

INSTITUTE FOR
Electric Efficiency

Thoughts on Factors Affecting Customer Bills in Bakersfield, CA - Summer 2009

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Possible factors affecting customer bills in Bakersfield, CA: Summer 2008 v. 2009

Electricity bills are driven by “p” (rates) and “q” (usage).
Weather influences usage.

- Weather was much warmer in July 2009 than July 2008.
 - Therefore, customer usage higher in July ‘09 v ‘08.
- PG&E implemented new rates in 2009
 - A rate increase was implemented by PG&E in 2009.
 - Lowest two tiers frozen.
 - Rate increase accentuated in the upper tiers.
- PG&E installed smart meters in 2009.



Bakersfield warmer in Summer 2009 – hot weather increases A/C usage.

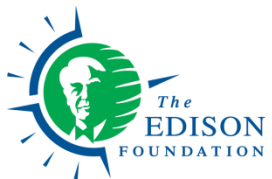
July						
S	M	T	W	T	F	S
2008			94	96	93	90
2009			100 ¹	103 ²	102 ³	104 ⁴
92	96	99	107	107	111	100
98 ⁵	93 ⁶	95 ⁷	93 ⁸	93 ⁹	93 ¹⁰	96 ¹¹
96	94	99	96	96	96	96
95 ¹²	94 ¹³	100 ¹⁴	105 ¹⁵	105 ¹⁶	105 ¹⁷	106 ¹⁸
100	96	90	92	97	99	98
111 ¹⁹	108 ²⁰	103 ²¹	98 ²²	104 ²³	99 ²⁴	97 ²⁵
100	98	95	95	97	98	
100 ²⁶	104 ²⁷	107 ²⁸	100 ²⁹	99 ³⁰	99 ³¹	

In July 2009, Bakersfield experienced 17 days with a temperature at or above 100 degrees compared to only 6 days in July 2008.

PG&E's inclining block rates increased in 2009 in Tiers 3, 4, and 5; Tiers 1 and 2 frozen.

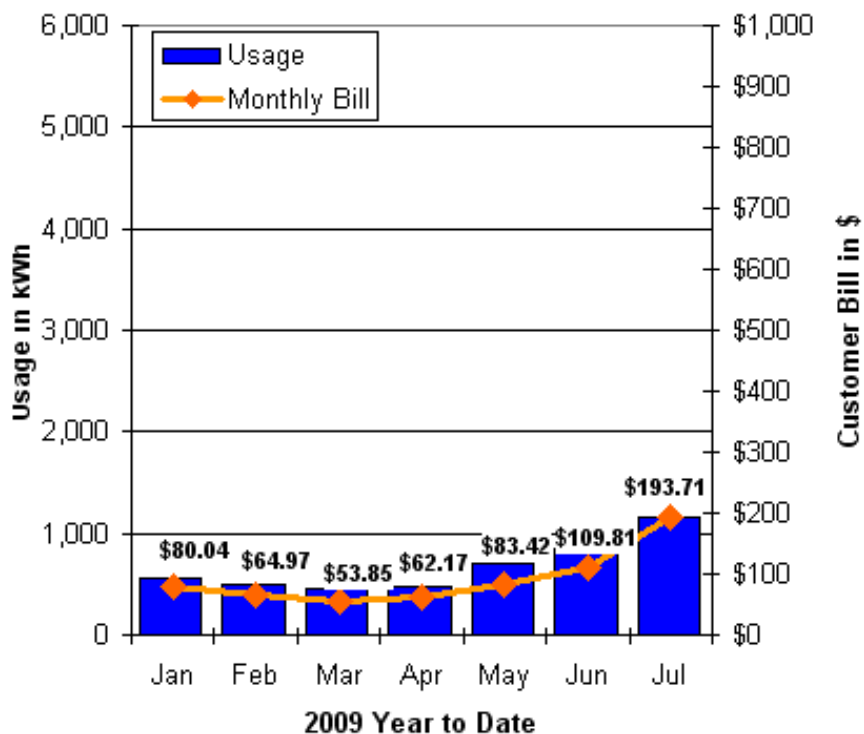
	2008 Rate	2009 Rate
Tier 1 – Baseline	11.5 ¢	11.5 ¢
Tier 2 – 101-130% of Baseline	13.1 ¢	13.1 ¢
Tier 3 – 131-200% of Baseline	22.6 ¢	26.0 ¢
Tier 4 – 201-300% of Baseline	31.3 ¢	38.0 ¢
Tier 5 – Over 300% of Baseline	35.9 ¢	44.3 ¢

A 3 ton air conditioner uses about 5,000 watts (5 kilowatts) of electricity and costs about 58¢ per hour at the Tier 1 rate. Throughout the month, using more electricity may move you to a higher rate tier. At the Tier 5 rate, that same 5,000 watts will cost about \$2.20 per hour.

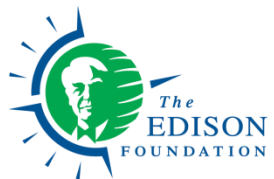
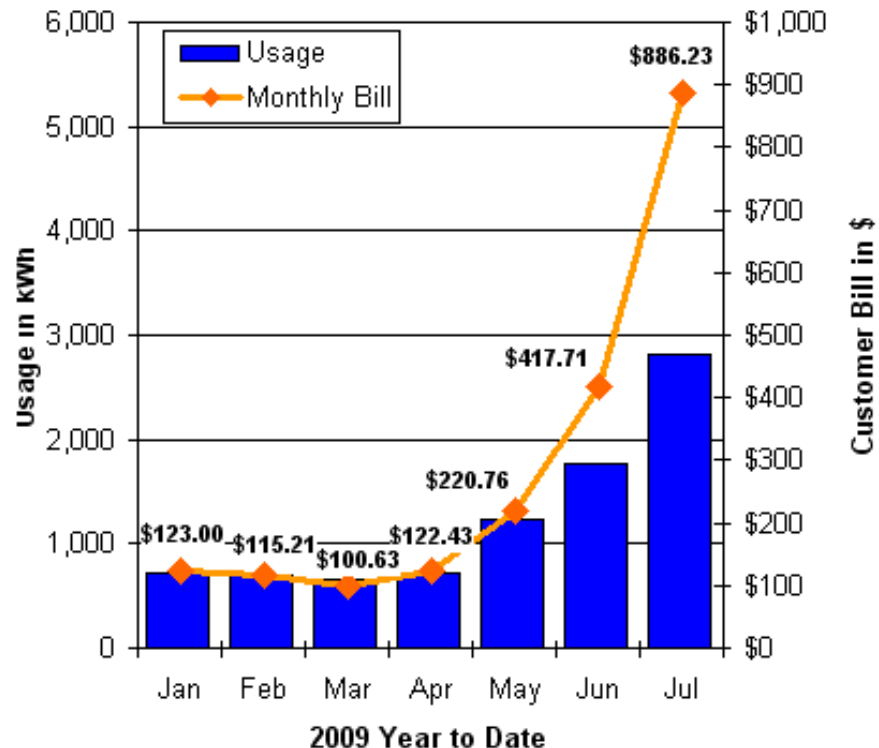


With tiered rate structure, increasing usage has a non-linear impact on bills: avg. vs. high use Kern county customer

Typical Customer Usage and Bill



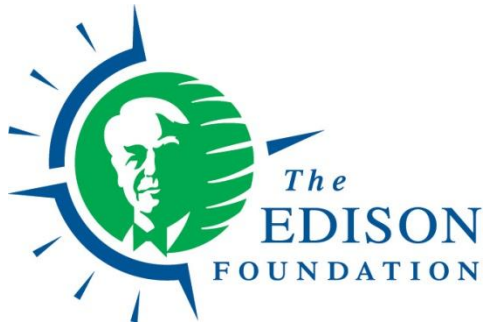
High-use Customer Usage and Bill



Weather and tiered rate structure explain a lot about electricity bills in Bakersfield.

- An average Kern county customer pays \$200 per month in July. A high use Kern county customer pays \$900 per month
- An average customer that increases usage can move into the higher tiered rates (i.e., from \$0.115 per kWh to \$0.443 per kWh) and experience a significant bill increase.
- As weather gets hotter, customers use more electricity.
 - A 3 ton air conditioner using 5,000 watts (5 kilowatts) per hour running for 180 hours per month (6 hours per day * 30 days) will cost \$110 at the two lowest tiers in that month.
 - In a hotter month, a 3 ton air conditioner using 5,000 watts (5 kilowatts) per hour running for 240 hours per month (8 hours per day * 30 days) will cost \$433 at the three highest tiers in that month.
- Weather and tiered rates significantly influence electricity bills.





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