisiana	Baton Rouge (I)	48.85	5	91.56		866	1,095	11,676		13,396
	New Orleans (I)	51.23	}	93.27		907	1,161	12,116		13,712
	Shreveport (I)	51.78	}	95.77		947	1,153	12,303		13,842
Maine	Portland (I)	75.62	2	141.69		1,334	1,652	18,521		20,926
Maryland	Baltimore (I)	78.54		149.19		1,475	1,680	15,877		18,378
Massachusetts	Boston (I)	109.32		212.21		2,186	2,736	29,436		33,161
	Cambridge (I)	112.96	<b>i</b>	219.03		2,016	2,564	25,632		29,409
	Springfield (I)	110.82	2	219.63		1,785	2,252	24,476		27,896
Michigan	Detroit (I)	76.87	,	154.32		1,159	1,483	14,625		15,712
	Grand Rapids (I)	75.48	}	147.64		1,415	1,791	15,870		18,892
	Lansing (M)	72.78	}	134.80		1,482	1,841	19,436		22,124
Minnesota	Duluth (I)	49.70	)	103.65		1,023	1,334	13,184		15,030
	Minneapolis (I)	69.29	)	127.92		1,143	1,596	15,258		17,118
Mississippi	Jackson (I)	62.13	}	99.89		1,064	1,359	11,994		13,747
Missouri	Kansas City (I)	74.03	}	123.39		1,148	1,390	15,538		17,216
	Saint Louis (I)	62.34		111.90		981	1,369	13,002		14,931
	Springfield (M)	51.90	)	92.92		973	1,139	12,970		14,212
Montana	Billings (I)	59.02		112.72		1,153	1,459	15,230		17,483
Nebraska	Lincoln (M)	55.07	,	93.62		773	1,057	14,362		15,184
	Omaha (M)	63.95	;	116.64		870	1,124	12,738		14,036

#### M - Municipal or Public Power District

						40 kW		40 kW	500	kW		500 kW
CITY		500 kWh		1,000 kWh		10,000 kWh		14,000 kWh	150,000	) kWh	18	30,000 kWh
Las Vegas (I)	\$	69.00	\$	125.25	\$	977	\$	1,222	\$	12,604	\$	14,233
Reno (I)		59.20		103.15		899		1,092		12,625		14,015
Manchester (I)		94.99		172.99		1,697		2,147		22,266		25,471
Newark (I)		81.94		163.28		1,526		1,863		19,750		21,494
Albuquerque (I)		57.49		125.99		1,247		1,743		15,552		17,115
Buffalo (I)		67.22		116.92		779		886		9,449		10,219
Hempstead (M)		92.69		176.15		1,631		2,100		23,742		27,326
New York City (I)		127.20		237.76		2,278		2,699		30,678		33,832
Charlotte (I)		59.72		107.11		894		1,092		11,866		13,453
Raleigh (I)		61.17		110.04		905		1,115		11,321		12,717
Fargo (I)		58.99		102.99		1,054		1,284		14,315		16,038
Cincinnati (I)		68.13		123.79		1,167		1,353		15,008		16,362
Cleveland (I)		68.30		132.32		1,338		1,672		15,855		18,262
Columbus (I)		72.07		131.62		1,100		1,387		15,302		17,442
Oklahoma City (I)		58.13		94.55		805		956		10,124		11,256
Tulsa (I)		44.78		89.34		804		1,050		8,714		9,719
Eugene (M)		63.36		109.19		980		1,230		13,129		15,000
Portland (I)		62.49		112.99		1,012		1,304		12,552		14,417
Erie (I)		77.89		145.76		1,092		1,427		15,163		17,477
Philadelphia (I)		80.75		154.40		1,195		1,548		15,883		18,288
Pittsburgh (I)		80.10		147.11		1,122		1,449		15,036		16,687
Pawtucket (I)		92.36		178.56		2,164		2,856		25,371		29,710
Columbia (I)		79.70		149.58		1,339		1,861		19,933		21,585
Myrtle Beach (M)		88.64		156.64		1,377		1,919		23,107		25,394
Sioux Falls (I)		58.99		102.99		1,054		1,284		14,315		16,038
Knoxville (M)		58.44		101.88		1,030		1,434		15,519		17,232
Memphis (M)		56.25		98.71		986		1,374		14,959		16,657
Nashville (M)		63.16		114.48		1,176		1,612		16,435		18,312
	Las Vegas (I) Reno (I) Manchester (I) Newark (I) Albuquerque (I) Buffalo (I) Hempstead (M) New York City (I) Charlotte (I) Raleigh (I) Fargo (I) Cincinnati (I) Cleveland (I) Columbus (I) Oklahoma City (I) Tulsa (I) Eugene (M) Portland (I) Erie (I) Philadelphia (I) Pittsburgh (I) Pawtucket (I) Columbia (I) Myrtle Beach (M) Sioux Falls (I) Knoxville (M) Memphis (M)	Las Vegas (I) Reno (I) Manchester (I) Newark (I) Albuquerque (I) Buffalo (I) Hempstead (M) New York City (I) Charlotte (I) Raleigh (I) Fargo (I) Cincinnati (I) Cleveland (I) Columbus (I) Oklahoma City (I) Tulsa (I) Eugene (M) Portland (I) Erie (I) Philadelphia (I) Pittsburgh (I) Pawtucket (I) Columbia (I) Myrtle Beach (M) Sioux Falls (I) Knoxville (M)	Las Vegas (I) \$ 69.00 Reno (I) 59.20 Manchester (I) 94.99 Newark (I) 81.94 Albuquerque (I) 57.49 Buffalo (I) 67.22 Hempstead (M) 92.69 New York City (I) 127.20 Charlotte (I) 59.72 Raleigh (I) 61.17 Fargo (I) 58.99 Cincinnati (I) 68.13 Cleveland (I) 68.30 Columbus (I) 72.07 Oklahoma City (I) 58.13 Tulsa (I) 44.78 Eugene (M) 63.36 Portland (I) 62.49 Erie (I) 77.89 Philadelphia (I) 80.75 Pittsburgh (I) 92.36 Columbia (I) 79.70 Myrtle Beach (M) 88.64 Sioux Falls (I) 58.99 Knoxville (M) 58.44 Memphis (M) 56.25	Las Vegas (I) \$ 69.00 \$  Reno (I) 59.20  Manchester (I) 94.99  Newark (I) 81.94  Albuquerque (I) 57.49  Buffalo (I) 67.22  Hempstead (M) 92.69  New York City (I) 127.20  Charlotte (I) 59.72  Raleigh (I) 61.17  Fargo (I) 68.13  Cleveland (I) 68.30  Columbus (I) 72.07  Oklahoma City (I) 58.13  Tulsa (I) 44.78  Eugene (M) 63.36  Portland (I) 62.49  Erie (I) 77.89  Philadelphia (I) 80.75  Pittsburgh (I) 80.10  Pawtucket (I) 92.36  Columbia (I) 79.70  Myrtle Beach (M) 88.64  Sioux Falls (I) 58.99  Knoxville (M) 58.44  Memphis (M) 56.25	Las Vegas (I) \$ 69.00 \$ 125.25 Reno (I) 59.20 103.15 Manchester (I) 94.99 172.99 Newark (I) 81.94 163.28 Albuquerque (I) 57.49 125.99 Buffalo (I) 67.22 116.92 Hempstead (M) 92.69 176.15 New York City (I) 127.20 237.76 Charlotte (I) 59.72 107.11 Raleigh (I) 61.17 110.04 Fargo (I) 58.99 102.99 Cincinnati (I) 68.13 123.79 Cleveland (I) 68.30 132.32 Columbus (I) 72.07 131.62 Oklahoma City (I) 58.13 94.55 Tulsa (I) 44.78 89.34 Eugene (M) 63.36 109.19 Portland (I) 62.49 112.99 Erie (I) 77.89 145.76 Philadelphia (I) 80.75 154.40 Pittsburgh (I) 80.10 147.11 Pawtucket (I) 92.36 178.56 Columbia (I) 79.70 149.58 Myrtle Beach (M) 88.64 156.64 Sioux Falls (I) 58.99 102.99 Knoxville (M) 58.44 101.88 Memphis (M) 56.25 98.71	Las Vegas (I)       \$ 69.00       \$ 125.25       \$ Reno (I)         Manchester (I)       94.99       172.99         Newark (I)       81.94       163.28         Albuquerque (I)       57.49       125.99         Buffalo (I)       67.22       116.92         Hempstead (M)       92.69       176.15         New York City (I)       127.20       237.76         Charlotte (I)       59.72       107.11         Raleigh (I)       61.17       110.04         Fargo (I)       58.99       102.99         Cincinnati (I)       68.13       123.79         Cleveland (I)       68.30       132.32         Columbus (I)       72.07       131.62         Oklahoma City (I)       58.13       94.55         Tulsa (I)       44.78       89.34         Eugene (M)       63.36       109.19         Portland (I)       62.49       112.99         Erie (I)       77.89       145.76         Philadelphia (I)       80.75       154.40         Pittsburgh (I)       80.10       147.11         Pawtucket (I)       92.36       178.56         Columbia (I)       79.70       149.58	CITY         500 kWh         1,000 kWh         10,000 kWh           Las Vegas (I)         \$ 69.00         \$ 125.25         \$ 977           Reno (I)         59.20         103.15         899           Manchester (I)         94.99         172.99         1,697           Newark (I)         81.94         163.28         1,526           Albuquerque (I)         57.49         125.99         1,247           Buffalo (I)         67.22         116.92         779           Hempstead (M)         92.69         176.15         1,631           New York City (I)         127.20         237.76         2,278           Charlotte (I)         59.72         107.11         894           Raleigh (I)         61.17         110.04         905           Fargo (I)         58.99         102.99         1,054           Cincinnati (I)         68.13         123.79         1,167           Cleveland (I)         68.30         132.32         1,338           Columbus (I)         72.07         131.62         1,100           Oklahoma City (I)         58.13         94.55         805           Tulsa (I)         44.78         89.34         804	CITY         500 kWh         1,000 kWh         10,000 kWh           Las Vegas (I)         \$ 69.00         \$ 125.25         \$ 977         \$ Reno (I)           Reno (I)         59.20         103.15         899           Manchester (I)         94.99         172.99         1,697           Newark (I)         81.94         163.28         1,526           Albuquerque (I)         57.49         125.99         1,247           Buffalo (I)         67.22         116.92         779           Hempstead (M)         92.69         176.15         1,631           New York City (I)         127.20         237.76         2,278           Charlotte (I)         59.72         107.11         894           Raleigh (I)         61.17         110.04         905           Fargo (I)         58.99         102.99         1,054           Cincinnati (I)         68.13         123.79         1,167           Cleveland (I)         68.33         132.32         1,338           Columbus (I)         72.07         131.62         1,100           Oklahoma City (I)         58.13         94.55         805           Tulsa (I)         44.78         89.34         804	CITY         500 kWh         1,000 kWh         10,000 kWh         14,000 kWh           Las Vegas (I)         \$ 69.00         \$ 125.25         \$ 977         \$ 1,222           Reno (I)         59.20         103.15         899         1,092           Manchester (I)         94.99         172.99         1,697         2,147           Newark (I)         81.94         163.28         1,526         1,863           Albuquerque (I)         57.49         125.99         1,247         1,743           Buffalo (I)         67.22         116.92         779         886           Hempstead (M)         92.69         176.15         1,631         2,100           New York City (I)         127.20         237.76         2,278         2,699           Charlotte (I)         59.72         107.11         894         1,092           Raleigh (I)         61.17         110.04         905         1,115           Fargo (I)         58.99         102.99         1,054         1,284           Cincinnati (I)         68.13         123.79         1,167         1,353           Cleveland (I)         68.30         132.32         1,338         1,672           Columbus (I)	CITY         500 kWh         1,000 kWh         10,000 kWh         14,000 kWh         150,000           Las Vegas (I)         \$ 69.00         \$ 125.25         \$ 977         \$ 1,222         \$ 800           Reno (I)         59.20         103.15         899         1,092         \$ 1,092           Manchester (I)         94.99         172.99         1,697         2,147           Newark (I)         81.94         163.28         1,526         1,863           Albuquerque (I)         57.49         125.99         1,247         1,743           Buffalo (I)         67.22         116.92         779         886           Hempstead (M)         92.69         176.15         1,631         2,100           New York City (I)         127.20         237.76         2,278         2,699           Charlotte (I)         59.72         107.11         894         1,092           Raleigh (I)         61.17         110.04         905         1,115           Fargo (I)         58.99         102.99         1,054         1,284           Cincinnati (I)         68.13         123.79         1,167         1,353           Cleveland (I)         72.07         131.62         1,100	CITY         500 kWh         1,000 kWh         10,000 kWh         14,000 kWh         150,000 kWh           Las Vegas (I)         \$ 69.00         \$ 125.25         \$ 977         \$ 1,222         \$ 12,604           Reno (I)         59.20         103.15         899         1,092         12,625           Manchester (I)         94.99         172.99         1,697         2,147         22,266           Newark (I)         81.94         163.28         1,526         1,863         19,750           Albuquerque (I)         57.49         125.99         1,247         1,743         15,552           Buffalo (I)         67.22         116.92         779         886         9,449           Hempstead (M)         92.69         176.15         1,631         2,100         23,722           New York City (I)         127.20         237.76         2,278         2,699         30,678           Raleigh (I)         51.72         107.11         894         1,092         11,866           Raleigh (I)         61.17         110.04         905         1,115         11,321           Fargo (I)         68.13         123.79         1,167         1,353         15,085           Cliveland (I)	CITY         500 kWh         1,000 kWh         10,000 kWh         14,000 kWh         150,000 kWh         18           Las Vegas (I)         \$ 69.00         \$ 125.25         \$ 977         \$ 1,222         \$ 12,604         \$ Reno (I)           Menchester (I)         94.99         172.99         1,697         2,147         22,266           Newark (I)         81.94         163.28         1,526         1,863         19,750           Albuquerque (I)         57.49         125.99         1,247         1,743         15,552           Buffalo (I)         67.22         116.92         779         886         9,449           Hempstead (M)         92.69         176.15         1,631         2,100         23,742           New York City (I)         127.20         237.76         2,278         2,699         30,678           Charlotte (I)         59.72         107.11         894         1,092         11,866           Raleigh (I)         61.17         110.04         905         1,115         11,321           Fargo (I)         58.99         102.99         1,054         1,284         14,315           Cincinnati (I)         68.13         123.79         1,167         1,353         15,008

#### M - Municipal or Public Power District

STATE	CITY	500 kWh	1,000 kWh	40 kW 10,000 kWh	1	40 kW 4,000 kWh	1	500 kW 50,000 kWh	1	500 kW 80,000 kWh
Texas	Austin (M)	\$ 45.26	\$ 101.01	\$ 1,175	\$	1,411	\$	15,663	\$	17,171
	El Paso (I)	56.17	107.33	1,104		1,333		15,025		16,692
	Amarillo (I)	55.30	103.01	899		1,024		11,713		12,654
Utah	Salt Lake City (I)	55.81	114.82	1,150		1,306		14,641		15,811
Vermont	Burlington (M)	83.01	161.77	1,775		2,129		23,926		26,576
Virginia	Richmond (I)	61.02	113.24	1,024		1,233		13,599		14,432
	Roanoke (I)	61.99	114.99	1,049		1,266		14,584		15,939
Washington	Seattle (M)	34.67	88.22	716		1,002		11,285		13,310
	Spokane (I)	44.84	83.63	1,224		1,514		14,060		16,232
	Tacoma (M)	47.57	84.65	790		1,098		9,979		11,215
West Virginia	Charleston (I)	61.94	109.82	1,023		1,287		14,238		16,039
	Wheeling (I)	61.94	109.82	1,023		1,287		14,238		16,039
Wisconsin	Madison (I)	84.61	150.22	1,447		1,729		18,298		20,391
	Milwaukee (I)	81.18	146.37	1,326		1,733		17,663		19,624
Wyoming	Cheyenne (I)	81.00	149.00	1,655		1,906		19,175		20,828

M - Municipal or Public Power District

I - Investor-owned utility

				40 kW	40 kW	500 kW	500 kW
STATE	CITY	500 kWh	1,000 kWh	10,000 kWh	14,000 kWh	150,000 kWh	180,000 kWh
Alabama	Birmingham (I)	63	58	72	70	75	78
	Huntsville (M)	8	5	18	34	32	32
Alaska	Anchorage (M)	87	89	92	91	92	92
	Fairbanks (M)	92	92	90	93	95	93
Arizona	Mesa (M)	56	46	57	40	66	61
	Phoenix (I)	53	56	82	73	57	50
	Tucson (I)	43	51	74	85	73	72
Arkansas	Little Rock (I)	15	19	13	17	18	17
California	Los Angeles (M)	95	86	85	86	84	84
	Sacramento (M)	66	64	76	79	77	82
	San Diego (I)	97	100	100	98	99	98
	San Francisco (I)	88	98	95	95	96	96
Colorado	Colorado Springs (M)	51	44	8	20	48	42
	Denver (I)	6	14	32	18	24	18
	Pueblo (I)	86	70	84	77	87	85
Connecticut	Bridgeport (I)	98	96	93	92	89	90
Delaware	Wilmington (I)	71	71	59	49	70	69
District of Columbia	• ,	59	63	66	76	80	81
Florida	Jacksonville (M)	52	59	62	69	76	76
	Miami (I)	12	11	21	21	25	23
	Tampa (I)	31	28	34	26	33	34
Georgia	Atlanta (I)	46	48	77	62	69	62
Hawaii	Honolulu (I)	100	99	99	100	100	100
Idaho	Boise (I)	10	13	2	3	7	7
Illinois	Chicago (I)	50	45	26	31	39	45
	Springfield (M)	44	52	78	82	83	83
Indiana	Evansville (I)	83	83	60	64	27	29
	Gary (I)	49	50	67	65	61	60
	Indianapolis (I)	32	16	41	52	29	30

2016 National Rate Study Schedules

#### M - Municipal or Public Power District

				40 kW	40 kW	500 kW	500 kW
STATE	CITY	500 kWh	1,000 kWh	10,000 kWh	14,000 kWh	150,000 kWh	180,000 kWh
lowa	Cedar Rapids (I)	74	69	48	59	67	71
	Davenport (I)	20	26	10	6	6	6
	Des Moines (I)	21	27	9	5	3	3
Kansas	Kansas City (M)	42	37	46	39	63	57
	Overland Park (I)	62	61	65	57	62	63
	Wichita (I)	68	67	63	61	64	58
Kentucky	Lexington (I)	22	21	40	54	28	24
	Louisville (I)	35	35	45	56	68	59
Louisiana	Baton Rouge (I)	7	6	11	11	10	10
	New Orleans (I)	11	8	17	19	13	12
	Shreveport (I)	13	12	19	16	14	14
Maine	Portland (I)	70	72	69	66	74	75
Maryland	Baltimore (I)	75	78	80	68	59	67
Massachusetts	Boston (I)	93	93	97	97	97	97
	Cambridge (I)	96	94	94	94	94	94
	Springfield (I)	94	95	91	90	91	91
Michigan	Detroit (I)	72	81	53	53	41	31
	Grand Rapids (I)	69	76	75	75	58	68
	Lansing (M)	65	68	81	78	79	80
Minnesota	Duluth (I)	9	25	28	36	23	27
	Minneapolis (I)	61	62	49	60	50	49
Mississippi	Jackson (I)	39	17	38	38	12	13
Missouri	Kansas City (I)	67	53	50	45	53	52
	Saint Louis (I)	40	36	24	41	21	25
	Springfield (M)	14	7	20	15	20	19
Montana	Billings (I)	28	38	52	51	49	56
Nebraska	Lincoln (M)	16	9	3	8	38	28
	Omaha (M)	48	47	12	14	19	16

#### M - Municipal or Public Power District

				40 kW	40 kW	500 kW	500 kW
STATE	CITY	500 kWh	1,000 kWh	10,000 kWh	14,000 kWh	150,000 kWh	180,000 kWh
Nevada	Las Vegas (I)	60	55	22	22	16	20
	Reno (I)	29	24	15	10	17	15
New Hampshire	Manchester (I)	91	88	88	89	85	87
New Jersey	Newark (I)	81	87	83	81	81	77
New Mexico	Albuquerque (I)	23	57	64	74	54	48
New York	Buffalo (I)	54	49	4	1	2	2
	Hempstead (M)	90	90	86	87	88	89
	New York City (I)	99	97	98	96	98	99
North Carolina	Charlotte (I)	30	29	14	9	11	11
	Raleigh (I)	34	34	16	13	9	8
North Dakota	Fargo (I)	26	22	36	27	36	36
Ohio	Cincinnati (I)	57	54	54	37	44	43
	Cleveland (I)	58	66	70	67	56	64
	Columbus (I)	64	65	43	44	51	54
Oklahoma	Oklahoma City (I)	24	10	7	2	5	5
	Tulsa (I)	2	4	6	7	1	1
Oregon	Eugene (M)	47	31	23	23	22	26
	Portland (I)	41	39	27	32	15	21
Pennsylvania	Erie (I)	73	73	42	47	47	55
	Philadelphia (I)	78	82	58	58	60	65
	Pittsburgh (I)	77	75	47	50	46	46
Rhode Island	Pawtucket (I)	89	91	96	99	93	95
South Carolina	Columbia (I)	76	79	71	80	82	79
	Myrtle Beach (M)	85	84	73	84	86	86
South Dakota	Sioux Falls (I)	26	22	36	27	36	36
Tennessee	Knoxville (M)	25	20	33	48	52	53
	Memphis (M)	19	15	25	42	43	44
	Nashville (M)	45	41	56	63	65	66

#### M - Municipal or Public Power District

STATE	CITY	500 kWh	1,000 kWh	40 kW 10,000 kWh	40 kW 14,000 kWh	500 kW 150,000 kWh	500 kW 180,000 kWh
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Texas	Austin (M)	4	18	55	46	55	51
	El Paso (I)	18	30	44	35	45	47
	Amarillo (I)	17	24	15	5	11	8
Utah	Salt Lake City (I)	17	42	51	33	42	33
Vermont	Burlington (M)	82	85	89	88	90	88
Virginia	Richmond (I)	33	40	31	24	26	22
	Roanoke (I)	38	43	35	25	40	35
Washington	Seattle (M)	1	3	1	4	8	9
	Spokane (I)	3	1	61	55	30	41
	Tacoma (M)	5	2	5	12	4	4
West Virginia	Charleston (I)	36	32	29	29	34	38
	Wheeling (I)	36	32	29	29	34	38
Wisconsin	Madison (I)	84	80	79	71	72	73
	Milwaukee (I)	80	74	68	72	71	70
Wyoming	Cheyenne (I)	79	77	87	83	78	74

M - Municipal or Public Power District

		75 kW	75 kW	75 kW	1,000 kW	1,000 kW	1,000 kW
STATE	CITY	15,000 kWh	30,000 kWh	50,000 kWh	200,000 kWh	400,000 kWh	650,000 kWh
Alabama	Birmingham (I)	\$ 2,034	\$ 3,472	\$ 5,288	\$ 17,608	\$ 28,446	\$ 40,482
	Huntsville (M)	2,282	3,077	4,138	22,289	32,899	46,162
Alaska	Anchorage (M)	2,970	4,624	6,829	39,055	61,106	88,670
	Fairbanks (M)	3,354	4,716	6,532	38,894	63,619	94,524
Arizona	Mesa (M)	1,892	2,754	3,892	22,213	34,060	44,851
	Phoenix (I)	2,508	3,286	4,323	26,124	34,744	45,519
	Tucson (I)	2,922	3,908	5,223	29,116	40,668	55,107
Arkansas	Little Rock (I)	1,418	2,417	3,500	18,926	29,771	36,942
California	Los Angeles (M)	2,575	4,204	6,377	32,455	53,855	80,605
	Sacramento (M)	2,225	3,877	6,081	25,694	47,404	74,542
	San Diego (I)	4,118	5,528	7,408	52,589	71,321	94,738
	San Francisco (I)	3,205	5,320	8,140	46,263	64,630	87,590
Colorado	Colorado Springs (M)	1,245	2,469	3,355	27,108	31,901	37,207
	Denver (I)	1,771	2,259	2,910	22,580	30,282	39,910
	Pueblo (I)	3,241	4,041	5,109	42,047	52,720	66,061
Connecticut	Bridgeport (I)	2,909	5,082	7,360	38,094	58,249	83,443
Delaware	Wilmington (I)	1,993	2,887	4,077	27,990	40,467	56,063
District of Columbia	Washington (I)	2,023	3,513	5,500	25,459	43,124	65,205
Florida	Jacksonville (M)	2,229	3,533	5,270	30,124	45,634	65,022
	Miami (I)	1,611	2,406	3,465	21,737	31,321	42,671
	Tampa (I)	1,708	2,583	3,750	22,396	34,064	48,648
Georgia	Atlanta (I)	2,339	3,003	3,812	31,745	41,147	51,703
Hawaii	Honolulu (I)	3,725	6,467	10,122	56,324	87,459	126,377
Idaho	Boise (I)	1,225	1,992	3,016	15,976	25,012	36,307
Illinois	Chicago (I)	1,588	2,688	4,155	20,133	34,803	53,141
	Springfield (M)	2,470	3,936	5,890	31,332	50,870	75,294
Indiana	Evansville (I)	1,946	3,459	4,996	21,415	33,357	48,284
	Gary (I)	2,058	3,245	4,795	24,703	37,721	53,993
	Indianapolis (I)	1,795	2,695	3,896	22,376	33,161	46,643
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M - Municipal or Public Power District

STATE	CITY	75 kW 15,000 kWh	75 kW 30,000 kWh	75 kW 50,000 kWh	1,000 kW 200,000 kWh	1,000 kW 400,000 kWh	1,000 kW 650,000 kWh
lowa	Cedar Rapids (I)	\$ 1,79	4 \$ 2,33	<b>3,059</b>	\$ 23,480	\$ 30,709	\$ 39,745
	Davenport (I)	1,38	1 2,13	3,083	15,473	24,985	36,142
	Des Moines (I)	1,38	0 2,13	5 3,081	14,337	23,013	33,125
Kansas	Kansas City (M)	1,90	7 2,83	3,775	23,944	36,254	48,066
	Overland Park (I)	2,04	1 3,11	5 4,471	26,017	38,826	52,004
	Wichita (I)	1,90	6 3,31	5,188	27,986	36,173	46,406
Kentucky	Lexington (I)	2,15	1 2,58	3,170	23,604	29,395	36,633
	Louisville (I)	2,10	5 2,718	3,536	25,817	33,758	43,684
Louisiana	Baton Rouge (I)	1,36	4 2,22	3,327	17,022	28,283	41,878
	New Orleans (I)	1,45	6 2,409	9 3,421	18,573	29,213	41,396
	Shreveport (I)	1,45	8 2,23	3,267	19,415	29,658	41,311
Maine	Portland (I)	2,17	9 3,37	4,958	29,678	40,157	53,255
Maryland	Baltimore (I)	2,20	3 3,58	5,574	30,346	39,874	55,272
Massachusetts	Boston (I)	3,77	2 5,83	4 8,583	46,215	71,053	102,101
	Cambridge (I)	3,28	7 5,34	4 8,087	39,418	64,598	96,073
	Springfield (I)	2,78	1 4,533	2 6,867	36,855	59,650	88,144
Michigan	Detroit (I)	1,71	8 2,87	3,559	22,409	32,176	41,122
	Grand Rapids (I)	1,62	2 3,13	3 4,066	20,907	36,201	47,156
	Lansing (M)	2,34	2 3,680	5,478	29,796	47,716	70,116
Minnesota	Duluth (I)	1,61	7 2,78	2 4,337	19,666	32,340	47,720
	Minneapolis (I)	1,84	7 2,77	7 3,761	23,487	35,085	49,581
Mississippi	Jackson (I)	1,62	2 2,67	1 4,071	16,473	27,941	37,814
Missouri	Kansas City (I)	1,96	8 2,79	7 3,681	27,088	36,440	44,379
	Saint Louis (I)	1,46	7 2,543	3,573	18,315	30,409	42,701
	Springfield (M)	1,63	3 2,25	4 3,082	21,500	29,780	40,130
Montana	Billings (I)	1,86	4 3,014	4,547	20,352	35,096	53,525
Nebraska	Lincoln (M)	1,12	8 2,05	7 2,667	24,647	29,969	36,622
	Omaha (M)	1,42	6 2,25	2 3,117	18,771	28,791	39,389

M - Municipal or Public Power District

		75 kW	75 kW		75 kW	1,000 kW	1,000 kW	1,000 kW
STATE	CITY	 15,000 kWh	30,000 kWh		50,000 kWh	200,000 kWh	400,000 kWh	650,000 kWh
Nevada	Las Vegas (I)	\$ 1,583	\$ 2,502	9	3,728	\$ 20,619	\$ 30,993	\$ 43,959
	Reno (I)	1,495	2,219		3,184	21,476	30,469	41,711
New Hampshire	Manchester (I)	2,748	4,436		6,687	33,640	54,820	81,291
New Jersey	Newark (I)	2,541	3,806		5,493	31,060	42,337	56,433
New Mexico	Albuquerque (I)	2,035	3,035		4,150	25,804	36,222	48,798
New York	Buffalo (I)	1,314	1,714		2,248	15,892	21,023	27,438
	Hempstead (M)	2,579	4,335		6,675	35,235	59,125	88,987
	New York City (I)	3,411	4,963		7,033	45,087	65,786	91,659
North Carolina	Charlotte (I)	1,390	2,274		3,082	17,770	28,561	39,379
	Raleigh (I)	1,428	2,132		3,015	21,874	31,652	42,394
North Dakota	Fargo (I)	1,677	2,522		3,438	22,042	33,307	44,765
Ohio	Cincinnati (I)	1,960	2,647		3,535	25,295	34,461	45,553
	Cleveland (I)	2,210	3,461		5,130	18,387	32,138	49,326
	Columbus (I)	1,777	2,850		4,277	21,764	35,422	52,394
Oklahoma	Oklahoma City (I)	1,301	1,867		2,623	14,816	21,374	29,572
	Tulsa (I)	1,191	2,009		2,929	13,771	20,472	28,847
Oregon	Eugene (M)	1,552	2,487		3,735	19,868	29,570	41,698
_	Portland (I)	1,584	2,681		4,144	18,236	30,673	46,220
Pennsylvania	Erie (I)	2,086	3,129		4,521	18,743	32,656	50,048
	Philadelphia (I)	1,955	3,183		4,820	20,200	31,820	46,345
	Pittsburgh (I)	1,783	3,021		4,671	24,208	35,217	48,978
Rhode Island	Pawtucket (I)	3,264	5,833		9,259	36,252	65,182	101,346
South Carolina	Columbia (I)	1,992	3,655		4,843	27,372	39,379	52,807
	Myrtle Beach (M)	2,904	4,063		5,608	38,564	53,812	72,873
South Dakota	Sioux Falls (I)	1,677	2,522		3,438	22,042	33,307	44,765
Tennessee	Knoxville (M)	2,114	2,971		4,113	25,072	36,498	50,780
	Memphis (M)	1,959	2,808		3,941	24,093	35,414	49,566
	Nashville (M)	2,169	3,107		4,358	26,410	38,922	54,562
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#### M - Municipal or Public Power District

STATE	CITY	5 kW 00 kWh	75 kW 000 kWh	75 kW 50,000 kWh	1,000 kW 200,000 kWh	1,000 kW 400,000 kWh	(	1,000 kW 650,000 kWh
Texas	Austin (M)	\$ 2,028	\$ 2,782	\$ 3,787	\$ 26,234	\$ 36,289	\$	48,858
	El Paso (I)	1,840	2,660	3,605	27,000	34,231		43,268
	Amarillo (I)	1,445	1,894	2,493	17,252	23,245		30,735
Utah	Salt Lake City (I)	1,956	2,541	3,321	25,914	34,077		44,282
Vermont	Burlington (M)	2,961	4,286	6,053	39,449	56,960		78,848
Virginia	Richmond (I)	1,756	2,435	3,014	24,182	29,848		36,790
	Roanoke (I)	1,633	2,530	3,434	19,991	31,109		40,153
Washington	Seattle (M)	1,187	2,199	3,549	15,820	29,320		46,195
	Spokane (I)	1,736	2,822	4,270	20,680	35,240		53,472
	Tacoma (M)	1,230	1,848	2,672	15,788	24,027		34,325
West Virginia	Charleston (I)	1,652	2,508	3,112	19,311	30,353		37,734
	Wheeling (I)	1,652	2,508	3,112	19,311	30,353		37,734
Wisconsin	Madison (I)	2,285	3,342	4,750	29,347	43,301		57,063
	Milwaukee (I)	2,075	3,169	4,476	27,623	39,746		54,900
Wyoming	Cheyenne (I)	2,663	3,489	4,591	32,605	43,625		57,400

M - Municipal or Public Power District I - Investor-owned utility

STATE	CITY	75 kW 15,000 kWh	75 kW 30,000 kWh	75 kW 50,000 kWh	1,000 kW 200,000 kWh	1,000 kW 400,000 kWh	1,000 kW 650,000 kWh
Alabama	Birmingham (I)	60	73	78	11	10	22
	Huntsville (M)	75	59	51	42	39	42
Alaska	Anchorage (M)	91	91	91	92	92	92
	Fairbanks (M)	96	92	88	91	93	95
Arizona	Mesa (M)	47	42	44	41	45	39
	Phoenix (I)	80	67	58	64	50	40
	Tucson (I)	89	82	76	74	74	73
Arkansas	Little Rock (I)	13	21	29	19	18	11
California	Los Angeles (M)	82	86	87	83	86	87
	Sacramento (M)	73	81	86	59	81	84
	San Diego (I)	100	97	95	99	99	96
	San Francisco (I)	92	95	97	98	95	90
Colorado	Colorado Springs (M)	6	23	23	69	34	12
	Denver (I)	39	16	5	46	22	19
	Pueblo (I)	93	84	73	95	84	81
Connecticut	Bridgeport (I)	88	94	94	89	89	89
Delaware	Wilmington (I)	57	53	49	73	73	75
District of Columbia	Washington (I)	58	75	81	58	77	80
Florida	Jacksonville (M)	74	76	77	78	80	79
	Miami (I)	24	19	28	36	31	30
	Tampa (I)	34	33	39	44	46	52
Georgia	Atlanta (I)	77	55	43	82	75	61
Hawaii	Honolulu (I)	98	100	100	100	100	100
Idaho	Boise (I)	4	4	9	8	7	7
Illinois	Chicago (I)	23	39	54	26	51	66
	Springfield (M)	79	83	84	81	83	85
Indiana	Evansville (I)	50	71	72	33	43	51
	Gary (I)	63	66	68	55	66	70
	Indianapolis (I)	43	40	45	43	40	47

M - Municipal or Public Power District I - Investor-owned utility

STATE	CITY	75 kW 15,000 kWh	75 kW 30,000 kWh	75 kW 50,000 kWh	1,000 kW	1,000 kW	1,000 kW
lowa	Cedar Rapids (I)	15,000 KWII 42	18	10	<b>200,000 kWh</b> 47	<b>400,000 kWh</b>	650,000 kWh
iowa	Davenport (I)	11	9	14	47	6	6
	Davenport (I)  Des Moines (I)	10	8	14	2	4	0
Kansas	Kansas City (M)	49	49	41	50	62	50
Nansas	Overland Park (I)	62	61	61	63	67	62
	Wichita (I)	48	68	75	72	59	46
Kentucky	Lexington (I)	68	34	18	49	15	9
Remucky	Louisville (I)	66	41	31	61	44	33
Louisiana	Baton Rouge (I)	9	12	22	10	9	28
Louisiaria	New Orleans (I)	16	20	24	16	13	25
	Shreveport (I)	17	13	20	22	17	24
Maine	Portland (I)	70	70	71	76	72	67
Maryland	Baltimore (I)	71	77	82	79	71	74
Massachusetts	Boston (I)	99	99	98	97	98	99
	Cambridge (I)	95	96	96	93	94	97
	Springfield (I)	86	90	92	88	91	91
Michigan	Detroit (I)	36	52	33	45	36	23
, and the second	Grand Rapids (I)	26	63	47	31	60	48
	Lansing (M)	78	79	79	77	82	82
Minnesota	Duluth (I)	25	45	59	23	37	49
	Minneapolis (I)	45	43	40	48	53	58
Mississippi	Jackson (I)	26	37	48	9	8	15
Missouri	Kansas City (I)	55	46	36	68	64	36
	Saint Louis (I)	18	32	34	14	25	31
	Springfield (M)	28	15	12	35	19	20
Montana	Billings (I)	46	56	64	28	54	69
Nebraska	Lincoln (M)	1	6	3	54	21	8
	Omaha (M)	14	14	17	18	12	17

M - Municipal or Public Power District I - Investor-owned utility

		75 kW	75 kW	75 kW	1,000 kW	1,000 kW	1,000 kW
STATE	CITY	15,000 kWh	30,000 kWh	50,000 kWh	200,000 kWh	400,000 kWh	650,000 kWh
Nevada	Las Vegas (I)	21	25	37	29	29	34
	Reno (I)	19	11	19	34	26	27
New Hampshire	Manchester (I)	85	89	90	85	87	88
New Jersey	Newark (I)	81	80	80	80	76	76
New Mexico	Albuquerque (I)	61	58	53	60	61	53
New York	Buffalo (I)	8	1	1	7	2	1
	Hempstead (M)	83	88	89	86	90	93
	New York City (I)	97	93	93	96	97	94
North Carolina	Charlotte (I)	12	17	13	12	11	16
	Raleigh (I)	15	7	8	38	32	29
North Dakota	Fargo (I)	32	28	26	39	41	37
Ohio	Cincinnati (I)	54	35	30	57	49	41
	Cleveland (I)	72	72	74	15	35	56
	Columbus (I)	40	51	56	37	58	64
Oklahoma	Oklahoma City (I)	7	3	2	3	3	3
	Tulsa (I)	3	5	6	1	1	2
Oregon	Eugene (M)	20	24	38	24	16	26
	Portland (I)	22	38	52	13	27	44
Pennsylvania	Erie (I)	65	62	63	17	38	59
	Philadelphia (I)	51	65	69	27	33	45
	Pittsburgh (I)	41	57	66	53	55	55
Rhode Island	Pawtucket (I)	94	98	99	87	96	98
South Carolina	Columbia (I)	56	78	70	70	69	65
	Myrtle Beach (M)	87	85	83	90	85	83
South Dakota	Sioux Falls (I)	32	28	26	39	41	37
Tennessee	Knoxville (M)	67	54	50	56	65	60
	Memphis (M)	53	47	46	51	57	57
	Nashville (M)	69	60	60	66	68	71

M - Municipal or Public Power District I - Investor-owned utility

07.475	OITV	75 kW	75 kW	75 kW	1,000 kW	1,000 kW	1,000 kW
STATE	CITY	15,000 kWh	30,000 kWh	50,000 kWh	200,000 kWh	400,000 kWh	650,000 kWh
Texas	Austin (M)	59	44	42	65	63	54
	El Paso (I)	44	36	35	67	48	32
	Amarillo (I)	16	4	2	11	5	4
Utah	Salt Lake City (I)	52	31	21	62	47	35
Vermont	Burlington (M)	90	87	85	94	88	86
Virginia	Richmond (I)	38	22	7	52	20	10
	Roanoke (I)	29	30	25	25	30	21
Washington	Seattle (M)	2	10	32	6	14	43
	Spokane (I)	37	48	55	30	56	68
	Tacoma (M)	5	2	4	5	5	5
West Virginia	Charleston (I)	30	26	15	20	23	13
	Wheeling (I)	30	26	15	20	23	13
Wisconsin	Madison (I)	76	69	67	75	78	77
	Milwaukee (I)	64	64	62	71	70	72
Wyoming	Cheyenne (I)	84	74	65	84	79	78

#### M - Municipal or Public Power District

STATE	CITY	Name of Utility	Utility Type
Alabama	Birmingham	Alabama Power Company	I
	Huntsville	City of Huntsville - (AL)	M
Alaska	Anchorage	Municipal Light & Power	M
	Fairbanks	Golden Valley Elec Assn Inc	M
Arizona	Mesa	Salt River Project	M
	Phoenix	Arizona Public Service Company	I
	Tucson	Tucson Electric Power Company	I
Arkansas	Little Rock	Entergy Arkansas, Inc.	I
California	Los Angeles	Los Angeles Department of Water & Power	M
	Sacramento	Sacramento Municipal Util Dist	M
	San Diego	San Diego Gas & Electric Company	I
	San Francisco	Pacific Gas & Electric Company	I
Colorado	Colorado Springs	City of Colorado Springs - (CO)	M
	Denver	Public Service Company of Colorado	I
	Pueblo	Black Hills/Colorado Electric (formerly Aquila Networks-WPE)	I
Connecticut	Bridgeport	United Illuminating Company	I
Delaware	Wilmington	Delmarva Power	I
District of Columbia	-	Potomac Electric Power Company	I
Florida	Jacksonville	JEA	M
	Miami	Florida Power & Light Company	1
	Tampa	Tampa Electric Company	1
Georgia	Atlanta	Georgia Power Company	I
Hawaii	Honolulu	Hawaiian Electric Company	I
ldaho	Boise	Idaho Power Company	I
Illinois	Chicago	Commonwealth Edison Company	1
	Springfield	City Water, Light & Power	M
Indiana	Evansville	Southern Indiana Gas & Electric Company	I
	Gary	Northern Indiana Public Service Company	1
	Indianapolis	Indianapolis Power & Light Company	i
lowa	Cedar Rapids	Interstate Power & Light	i
	Davenport	MidAmerican Energy - East System	i
	Des Moines	MidAmerican Energy Co	i
Kansas	Kansas City	Kansas City Board of Public Utilities	M
	Overland Park	Kansas City Power & Light Company	 I
	Wichita	Westar Energy Inc	i
Kentucky	Lexington	Kentucky Utilities Company	i
rtoritativy	Louisville	Louisville Gas & Electric Company	i
Louisiana	Baton Rouge	Entergy Gulf States, Inc.	i
Louidiana	New Orleans	Entergy New Orleans, Inc.	i
	Shreveport	Southwestern Electric Power Company	·
Maine	Portland	Central Maine Power Co	i
Maryland	Baltimore	Baltimore Gas & Electric Company	i
Massachusetts	Boston	Boston Edison Company	i
Massacriusetts	Cambridge	Cambridge Electric Company	I
	Springfield	Western Massachusetts Electric Company	i
Michigan	Detroit		i
Michigan	Grand Rapids	DTE Electric Company Consumers Energy	ı I
	Lansing	Lansing Board of Water & Light	ı M
Minnesota	Duluth	Minnesota Power Company	IVI I
IVIII II ICOULA		Northern States Power Co - Minnesota	1 1
Micaicainni	Minneapolis		1
Mississippi Missouri	Jackson Kanaga City	Entergy Mississippi, Inc.	I I
Missouri	Kansas City	Kansas City Power & Light Co	l I
	Saint Louis	AmerenUE	l Na
	Springfield	City Utilities of Springfield - (MO)	М

#### M - Municipal or Public Power District

STATE	CITY	Name of Utility	Utility Type
Montana	Billings	NorthWestern Energy (formerly Montana Power)	Ţ.
Nebraska	Lincoln	Lincoln Electric System	M
	Omaha	Omaha Public Power District	M
Nevada	Las Vegas	Nevada Power Company - NV Energy	1
	Reno	Sierra Pacific Power Company - NV Energy	1
New Hampshire	Manchester	Public Service Company of New Hampshire	1
New Jersey	Newark	Public Service Electric & Gas Company	1
New Mexico	Albuquerque	Public Service Company of New Mexico	1
New York	Buffalo	National Grid (Niagara Mohawk Power Corporation)	1
	Hempstead	PSEG Long Island	M
	New York City	Consolidated Edison Company of New York	1
North Carolina	Charlotte	Duke Energy Carolinas	1
	Raleigh	Duke Energy Progress, Inc.	1
North Dakota	Fargo	Northern States Power Company (MN)	1
Ohio	Cincinnati	Duke Energy Ohio	1
	Cleveland	Cleveland Electric Illuminating Company	1
	Columbus	AEP (Columbus Southern Power Rate Area)	1
Oklahoma	Oklahoma City	OG&E Electric Services	1
	Tulsa	Public Service Company of Oklahoma	i
Oregon	Eugene	Eugene Water & Electric Board	M
5.135	Portland	Portland General Electric Company	Ï
Pennsylvania	Erie	Pennsylvania Electric Company	i
	Philadelphia	PECO Energy	i
	Pittsburgh	Duquesne Light Company	i
Rhode Island	Pawtucket	Narragansett Electric Company	i
South Carolina	Columbia	South Carolina Electric & Gas Company	i
Codar Garonia	Myrtle Beach	Santee Cooper	М
South Dakota	Sioux Falls	Northern States Power Company (MN)	 I
Tennessee	Knoxville	Knoxville Utilities Board	М
1011100000	Memphis	Memphis Light, Gas and Water	M
	Nashville	Nashville Electric Service	M
Texas	Austin	Austin Energy	M
ТСЛО	El Paso	El Paso Electric Company	!**! 
	Amarillo	Southwestern Public Service	i
Utah	Salt Lake City	PacifiCorp	i
Vermont	Burlington	City of Burlington Electric - (VT)	M
Virginia	Richmond	Dominion Virginia Power	
Virginia	Roanoke	AEP (Appalachian Power Rate Area), Virginia	·
Washington	Seattle	City of Seattle - (WA)	M
Washington	Spokane	Avista Corp.	
	Tacoma	Tacoma Public Utilities	M
West Virginia	Charleston	AEP (Appalachian Power Rate Area)	IVI
vvest viigiilia	Wheeling	AEP (Wheeling Power Rate Area)	! !
Wisconsin	Madison	Madison Gas & Electric Company	1 1
V V 13 CO1 13 11 1	Milwaukee	We Energies (formerly Wisconsin Electric)	! !
\\\\vomina	Cheyenne	,	!
Wyoming	Cheyenne	Cheyenne Light, Fuel & Power Company	ı

## Average Bill Difference 2015 to

Study Rank	City	State	Average Rank*	2016
1	Tulsa	OK	3.3	-2%
2	Tacoma	WA	4.8	3%
3	Oklahoma City	OK	6.2	-15%
4	Boise	ID	6.8	-1%
5	Des Moines	IA	8.9	-1%
6	Amarillo	TX	10.2	0%
7	Davenport	IA	10.3	-1%
8	Buffalo	NY	11.0	-22%
9	Seattle	WA	11.1	1%
10	Baton Rouge	LA	12.1	-11%
11	Charlotte	NC	15.4	1%
12	New Orleans	LA	16.2	-4%
13	Lincoln	NE	16.3	0%
14	Shreveport	LA	16.8	1%
15	Little Rock	AR	17.5	6%
16	Springfield	MO	18.7	-2%
17	Raleigh	NC	20.3	-2%
18	Reno	NV	20.5	-10%
19	Omaha	NE	20.7	2%
20	Denver	CO	21.6	-12%
21	Miami	FL	23.4	-5%
22	Jackson	MS	25.0	-14%
23	Eugene	OR	26.7	2%
24	Charleston	WV	27.1	0%
25	Richmond	VA	27.1	-4%
26	Wheeling	WV	27.1	9%
27	Saint Louis	MO	28.4	5%
28	Las Vegas	NV	30.8	-7%
29	Portland	OR	30.9	-3%
30	Roanoke	VA	31.3	-4%
31	Colorado Springs	CO	31.7	-2%
32	Lexington	KY	31.8	8%
33	Sioux Falls	SD	32.2	-7%
34	Duluth	MN	32.2	2%

<sup>\*</sup>Average rank of the 12 billing categories

## Average Bill Difference 2015 to

Study Rank	City	State	Average Rank*	2016
35	Fargo	ND	32.2	2%
36	Tampa	FL	36.2	-3%
37	Huntsville	AL	36.4	2%
38	Indianapolis	IN	38.2	3%
39	Salt Lake City	UT	38.8	3%
40	El Paso	TX	40.1	-6%
41	Spokane	WA	40.4	3%
42	Chicago	IL	41.3	-6%
43	Memphis	TN	41.6	-1%
44	Cedar Rapids	IA	45.9	-2%
45	Cincinnati	ОН	46.3	-1%
46	Detroit	MI	46.3	-1%
47	Austin	TX	46.4	-6%
48	Louisville	KY	47.8	10%
49	Knoxville	TN	48.6	3%
50	Mesa	AZ	48.7	3%
51	Kansas City	KS	48.8	-14%
52	Billings	MT	49.3	-3%
53	Minneapolis	MN	51.5	4%
54	Kansas City	MO	52.1	9%
55	Columbus	ОН	52.3	-16%
56	Erie	PA	53.4	-1%
57	Albuquerque	NM	55.5	-9%
58	Evansville	IN	55.6	-2%
59	Pittsburgh	PA	55.7	-6%
60	Birmingham	AL	55.8	-1%
61	Philadelphia	PA	57.6	-11%
62	Grand Rapids	MI	58.0	-7%
63	Cleveland	ОН	58.8	7%
64	Nashville	TN	60.8	1%
65	Phoenix	AZ	60.9	-5%

<sup>\*</sup>Average rank of the 12 billing categories

## Average Bill Difference 2015 to

Study Rank	City	State	Average Rank*	2016
66	Gary	IN	61.7	-8%
67	Overland Park	KS	62.2	11%
68	Wichita	KS	62.4	4%
69	Atlanta	GA	63.1	-2%
70	Wilmington	DE	64.1	17%
71	Milwaukee	WI	69.8	10%
72	Portland	ME	71.0	-13%
73	Washington	D.C.	71.2	2%
74	Jacksonville	FL	71.5	2%
75	Tucson	AZ	72.2	10%
76	Columbia	SC	72.9	2%
77	Baltimore	MD	73.4	-8%
78	Madison	WI	75.1	-2%
79	Sacramento	CA	75.7	0%
80	Springfield	IL	76.4	0%
81	Lansing	MI	77.3	0%
82	Cheyenne	WY	78.5	-1%
83	Newark	NJ	80.3	-13%
84	Pueblo	CO	83.3	3%
85	Myrtle Beach	SC	84.3	0%
86	Los Angeles	CA	85.9	8%
87	Burlington	VT	87.7	2%
88	Manchester	NH	87.8	-3%
89	Hempstead	NY	88.3	-15%
90	Springfield	MA	90.8	-37%
91	Anchorage	AK	91.0	13%
92	Bridgeport	CT	91.8	-28%
93	Fairbanks	AK	92.5	0%
94	Pawtucket	RI	94.6	-24%
95	San Francisco	CA	94.7	3%
96	Cambridge	MA	94.8	-19%
97	New York City	NY	96.4	-6%
98	Boston	MA	97.0	-19%
99	San Diego	CA	98.2	-4%
100	Honolulu	HI	99.7	-18%

<sup>\*</sup>Average rank of the 12 billing categories