Electricity Affordability and Price Competitiveness

Report to the Electric Utility Commission

October 18, 2010

City Council Adoption of the Resource, Generation and Climate Protection Plan (April 22, 2010)

- Implementation contingent upon adoption of an “affordability matrix.”
- Explicit guidance on the “affordability matrix”:
  - Include benchmarking of residential and commercial & industrial rates across the State.
  - Use as a tool when evaluating new resource acquisitions.

What is an “Affordability Matrix”?

- #1 listing on Google: “A system for calculating how affordable the housing is in a particular area.”
- Matrix: a structured organization of data.

Real Estate Affordability Matrix Example

Charlotte, NC Affordability Matrix
(Based on a Family of 4)

% of Median Annual Max Income	Income	Monthly Rent
30%	$19,950	$499
50%	$33,250	$831
60%	$39,900	$998
80%	$53,200	$1,330
100%	$66,500	$1,663
120%	$79,800	$1,995

AE's Initial Approach

- Original Working Assumptions:
  - Data-driven
  - Specific to customer classes
  - Benchmarking w/ Texas cities
  - Simple, visual presentation
  - Detailed methodology and sources
  - Updated annually
  - Used as tool for making resource investment decisions
- Challenges:
  - Data availability and complexity
  - Making results meaningful to decision makers and community
- Summary Tables
  - Suitable for policy discussion
- Detailed Report
  - Detailed documentation of methodology
  - Address a variety of issues raised by customers
  - Present a complete copy of each report component

Key Findings from Customer Engagement on Affordability

- Wide scope of customer interests.
  - Detailed interest in AE's operations and data.
  - Visibility into decision making.
- Forward-looking measures ("predictability").
- Search for affordability goals/targets.
  - Missing aspect of generation resource plan.
- C&I Customers: Measure affordability via competitiveness.
  - Measure competitiveness through rate comparisons with other communities.
  - Consider community-wide economic conditions.

Affordability is One Piece of a Larger Puzzle

- Affordability Matrix.
- Planning and decision making.
  - Internal resource planning team.
  - Decision template.
  - Annual assessment and biennial review of generation resource plan.
- Transparency.
  - Competitive Matters Resolution revisions underway.
  - Expanded annual report.
  - Posting of reports and links to publicly available information.
- Rates and bills.
  - Outside benchmarking study.
  - Public involvement in rate review.

Focus of AE's Research Efforts

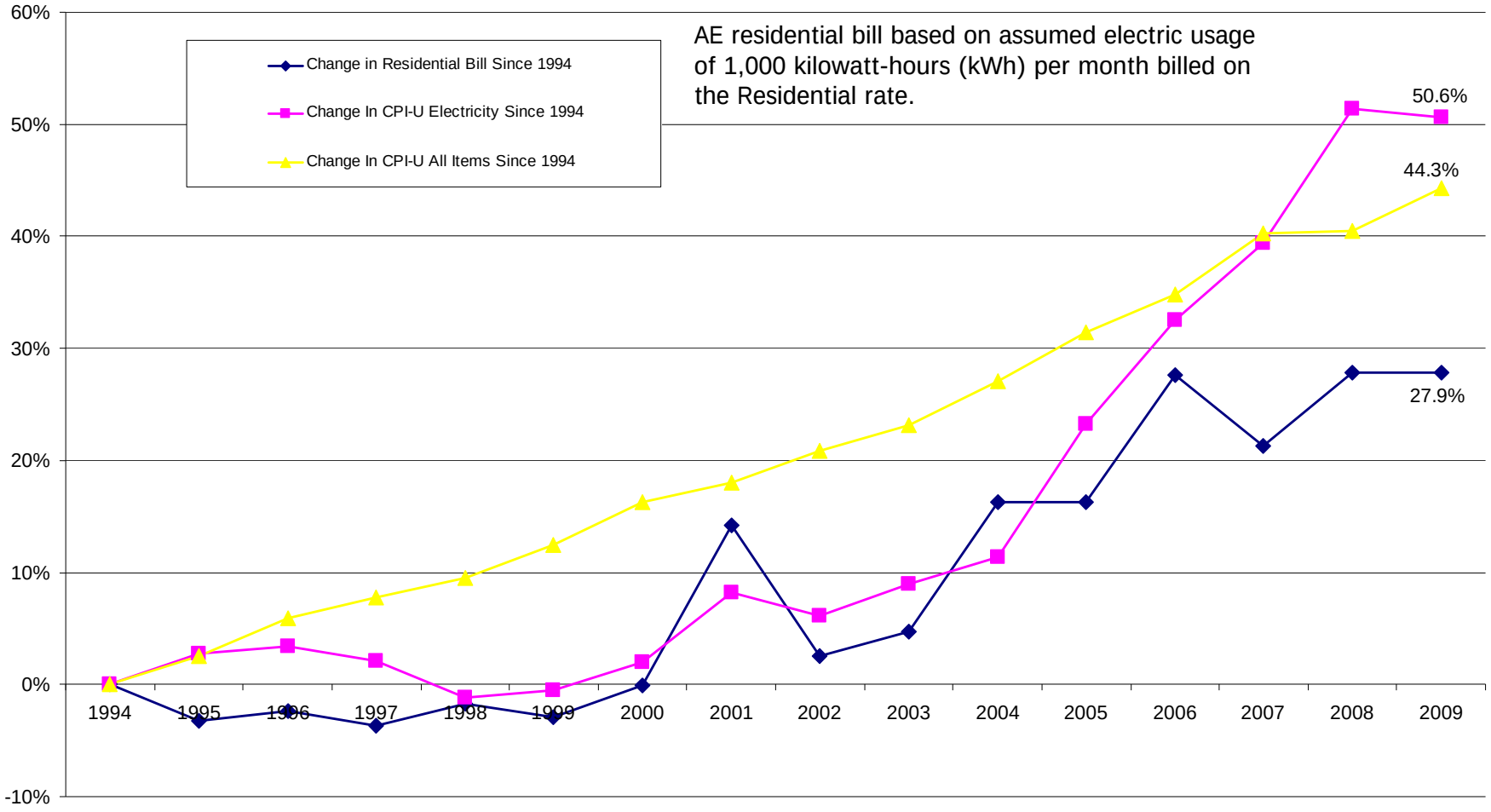
- First develop measurement tools.
  - Benchmark residential rates.
  - Assess residential customers' "energy burden."
  - Benchmark commercial rates.
  - Other commercial and industrial bill comparisons.
- Develop capability to track benchmarks over time to see long-term trends.
- Consider electric bills as well as rates.
- Consider how to take a meaningful forward-looking approach.

Rate Comparisons at a High Level

- Historic trends in AE's residential, commercial, and industrial rates.
- National comparisons published annually by Memphis Light, Gas & Water.

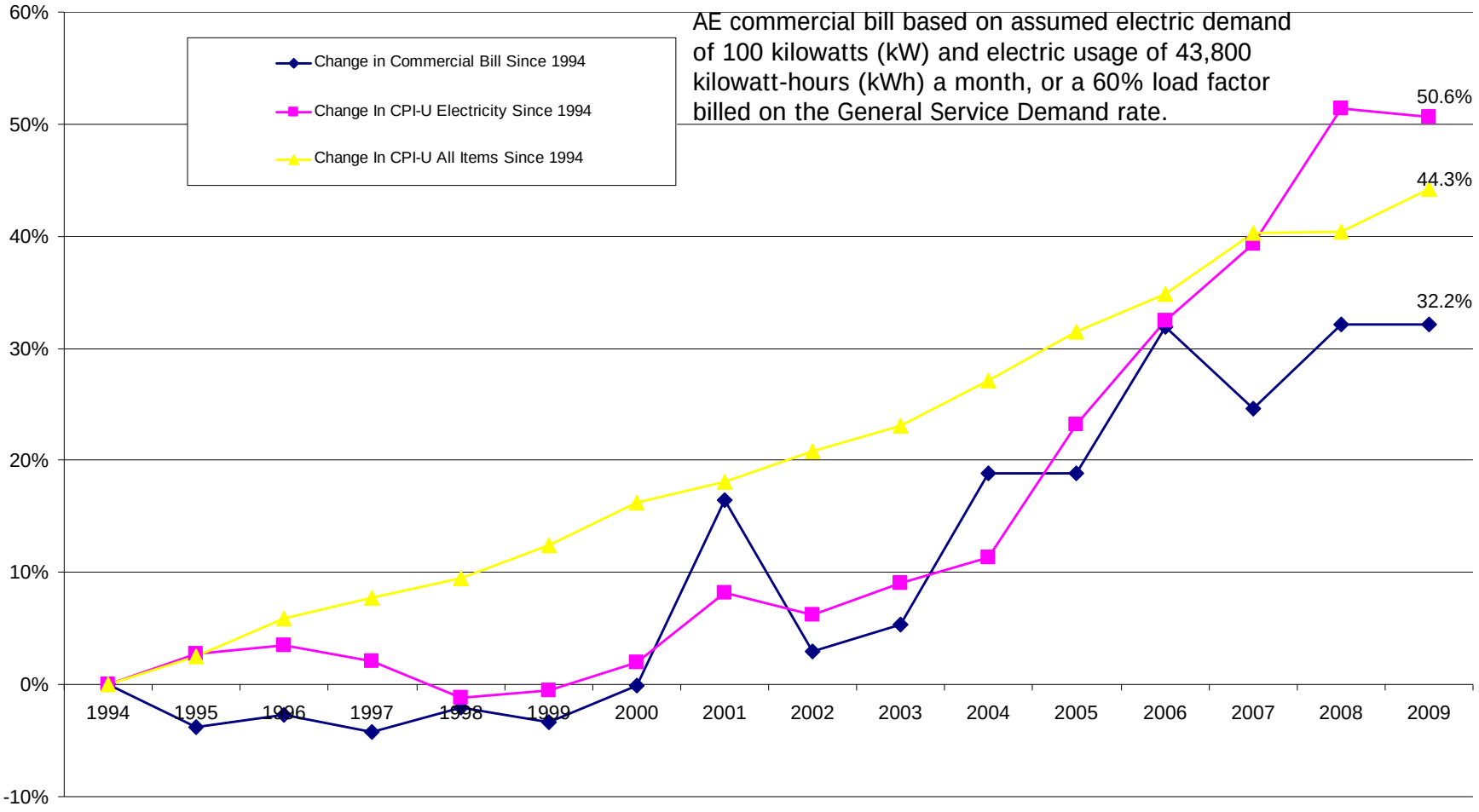
Residential Price Changes Over Time (1994 to 2009)

Percentage Change In AE Residential Bill vs. Consumer Price Index



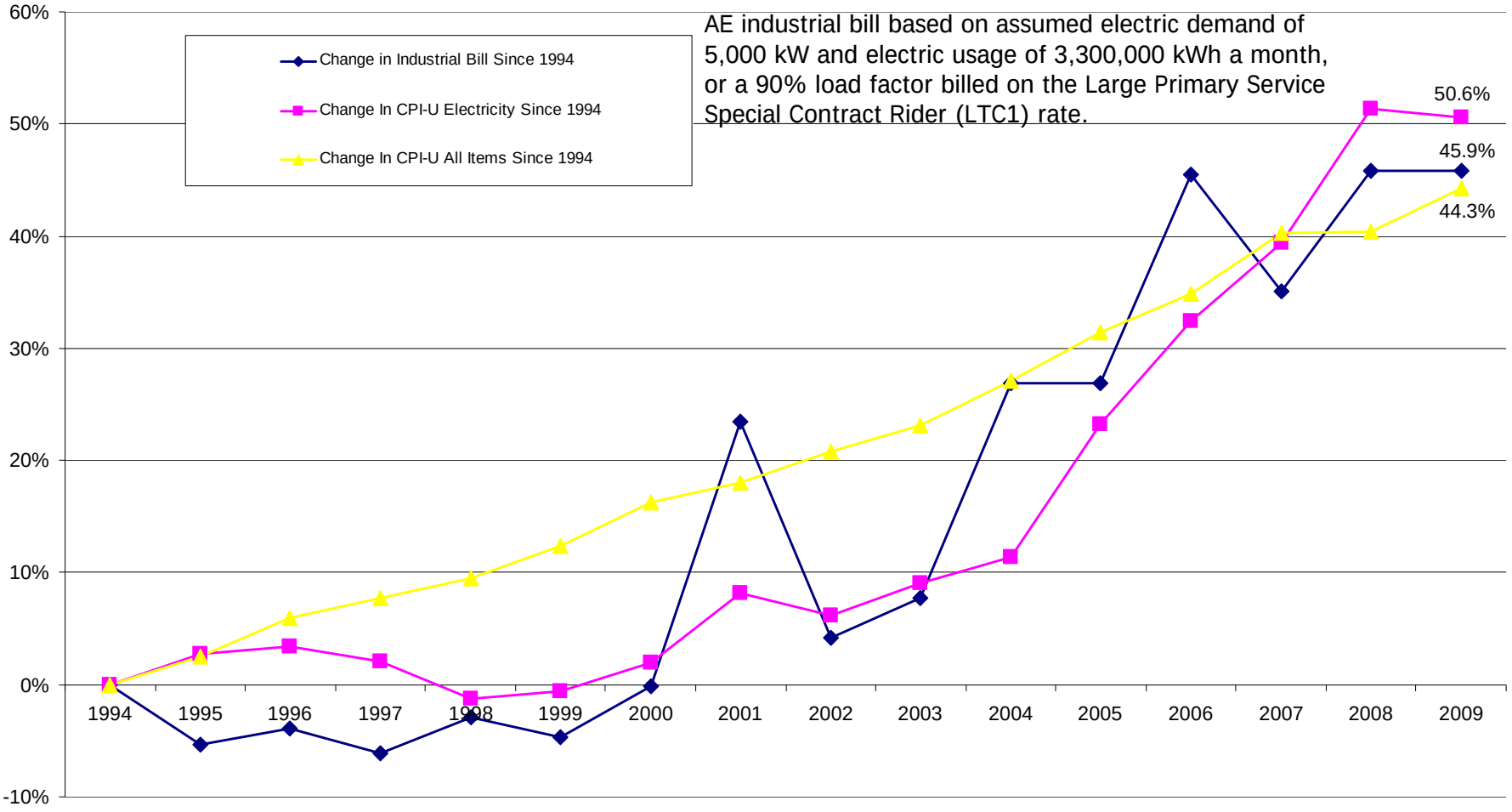
Commercial Price Changes Over Time (1994 to 2009)

Percentage Change In AE Commercial Bill vs. Consumer Price Index

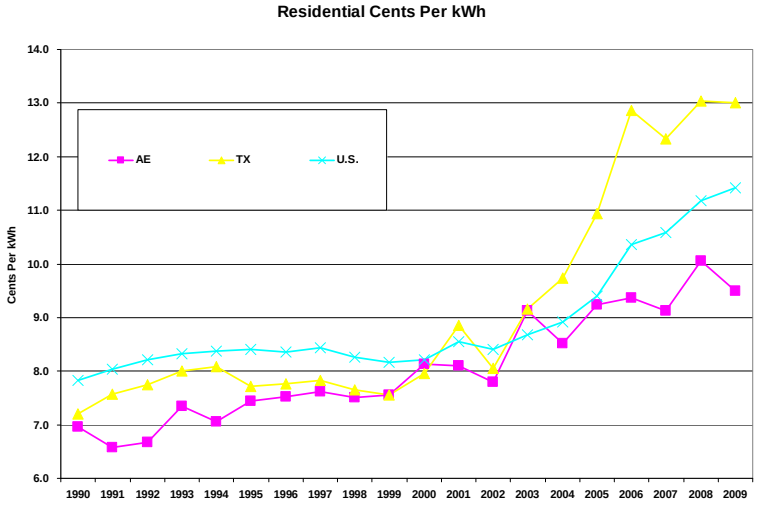


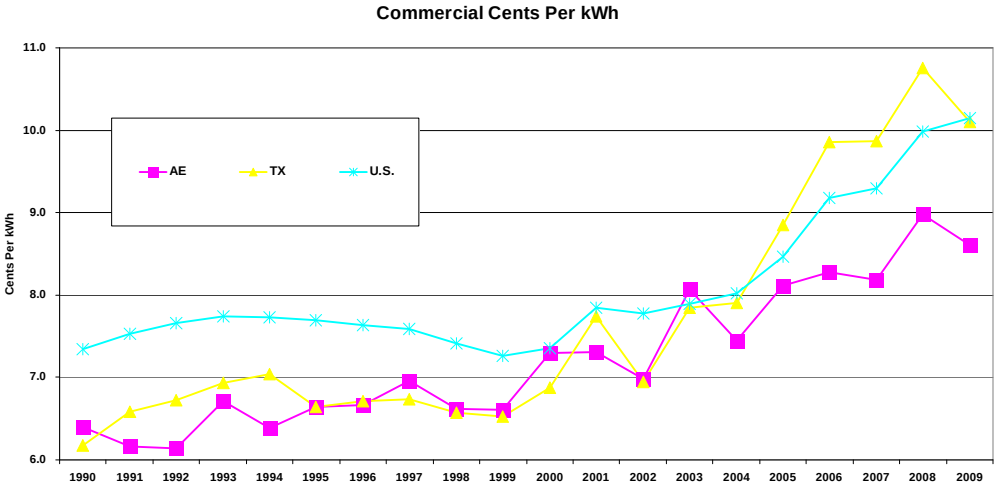
Industrial Price Changes Over Time (1994 to 2009)

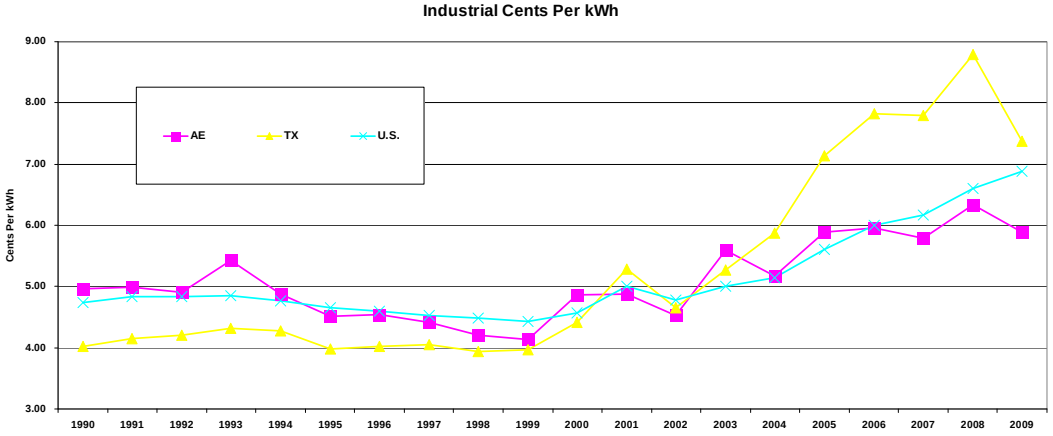
Percentage Change In AE Industrial Bill vs. Consumer Price Index



Average Rate Comparison: U.S., Texas, Austin Energy (1990-2009)







Current Rate Comparisons with Utilities Nationally

- Memphis Light, Gas, and Water 2009 Utility Bill Comparisons for Selected U.S. Cities:
  - Residential – Ranked 14 out of 46 cities for lowest monthly average bills at 1,000 kWh.
  - Commercial – Varies based on usage (16 to 31 out of 42 cities).
  - Industrial – Varies based on usage (17 to 19 out of 36 cities).

Residential Rankings of Rates in U.S. Cities (2009)

RESIDENTIAL ELECTRIC BILLS

Rates in effect January 1, 2009

Rank	City	State	Company	500 kWh	1000 kWh	1500 kWh	2000 kWh	2500 kWh	3000 kWh
1	St. Louis	MO	AmerenUE	$35.35	$58.85	$77.75	$96.65	$115.55	$134.45
2	Seattle	WA	Seattle City Light	$22.55	$62.20	$101.85	$141.50	$181.15	$220.80
3	Springfield	MO	City Utilities of Springfield, MO	$40.15	$72.80	$100.45	$128.10	$155.75	$183.40
4	Louisville	KY	Louisville Gas and Electric	$39.31	$73.56	$107.82	$142.06	$176.32	$210.57
5	Colorado Springs	CO	Colorado Springs Utilities	$42.10	$76.60	$111.10	$145.60	$180.10	$214.60
6	Lincoln	NE	Lincoln Electric System	$45.13	$80.25	$111.10	$141.95	$172.80	$203.65
7	Salt Lake City	UT	PacifiCorp, dba Rocky Mountain Power	$41.65	$81.30	$120.95	$160.59	$200.24	$239.89
8	Indianapolis	IN	Indianapolis Power & Light Company	$52.55	$82.57	$112.62	$142.65	$172.70	$202.73
9	San Antonio	TX	CPS Energy	$45.01	$82.73	$120.47	$158.19	$195.93	$233.65
10	Denver	CO	Xcel Energy Inc.	$45.30	$83.37	$121.48	$159.56	$197.67	$235.75
11	Marietta	GA	Marietta Power and Water	$49.00	$84.39	$117.39	$150.39	$183.39	$216.38
12	Myrtle Beach	SC	Santee Cooper (South Carolina Public Service Authority)	$47.26	$87.67	$128.08	$168.49	$208.90	$249.32
13	Jackson	MS	Entergy Mississippi, Inc.	$55.93	$89.82	$123.85	$156.35	$189.88	$223.38
14	Austin	TX	Austin Energy	$42.02	$90.38	$138.75	$187.11	$235.48	$283.84
15	Huntsville	AL	Huntsville Utilities	$48.35	$90.88	$134.91	$180.89	$227.48	$274.06
16	Omaha	NE	Omaha Public Power District	$37.13	$91.42	$124.29	$157.16	$190.02	$222.89
17	Roanoke	VA	Appalachian Power Company	$49.95	$91.49	$133.04	$174.58	$216.13	$257.67
18	Columbus	OH	City of Columbus	$46.90	$98.00	$141.65	$185.30	$228.95	$272.60
19	Memphis	TN	Memphis Light, Gas and Water	$53.90	$98.30	$142.71	$187.11	$235.79	$284.46
20	Bellevue	WA	Puget Sound Energy	$49.27	$98.66	$149.84	$201.01	$252.19	$303.36
21	Chattanooga	TN	Electric Power Board	$53.39	$99.53	$145.67	$191.81	$237.95	$284.09
22	Jackson	TN	Jackson Energy Authority	$55.84	$100.68	$145.52	$190.36	$235.20	$280.04
23	Knoxville	TN	Knoxville Utility Board	$53.82	$101.55	$149.28	$197.01	$244.74	$292.47
24	Nashville	TN	Nashville Electric Service	$55.35	$102.31	$149.27	$196.23	$243.19	$290.15
25	Orlando	FL	Orlando Utilities Commission	$55.60	$104.19	$162.79	$221.38	$279.98	$338.57
26	Peoria	IL	AmerenCILCO	$63.57	$105.59	$129.74	$153.89	$178.04	$202.19
27	New Orleans	LA	Entergy New Orleans, Inc.	$54.14	$106.07	$154.72	$203.35	$252.00	$300.63
28	Springfield	IL	AmerenCIPS	$70.55	$108.55	$146.35	$184.15	$221.95	$259.75
29	Decatur	IL	AmerenIP	$64.86	$112.29	$152.71	$193.14	$233.56	$273.99
30	Little Rock	AR	Entergy Arkansas, Inc	$59.83	$112.70	$150.43	$188.14	$225.87	$263.59
31	Jacksonville	FL	Jacksonville Electric Authority	$60.81	$116.11	$171.42	$226.72	$282.03	$339.83
32	Cincinnati	OH	Duke Energy Ohio	$60.65	$116.71	$153.99	$191.27	$228.31	$265.38
33	Phoenix	AZ	Arizona Public Service	$59.46	$117.62	$149.08	$192.78	$236.49	$280.19
34	Detroit	MI	DTE Energy	$59.58	$120.07	$180.70	$241.34	$301.97	$362.60
35	Chicago	IL	Commonwealth Edison	$64.88	$120.63	$175.36	$230.04	$284.76	$339.45
36	Los Angeles	CA	Los Angeles Department of Water & Power	$61.68	$121.05	$181.43	$241.80	$302.18	$362.55
37	Kissimmee	FL	Kissimmee Utility Authority	$65.99	$121.82	$196.62	$258.77	$320.92	$383.07
38	El Paso	NM	El Paso Electric Company	$65.49	$126.48	$187.47	$248.46	$309.45	$370.44
39	Baltimore	MD	Baltimore Gas and Electric Company	$78.50	$149.50	$220.50	$291.50	$362.50	$433.50
40	Philadelphia	PA	Exelon Corporation-PECO	$79.33	$153.50	$227.68	$301.86	$376.03	$450.21
41	Tallahassee	FL	City of Tallahassee	$82.06	$157.80	$233.54	$309.28	$385.02	$460.76
42	Manchester	NH	Public Service of New Hampshire	$85.19	$161.44	$237.70	$313.95	$390.21	$466.46
43	Rosemead	CA	Southern California Edison Company	$67.11	$180.64	$317.00	$455.06	$593.24	$731.47
44	Boston	MA	NSTAR Electric and Gas (Boston Edison Company)	$106.00	$205.56	$305.13	$404.69	$504.26	$603.82
45	San Francisco	CA	Pacific Gas and Electric Company	$63.60	$217.18	$417.93	$623.17	$828.42	$1,033.66
46	New York	NY	Consolidated Edison Company of New York, Inc.	$116.53	$219.47	$322.40	$425.34	$528.27	$631.21

Commercial and Industrial Rankings of Rates in U.S. Cities (2009)

COMMERCIAL ELECTRIC BILLS

Rates in effect January 1, 2009

40 kW — 5,000 kWh Per Month

Rank	City	State	
1	Seattle	WA	$275.50
2	St. Louis	MO	$291.46
3	Colorado Springs	CO	$310.80
4	Lincoln	NE	$358.89
5	Omaha	NE	$394.82
6	Peoria	IL	$450.93
7	Bellevue	WA	$455.64
8	Springfield	IL	$466.69
9	Decatur	IL	$471.09
10	Indianapolis	IN	$473.21
11	Huntsville	AL	$484.30
12	Roanoke	VA	$502.35
13	Jackson	TN	$513.82
14	**Memphis**	**TN**	**$515.42**
15	Chattanooga	TN	$520.25
16	Orlando	FL	$521.60
17	Springfield	MO	$525.20
18	Little Rock	AR	$526.70
19	Jacksonville	FL	$540.20
20	Knoxville	TN	$540.35
21	Nashville	TN	$540.82
22	Jackson	MS	$585.44
23	Kissimmee	FL	$625.28
24	Salt Lake City	UT	$636.36
25	New Orleans	LA	$639.19
26	Chicago	IL	$649.94
27	Louisville	KY	$680.03
28	Myrtle Beach	SC	$689.88
29	Marietta	GA	$768.72
30	Denver	CO	$773.04
31	Austin	TX	$778.65
32	Rosemead	CA	$861.88
33	Columbus	OH	$890.80
34	Phoenix	AZ	$896.99
35	Cincinnati	OH	$928.53
36	Philadelphia	PA	$958.76
37	Manchester	NH	$971.16
38	Los Angeles	CA	$989.65
39	Tallahassee	FL	$990.85
40	El Paso	TX	$1,004.05
41	Las Cruses	NM	$1,100.05
42	Boston	MA	$1,202.94

100 kW — 10,000 kWh Per Month

Rank	City	State	
1	Seattle	WA	$570.00
2	Colorado Springs	CO	$605.80
3	St. Louis	MO	$670.11
4	Springfield	IL	$801.21
5	Peoria	IL	$827.73
6	Decatur	IL	$849.59
7	Omaha	NE	$1,024.08
8	Roanoke	VA	$1,065.23
9	Little Rock	AR	$1,114.67
10	Springfield	MO	$1,156.00
11	Jackson	MS	$1,185.87
12	Orlando	FL	$1,359.90
13	Bellevue	WA	$1,368.76
14	New Orleans	LA	$1,380.37
15	Chicago	IL	$1,383.80
16	Salt Lake City	UT	$1,482.42
17	Louisville	KY	$1,528.62
18	Marietta	GA	$1,535.69
19	Huntsville	AL	$1,542.80
20	Indianapolis	IN	$1,578.84
21	Jacksonville	FL	$1,590.60
22	Myrtle Beach	SC	$1,600.05
23	Lincoln	NE	$1,624.72
24	Jackson	TN	$1,661.60
24	**Memphis**	**TN**	**$12,321.57**
25	Chattanooga	TN	$1,686.60
26	Knoxville	TN	$1,724.20
27	Memphis	TN	$1,757.12
28	Austin	TX	$1,848.80
29	Rosemead	CA	$1,819.92
30	Nashville	TN	$1,825.09
31	Denver	CO	$1,826.93
32	Kissimmee	FL	$1,844.54
33	Phoenix	AZ	$1,942.25
34	Manchester	NH	$2,092.01
35	Tallahassee	FL	$2,124.00
36	Cincinnati	OH	$2,155.83
37	Philadelphia	PA	$2,168.50
38	El Paso	NM	$2,250.10
39	Los Angeles	CA	$2,271.00
40	Las Cruses	TX	$2,336.70
41	Columbus	OH	$2,371.00
42	Boston	MA	$2,773.89

500 kW — 100,000 kWh Per Month

Rank	City	State	
1	St. Louis	MO	$5,142.11
2	Seattle	WA	$5,185.00
3	Springfield	MO	$7,800.00
4	Omaha	NE	$7,840.08
5	Roanoke	VA	$8,697.13
6	Salt Lake City	UT	$8,731.67
7	Jackson	MS	$8,778.14
8	Louisville	KY	$8,880.97
9	Jacksonville	FL	$8,931.00
10	Colorado Springs	CO	$9,016.96
11	Little Rock	AR	$9,383.84
12	Indianapolis	IN	$9,545.77
13	Myrtle Beach	SC	$9,930.15
14	Orlando	FL	$10,214.00
15	Denver	CO	$10,270.53
16	Lincoln	NE	$10,599.84
17	Austin	TX	$10,609.00
18	Bellevue	WA	$10,622.50
19	New Orleans	LA	$10,906.99
20	Huntsville	AL	$11,295.00
21	Jackson	TN	$11,977.50
22	Marietta	GA	$12,045.15
23	Phoenix	AZ	$12,295.85
24	**Memphis**	**TN**	**$12,321.57**
25	Chattanooga	TN	$12,515.20
26	Nashville	TN	$12,771.59
27	Knoxville	TN	$12,800.65
28	Columbus	OH	$13,495.00
29	Cincinnati	OH	$13,496.13
30	Rosemead	CA	$13,708.90
31	Kissimmee	FL	$14,301.12
32	Philadelphia	PA	$15,112.65
33	Manchester	NH	$15,635.51
34	Tallahassee	FL	$15,848.70
35	El Paso	NM	$16,009.00
36	Las Cruses	TX	$16,590.75
37	Los Angeles	CA	$16,861.00
38	Boston	MA	$20,723.67

500 kW — 500,000 kWh Per Month

Rank	City	State	
1	St. Louis	MO	$22,312.11
2	Seattle	WA	$24,462.00
3	Omaha	NE	$30,013.33
4	Springfield	MO	$31,820.00
5	Colorado Springs	CO	$32,184.80
6	Salt Lake City	UT	$32,315.39
7	Louisville	KY	$32,496.78
8	Denver	CO	$33,582.57
9	Indianapolis	IN	$35,206.17
10	Lincoln	NE	$35,968.57
11	Myrtle Beach	SC	$37,736.15
12	Jackson	MS	$37,899.13
13	Little Rock	AR	$38,975.40
14	Marietta	GA	$40,842.75
15	Roanoke	VA	$41,123.75
16	Austin	TX	$41,935.00
17	Bellevue	WA	$43,001.00
18	Orlando	FL	$44,080.00
19	Phoenix	AZ	$46,567.25
20	Huntsville	AL	$47,135.00
21	New Orleans	LA	$47,324.67
22	Columbus	OH	$48,655.00
23	Jackson	TN	$48,700.86
24	**Memphis**	**TN**	**$49,921.64**
25	Cincinnati	OH	$49,925.31
26	Chattanooga	TN	$50,255.63
27	Nashville	TN	$51,396.20
28	Knoxville	TN	$51,705.00
29	Jacksonville	FL	$52,785.00
30	Rosemead	CA	$54,617.96
31	Los Angeles	CA	$56,890.00
32	Kissimmee	FL	$59,117.12
33	Philadelphia	PA	$62,541.22
34	El Paso	NM	$65,850.00
35	Manchester	NH	$68,211.86
36	Las Cruses	TX	$68,660.00
37	Tallahassee	FL	$69,282.70
38	Boston	MA	$85,709.57

INDUSTRIAL ELECTRIC BILLS

Rates in effect January 1, 2009

5,000 kW — 1,500,000 kWh Per Month

Rank	City	State	
1	Bellevue	WA	$26,574.12
2	St. Louis	MO	$64,617.25
3	Seattle	WA	$73,780.00
4	Salt Lake City	UT	$77,082.44
5	Omaha	NE	$81,945.00
6	Louisville	KY	$90,510.09
7	Springfield	MO	$98,450.00
8	Roanoke	VA	$102,238.70
9	El Paso	NM	$104,670.80
10	Lincoln	NE	$105,429.20
11	Colorado Springs	CO	$106,284.60
12	Myrtle Beach	SC	$107,418.50
13	Denver	CO	$107,698.81
14	Indianapolis	IN	$109,247.17
15	Jackson	MS	$110,164.00
16	Little Rock	AR	$115,557.96
17	Austin	TX	$124,960.00
18	Huntsville	AL	$133,085.00
19	Orlando	FL	$135,460.00
20	Phoenix	AZ	$142,575.56
21	New Orleans	LA	$144,484.94
22	Jackson	TN	$146,900.00
23	Chattanooga	TN	$153,315.00
24	Cincinnati	OH	$154,021.82
25	**Memphis**	**TN**	**$154,155.00**
26	Columbus	OH	$156,915.00
27	Jacksonville	FL	$158,300.00
28	Knoxville	TN	$161,740.00
29	Nashville	TN	$163,921.20
30	Rosemead	CA	$168,451.52
31	Kissimmee	FL	$183,317.12
32	Philadelphia	PA	$187,746.79
33	Tallahassee	FL	$212,617.70
34	Las Cruses	NM	$217,980.00
35	Boston	MA	$265,104.57
36	Manchester	NH	$723,396.86

20,000 kW — 10,000,000 kWh Per Month

Rank	City	State	
1	St. Louis	MO	$342,617.25
2	El Paso	NM	$367,930.95
3	Salt Lake City	UT	$399,365.49
4	Seattle	WA	$449,349.00
5	Omaha	NE	$461,395.00
6	Louisville	KY	$464,047.01
7	Lincoln	NE	$504,629.20
8	Roanoke	VA	$522,574.80
9	Denver	CO	$523,812.14
10	Springfield	MO	$554,250.00
11	Colorado Springs	CO	$562,874.00
12	Myrtle Beach	SC	$569,994.00
13	Indianapolis	IN	$573,380.67
14	Bellevue	WA	$604,067.62
15	Jackson	MS	$651,662.44
16	Rosemead	CA	$672,282.60
17	Little Rock	AR	$682,571.68
18	Huntsville	AL	$683,900.00
19	Austin	TX	$684,800.00
20	Cincinnati	OH	$691,851.12
21	Phoenix	AZ	$749,961.56
22	Philadelphia	PA	$750,117.58
23	Jackson	TN	$789,500.00
24	Columbus	OH	$795,315.00
25	Orlando	FL	$796,615.00
26	Nashville	TN	$805,600.00
27	**Memphis**	**TN**	**$813,000.00**
28	Chattanooga	TN	$813,860.00
29	Knoxville	TN	$862,100.00
30	New Orleans	LA	$872,931.21
31	Jacksonville	FL	$928,175.00
32	Kissimmee	FL	$1,059,657.12
33	Las Cruses	NM	$1,133,200.00
34	Manchester	NH	$1,282,711.86
35	Tallahassee	FL	$1,287,152.70
36	Boston	MA	$1,532,574.57

70,000 kW — 50,000,000 kWh Per Month

Rank	City	State	
1	El Paso	NM	$1,307,531.45
2	St. Louis	MO	$1,516,617.25
3	Salt Lake City	UT	$1,740,650.54
4	Omaha	NE	$1,967,895.00
5	Louisville	KY	$2,007,730.59
6	Lincoln	NE	$2,079,129.20
7	Denver	CO	$2,183,463.42
8	Seattle	WA	$2,222,933.00
9	Roanoke	VA	$2,256,889.70
10	Colorado Springs	CO	$2,493,130.00
11	Springfield	MO	$2,518,600.00
12	Myrtle Beach	SC	$2,531,679.00
13	Indianapolis	IN	$2,539,920.67
14	Huntsville	AL	$2,594,500.00
15	Bellevue	WA	$2,908,541.36
16	Cincinnati	OH	$2,950,967.12
17	Jackson	MS	$3,043,631.78
18	Austin	TX	$3,090,400.00
19	Little Rock	AR	$3,142,048.92
20	Rosemead	CA	$3,265,095.50
21	Philadelphia	PA	$3,286,049.35
22	Phoenix	AZ	$3,302,451.56
23	Jackson	TN	$3,379,900.00
24	Columbus	OH	$3,413,315.00
25	**Memphis**	**TN**	**$3,417,700.00**
26	Nashville	TN	$3,435,000.00
27	Knoxville	TN	$3,458,000.00
28	Chattanooga	TN	$3,480,460.00
29	Orlando	FL	$3,788,015.00
30	Jacksonville	FL	$3,875,275.00
31	New Orleans	LA	$4,136,856.31
32	Las Cruses	NM	$4,177,300.00
33	Kissimmee	FL	$4,933,257.12
34	Tallahassee	FL	$5,934,852.70
35	Manchester	NH	$6,190,811.86
36	Boston	MA	$7,137,874.57

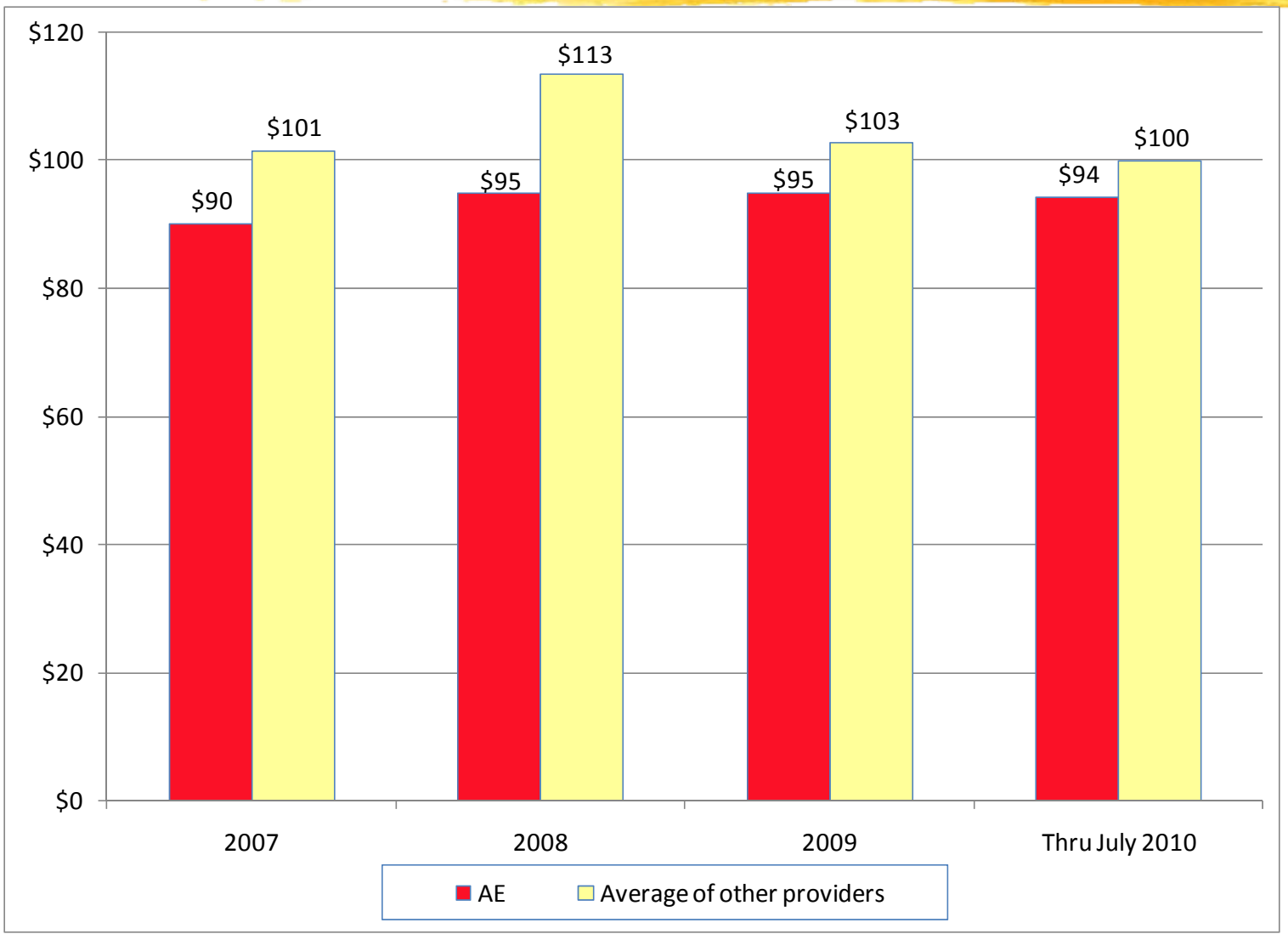
Residential Rate Benchmarking

- Methodology:
  - Compare service on comparable terms to terms offered by Austin Energy.
    - Minimum 3 month fixed price offers in competitive territories.
    - Calculate the average of offers over 12 months to see annualized results.
      - Impact of short term changes in price offers will be minimized, but evident if sustained over a longer period.
    - Show lowest, highest, and average offer for competitive territories.
- Data:
  - Competitive territories: “powertochoose” website; all in offers for retail service collected monthly.
    - Monthly from 2007 through July 2010.
  - Regulated utilities: calculated from tariffs.

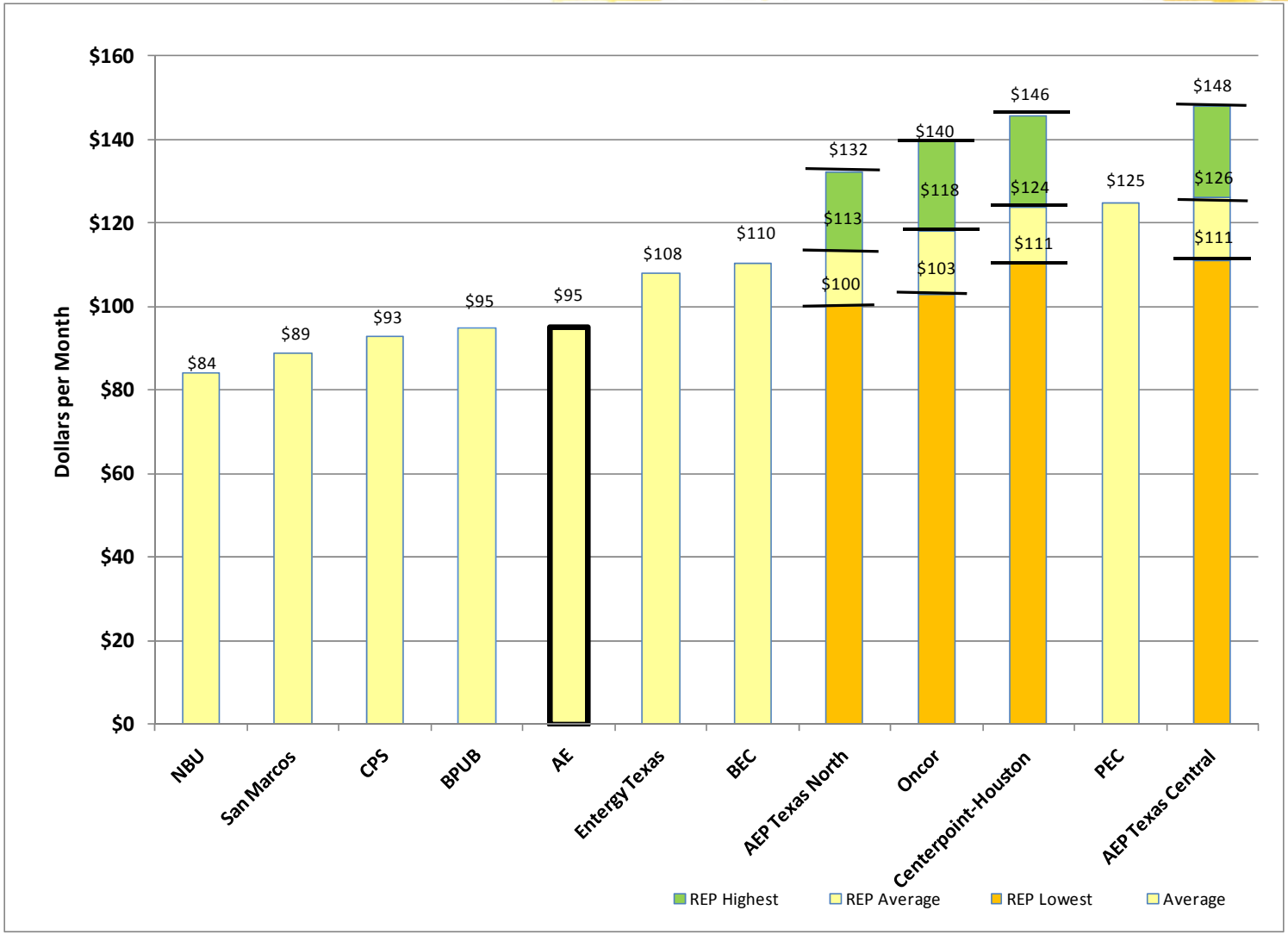
Residential Rate Benchmarking

- Benchmarks selected:
  - Four competitive zones in the ERCOT market.
  - Other munis and coops in Central Texas and across ERCOT as suggested by customers.
  - Renewable energy options.
  - Hypothetical bills for qualifying low-income customers.
- Usage levels compared:
  - 500 kWh, 1,000 kWh, 1,500 kWh, and 2,000 kWh per month.

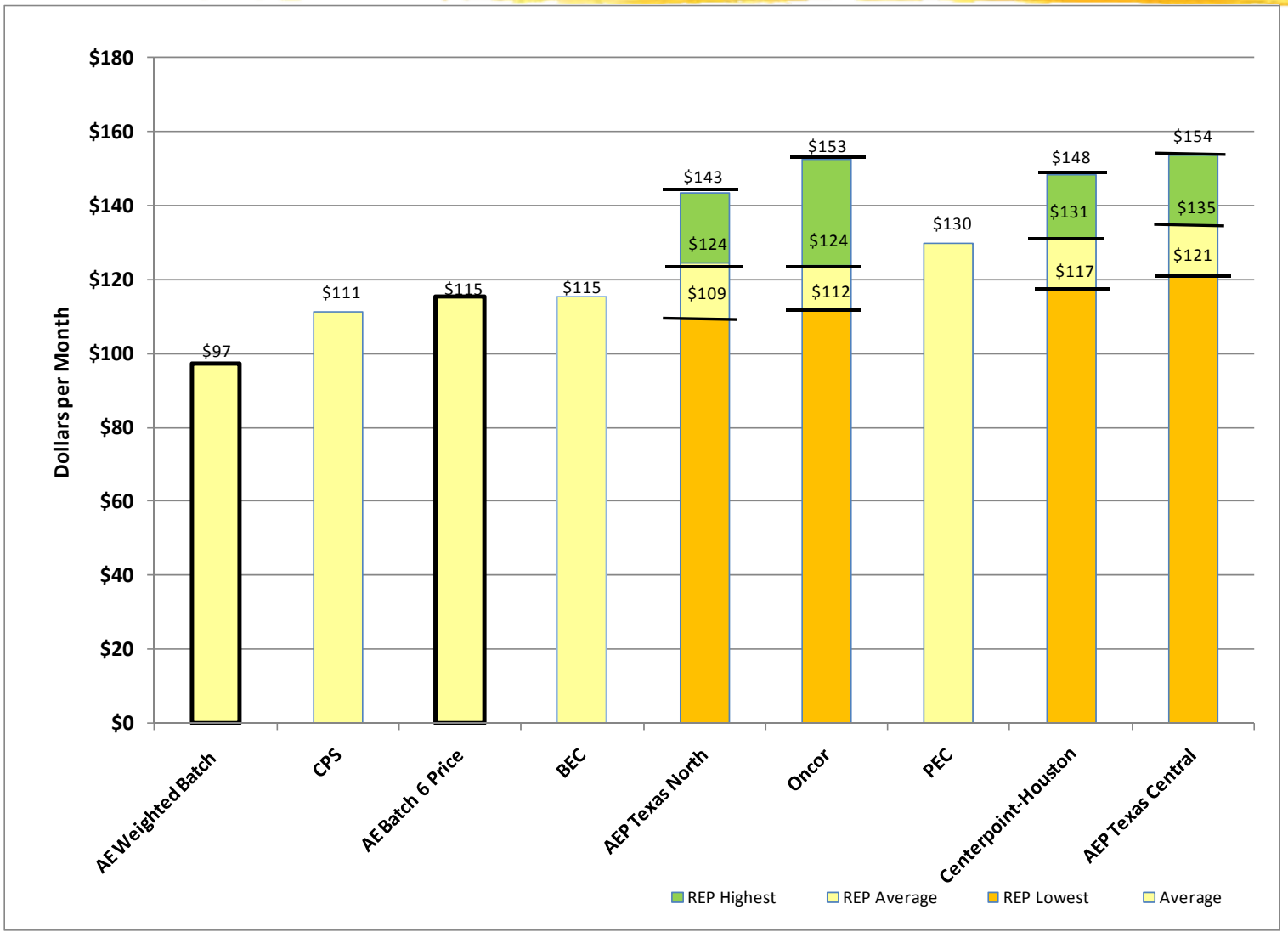
Average Electricity Costs at 1,000 kWh/month for 2007 to July 2010



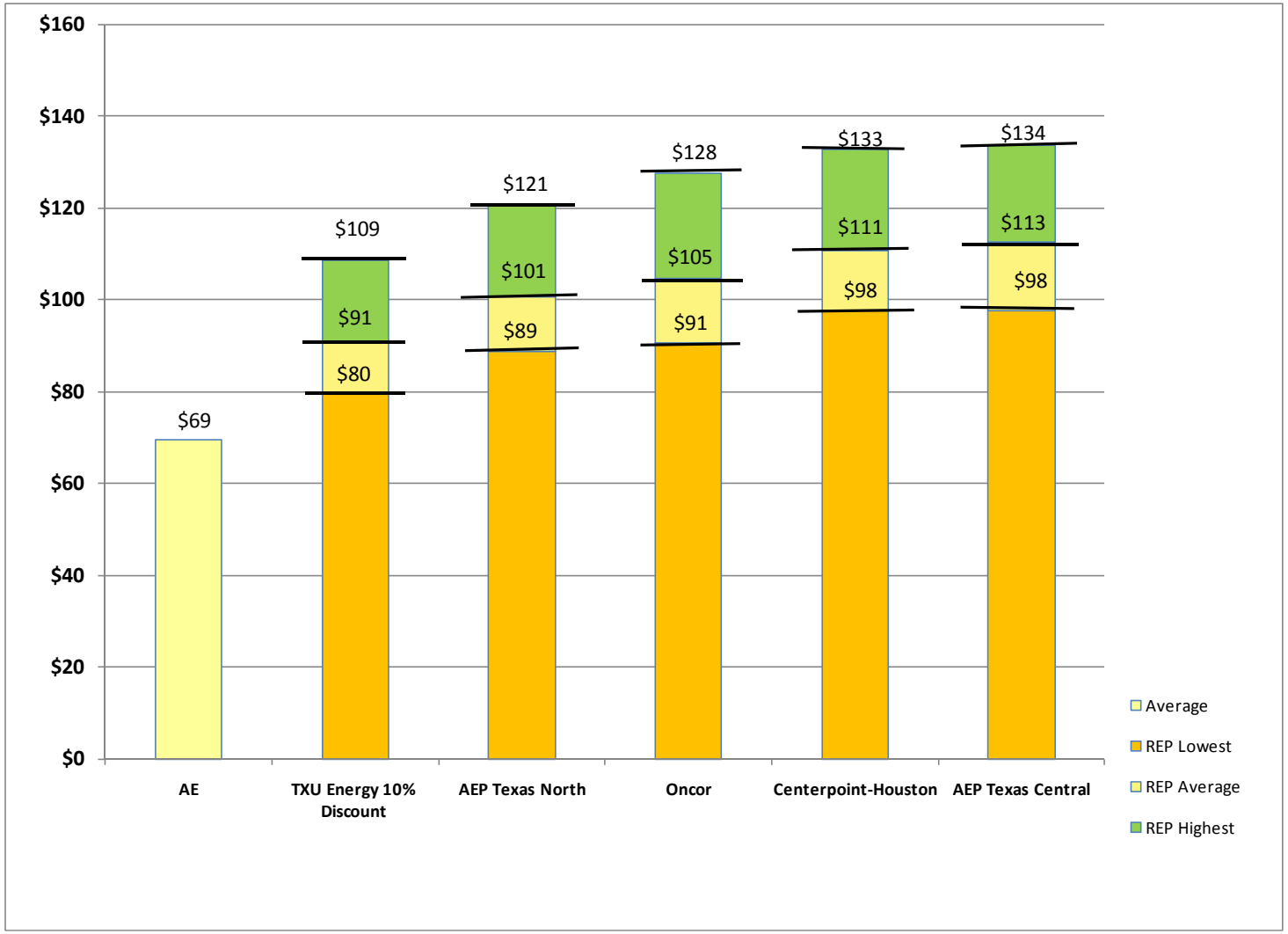
Average Monthly Electric Rates at 1,000 kWh/month for 2009



Average Monthly *Renewable* Rates at 1,000 kWh/month for 2009



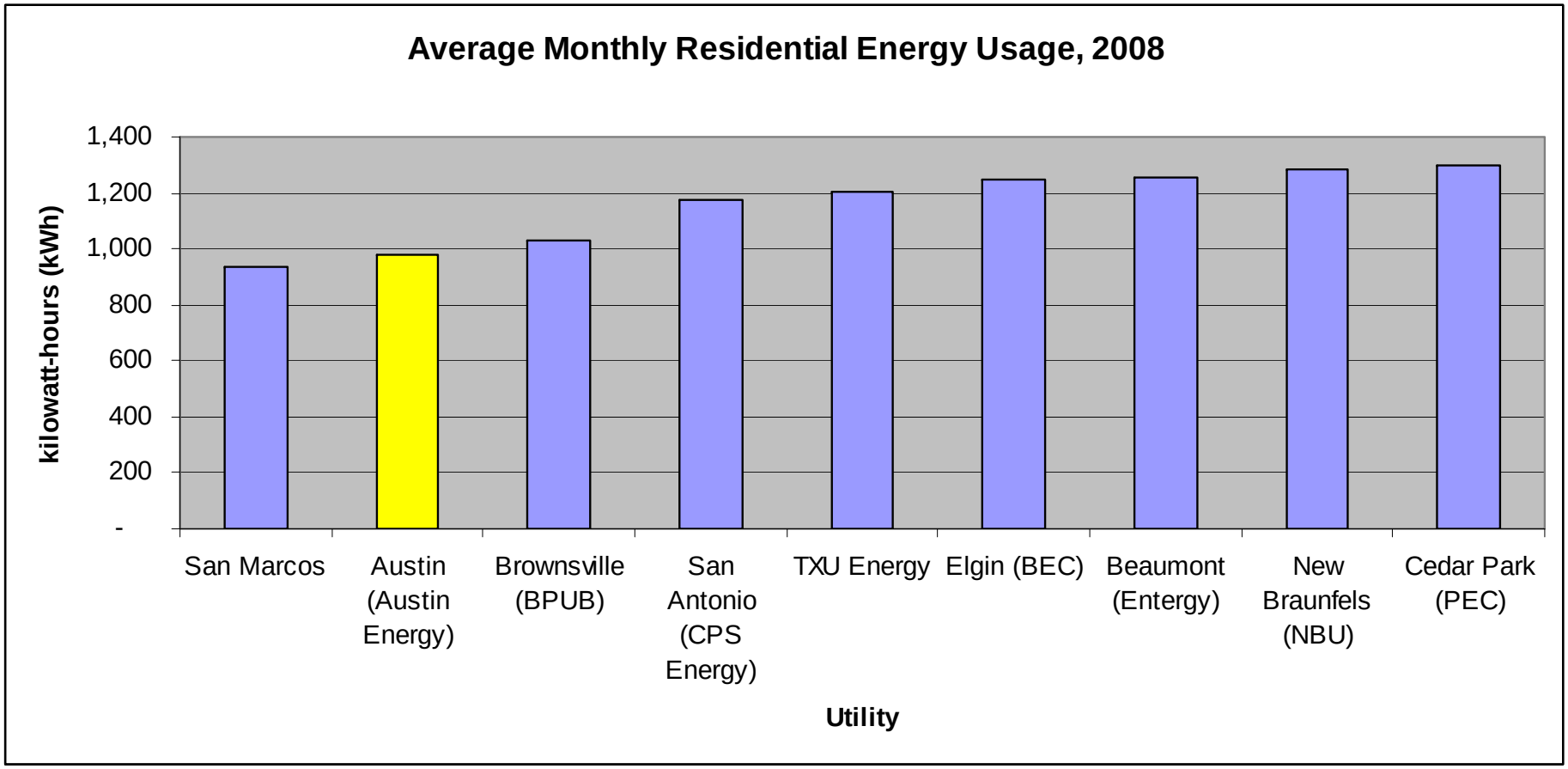
Average Monthly *Low-income* Rates at 1,000 kWh/month for 2009



Residential Rates vs. Bills

- Preferable to benchmark electric bills to assess affordability.
- Data required:
  - Rates, and
  - Usage levels—not available in competitive territories.
  - Alternatively, survey data on actual expenditures.
- Usage levels will vary due to:
  - Weather,
  - Housing stock characteristics,
  - Socioeconomic characteristics, and
  - Conservation investments and behavior.

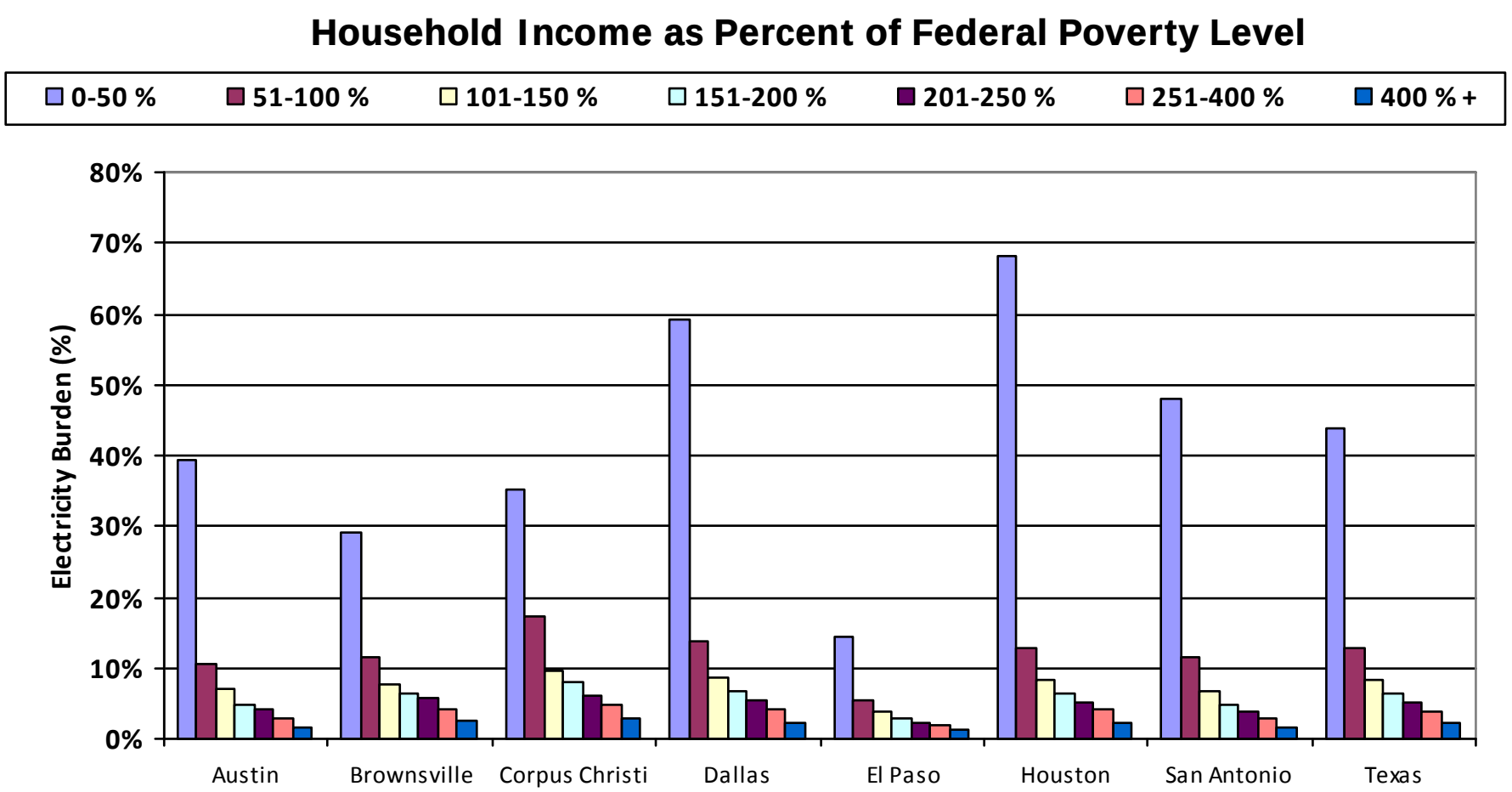
Comparison of Usage Levels Across Communities



Residential Electricity Burden

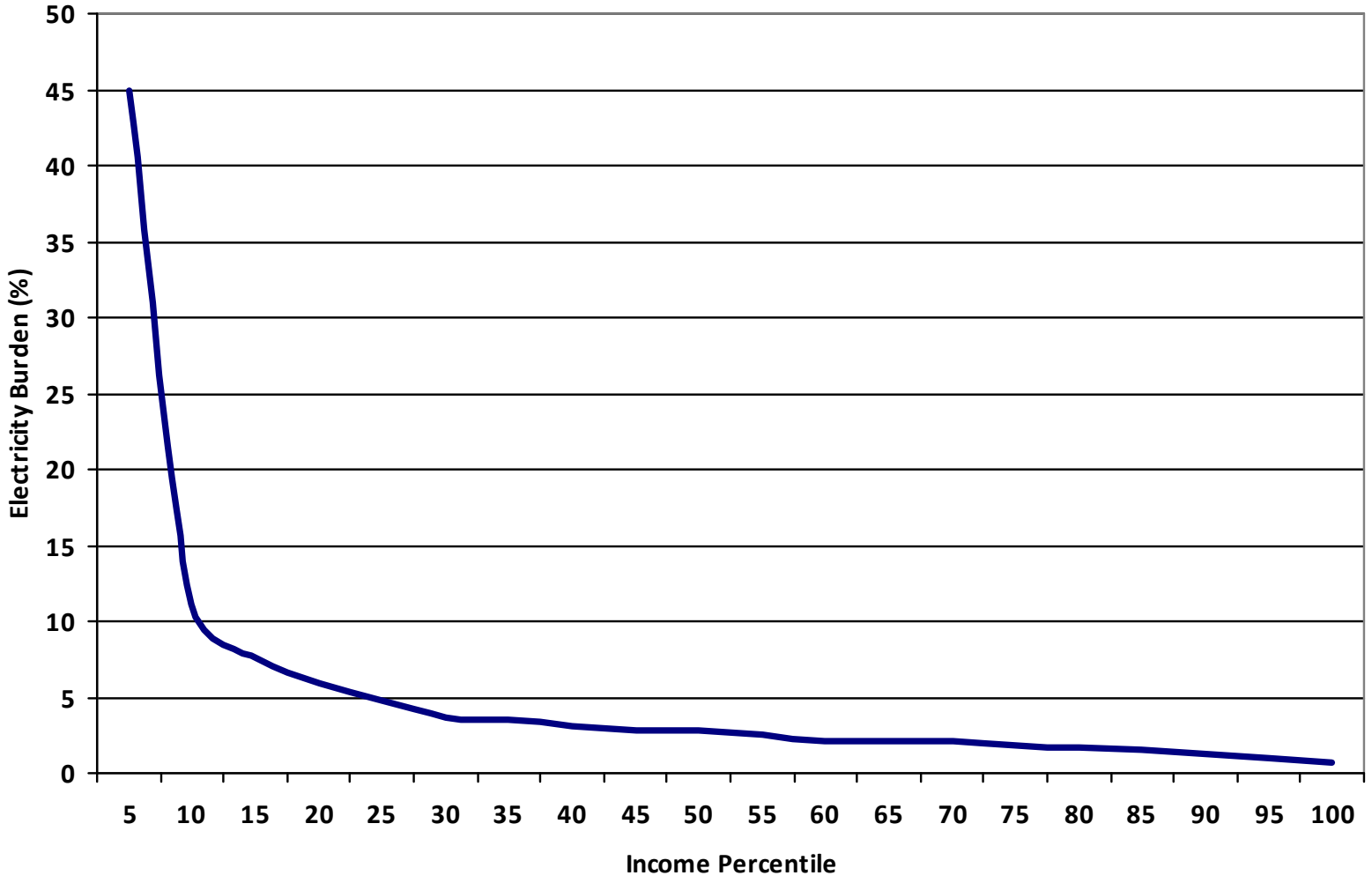
- Research: Literature review on assessing residential energy affordability.
- Established metric: Residential electricity burden—share of a household's income spent on electricity.
  - Reflects customer bills, not just rates.
- Data set: United States Census, American Community Survey (2006 – 2008)
  - Data limitations:
    - Self reporting by households on electricity expenditures.
    - Census areas not precisely consistent with service territory boundaries.
- Original research report: Documentation of all assumptions; expanded presentation of results.
  - Review by Customer Advocacy Group and representatives of residential customers.

Residential Electricity Burden by Poverty Classification Benchmarked Against Sample Communities (2006 – 2008)



Based on data as reported to Census. AE internal data suggest lower average bills in AE's territory than reported in the Census data.

Austin Residential Electricity Burden by Income Classification (2006 – 2008)



Residential Energy Burden: Next Steps

- Further grappling with Census data set limitations.
- Look at burden of entire package of utilities and housing expenses.
- Input to rate review.

Commercial / Industrial Affordability: "Competitiveness"

- Commercial/industrial customers assess affordability in terms of competitiveness.
- How do we assess competitiveness?
  - Characterize the general economic environment.
  - Austin Energy customer electric rate data benchmarked with comparative Texas cities' electric costs data.
  - Unique affordability metrics for commercial and industrial customers—particularly challenging to identify.
    - Example: school district bills.

Commercial and Industrial Rates Benchmarking Methodology

- Data availability:
  - Regulated territories—rates based on tariffs.
  - Competitive territories—rates not readily available.
- Methodology:
  - Regulated territories—calculated from tariffs.
  - Competitive territories—estimated based on methods that prices are created in competitive market.
    - Fixed-rate methodology—”heat rate” method.
    - Variable methodology—”MCPE” method.
      - Adjusted to an annualized rate.
    - Methods differ by amount of risk a retail customer is willing to accept.

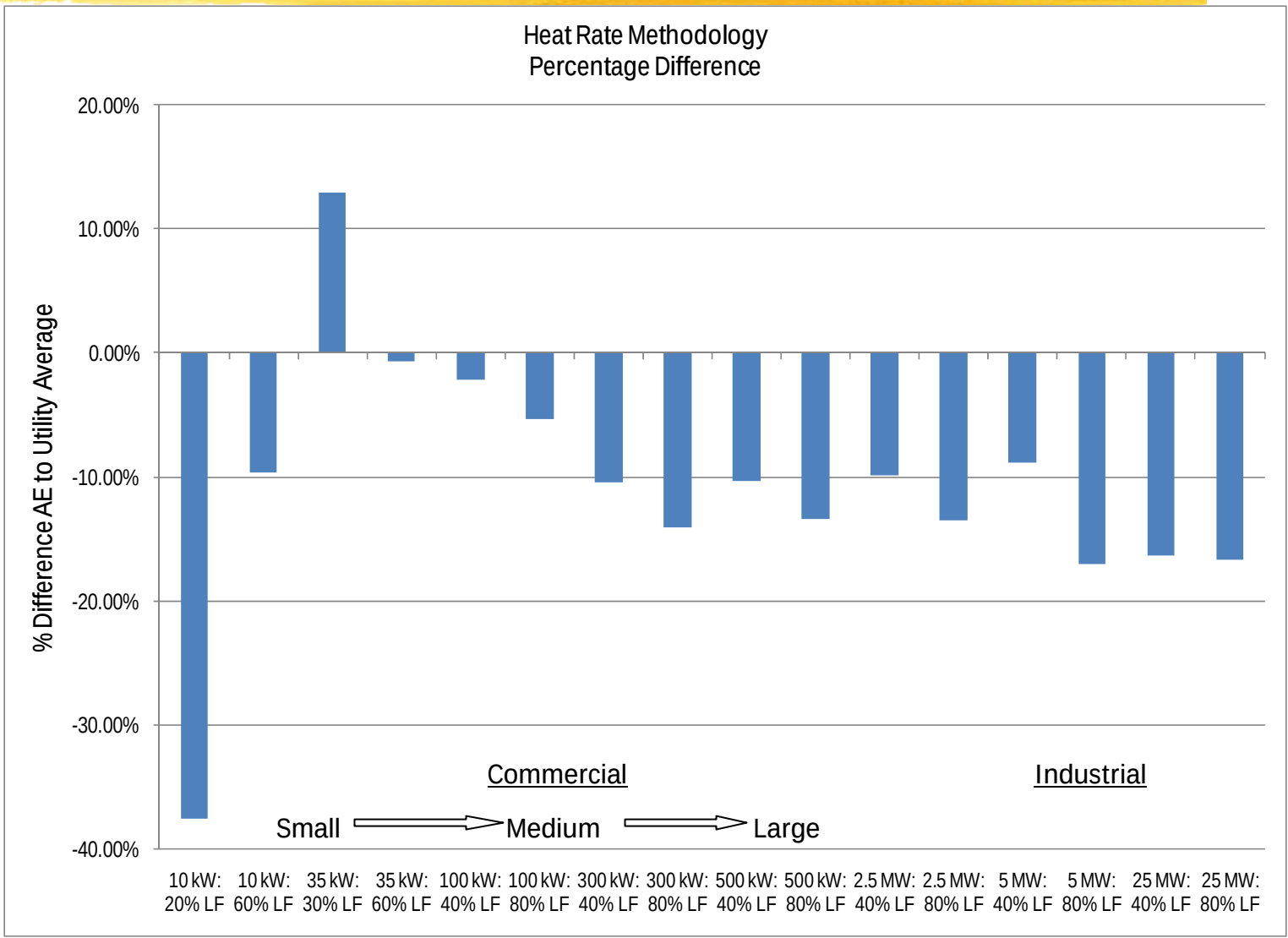
Commercial and Industrial Rates Benchmarking Methodology

- Benchmarks Selected:
  - Regulated territories—munis and coops in Central Texas plus selected other companies.
  - Competitive territories—one estimate for each of the four "congestion zones" in the ERCOT market; consistent with the territories of the four largest wires companies operating in competitive territories.
- Usage Levels Compared:
  - 16 combinations of size and load factor.

C&I Benchmarking Results: AE vs. Competitive Average (2009)

Above 0%, AE rates *more* expensive than average benchmark.

Below 0%, AE rates *less* expensive than average benchmark.



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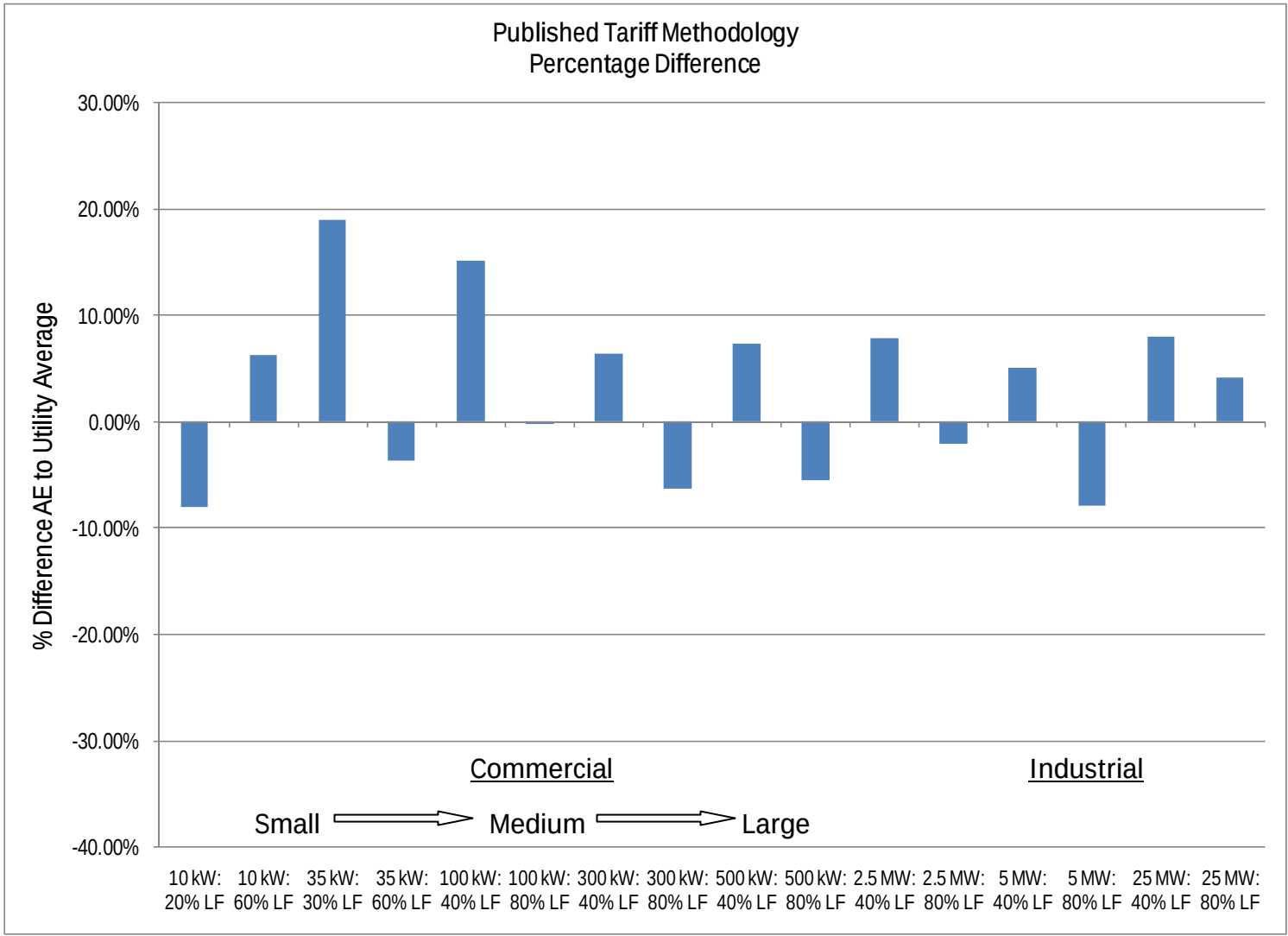
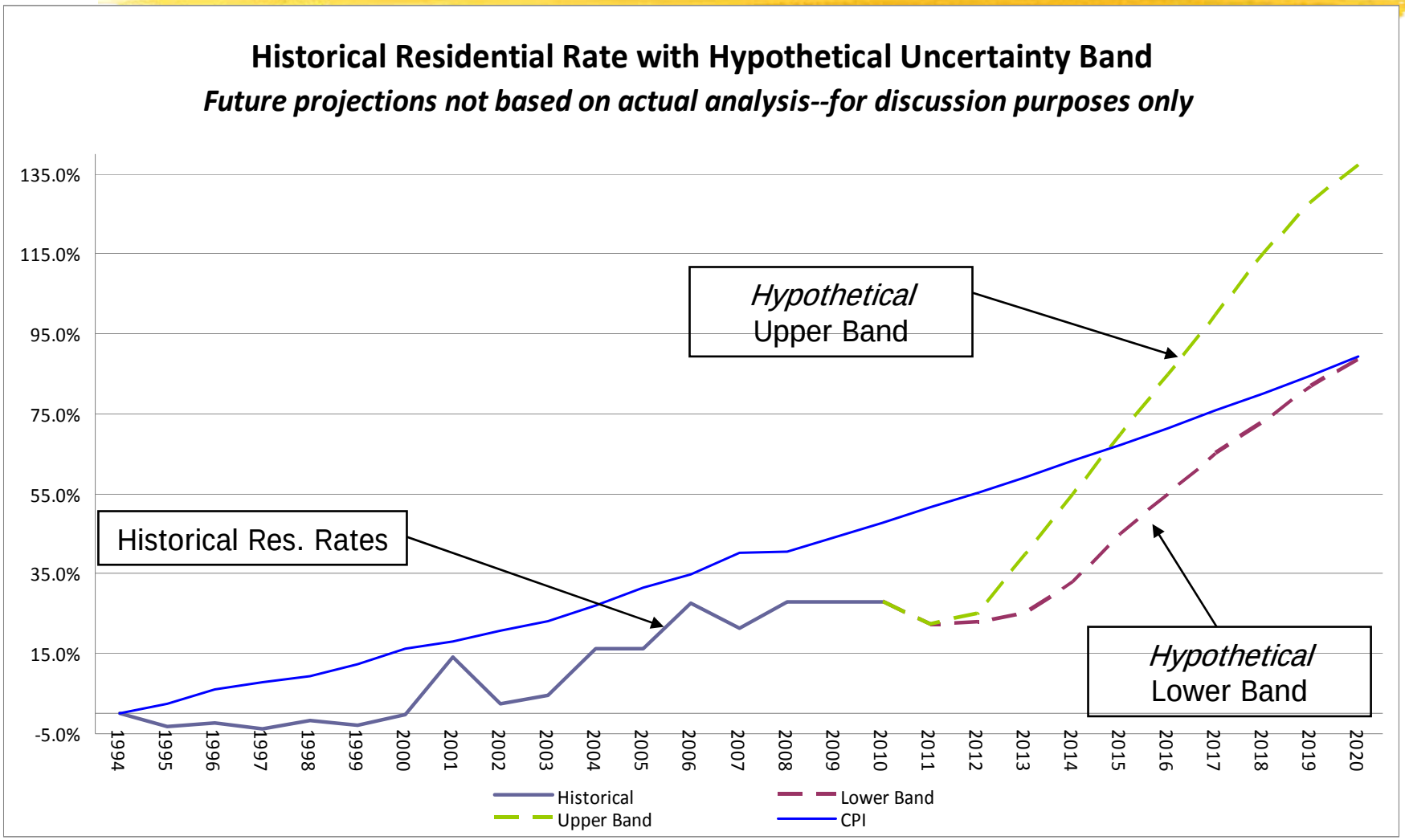


Predictability: Components of a Forward-looking Assessment

- Generation resource plan implementation.
  - Timing of specific resource investments.
  - Build vs. buy.
- Fuel cost expectations—natural gas cost.
- State-wide transmission build out costs and schedule.
- Environmental cost expectations.
  - Climate change legislation.
  - Environmental impact of natural gas drilling.
- Economic conditions.
- Rate review revenue requirement.
  - Transition path to new rate structure.
- Programmatic priorities and expenditures.
  - Cost containment.
- Unknown unknowns.

Forward Rate Uncertainty Band Relative to CPI Trend Line



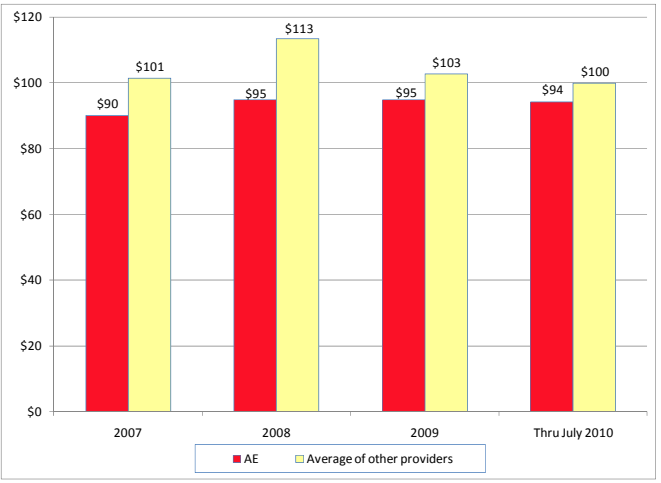
Dashboard Example: Benchmarks Proposed for Tracking

See next slide

Price Competitiveness Measures - Based on Electric Rate Benchmarking Data From R.W. Beck Study

Electricity Affordability Measures - Based on AE Energy Burden Analysis

Average Electricity Costs at 1,000 kWh/mo for 2007 through July 2010



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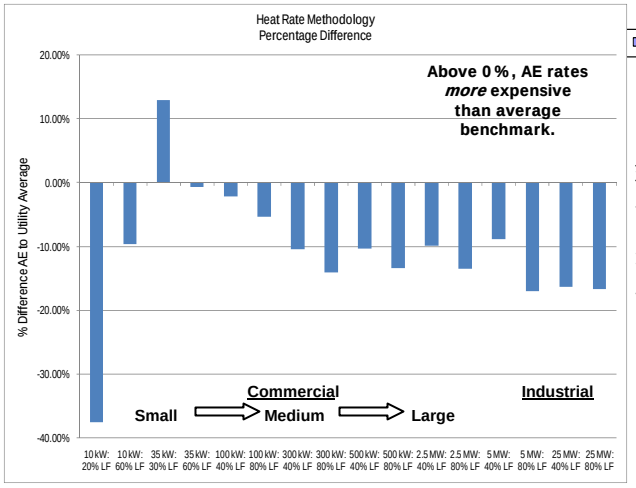
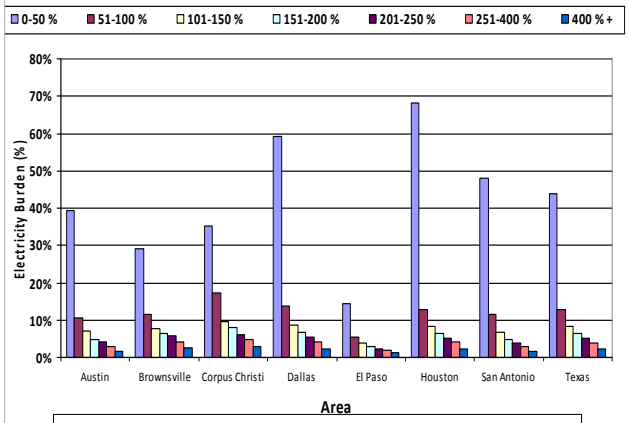


Residential Electricity Burden by Poverty Classification Benchmarked Against Sample Communities (2006 – 2008)



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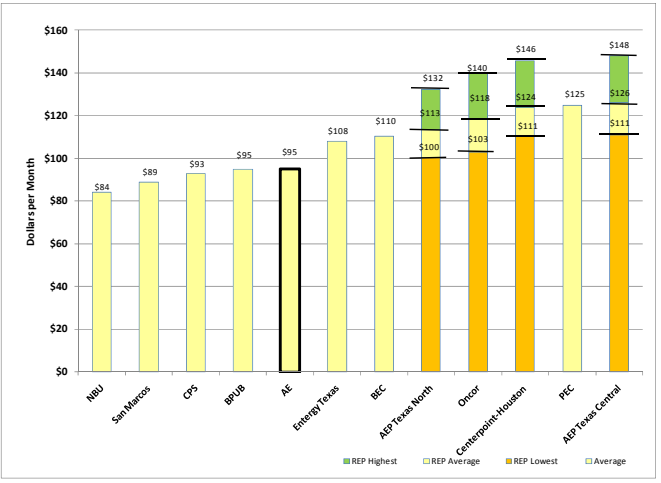
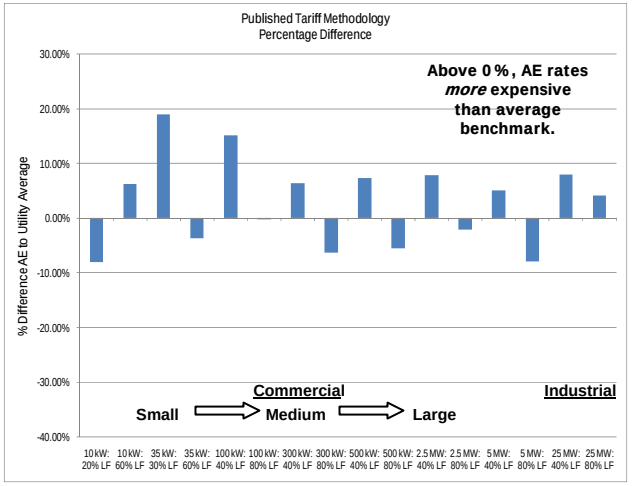
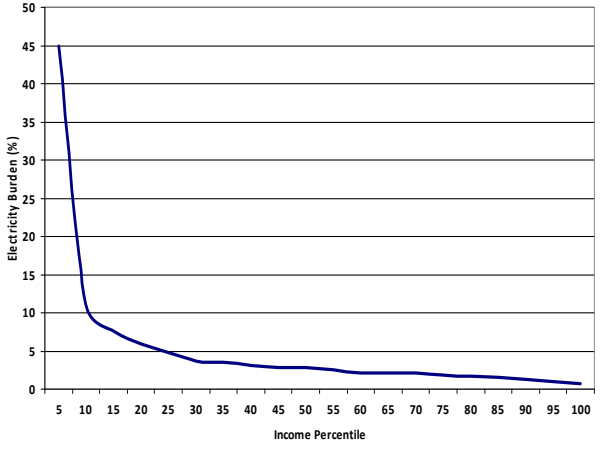


C&I Benchmarking Results: AE vs. Regulated Average (2009)



Austin Residential Electricity Burden by Income Classification (2006 – 2008)



Sample Application: Biomass and Webberville Solar Plant Impact on Household Electricity Burden

Income Level (Relative to Federal Poverty Level)	Base Case		Base Case plus Solar and Biomass Additions	
	Median Bill	Electricity Burden	Median Bill	Electricity Burden
0-50%	$ 103.84	39.3%	$ 107.89	40.9%
51-100%	$ 106.79	10.5%	$ 110.95	11.0%
101-150%	$ 120.00	7.2%	$ 124.68	7.5%
151-200%	$ 106.79	4.9%	$ 110.95	5.0%
201-250%	$ 110.00	4.1%	$ 114.29	4.2%
251-400%	$ 114.23	2.9%	$ 118.68	3.0%
401-500%	$ 124.61	2.3%	$ 129.47	2.3%
> 500%	$ 140.00	1.4%	$ 145.46	1.4%
All Households	$ 124.61	2.7%	$ 129.47	2.8%

Based on bill data as reported to Census. AE internal data suggests lower average bills in AE's territory than reported in the Census data.

Based on 2013 Estimated Costs of Biomass and Solar Contracts

Next Steps

- Continue to refine electricity burden analysis.
- Expand impact analysis for new resources to all of the proposed benchmarks.
- Develop rate uncertainty band.
- Conduct annual updates, consistent with schedule for revised annual report.
- Continue to refine tools and presentation of metrics.
- November 15th: post for EUC consideration.
- November 18th: briefing for Council.
- December 9th: post for Council consideration.