

The Likely Impact of Certain Rate Changes On Energy Affordability

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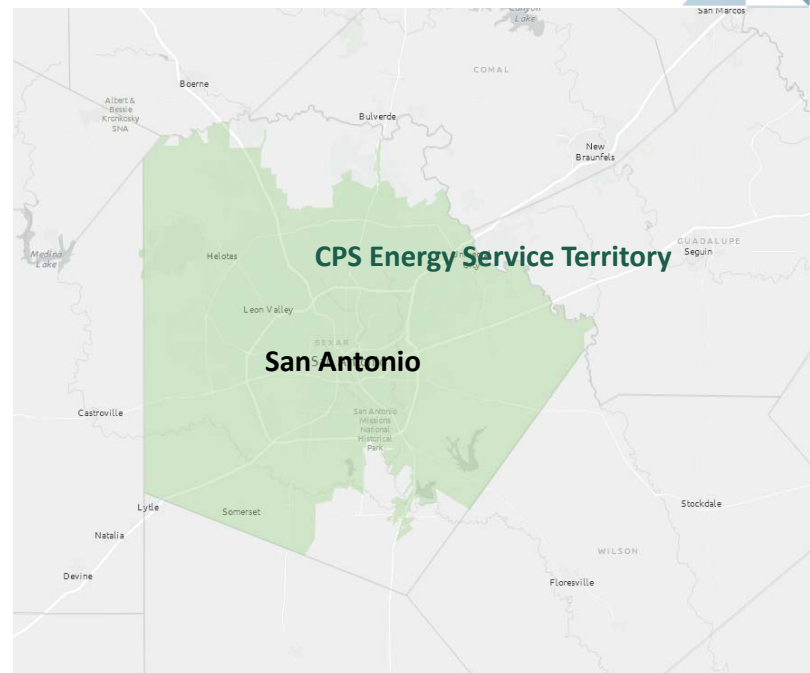


To assess the likely of rate changes on the energy burden of the 1st and 2nd income quintiles, we are going to use ACEEE's definition of the energy burden

The American Council for an Energy-Efficient Economy (ACEEE) considers households with a high energy burden are those that spends 6% (10% for severe energy burden) or more of total household income on electricity and gas costs (3% for single service)

- The annual energy burden is calculated by dividing the total energy bill by the total household income for the average bundled customer as shown below:

$$\text{Annual Energy Burden} = \frac{\text{Annual Electricity Costs} + \text{Annual Gas Costs}}{\text{Annual Household Income}}$$

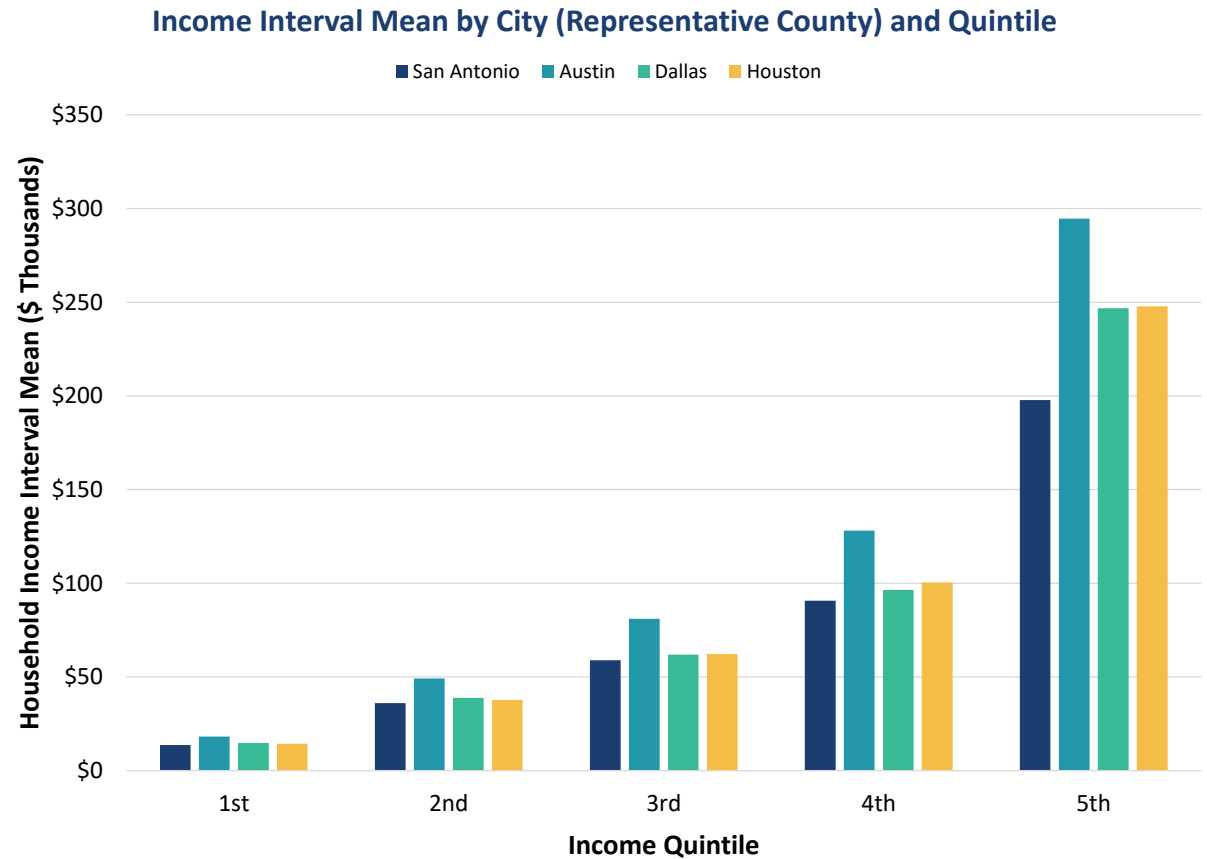


Source: S&P Global Market Intelligence; Accessed October 2021

At every income quintile, households in San Antonio are less well off than households in other Texas cities

- The average 3rd income quintile household in San Antonio earns **73%** as much as the average 3rd income quintile household in Austin
- The average 5th income quintile household in San Antonio earns **67%** as much as the average 5th income quintile household in Austin and **80%** as much as the average 5th income quintile household in Dallas or Houston

Region	Households per Income Quintile
Bexar County	129,270
Dallas County	188,117
Harris County	329,477
Travis County	101,550
Texas	1,997,025



Source: [Table B19081 - Mean Household Income of Quintiles, 2019: American Community Survey 1-Year Estimates Detailed Tables, United States Census Bureau.](#)

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We have carried out an analysis of Base Rate Increases, Fuel Cost Recovery, and Affordability Discount Program on the Energy Burden for the first and second income quintiles

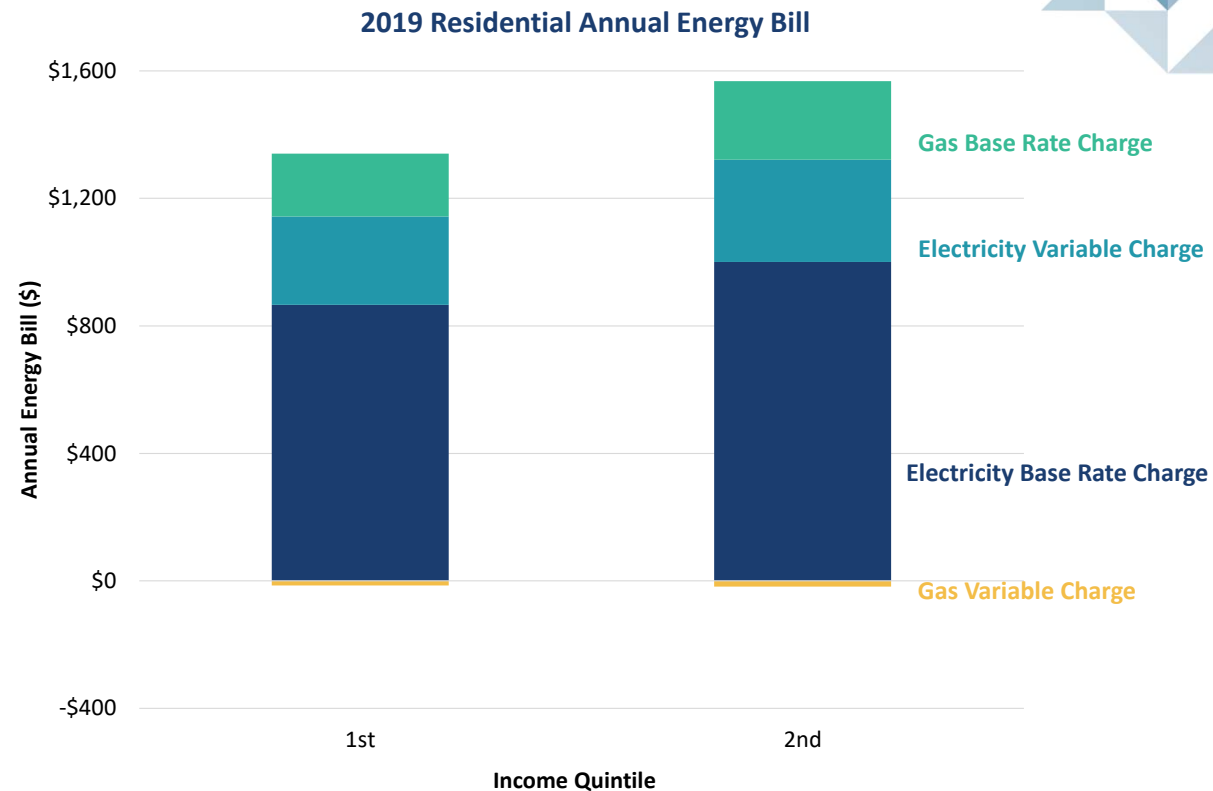


Details on Proposed Increases and Changes to the Affordability Discount Program (ADP)

Base Rate Increase	+ The proposed base rate increase of 3.85%, effective March 1, 2022, will result in a revenue increase of ~\$73 million to improve infrastructure resiliency, technology, and staffing. The proposed base rate increase does not apply to fuel or regulatory adjustment charges.
Fuel Cost Recovery	+ The proposed surcharge of ~\$1.26 per month, effective March 1, 2022, to recover fuel costs over 25 years due to Winter Storm Uri.
ADP Increase	- The proposed changes to the ADP increases overall enrollment by ~14,000 customers and adds an additional discount of \$3.84 per month for customers (\$16.14 per month total).

In 2019, customers in the 1st and 2nd income quintiles paid more than a thousand dollars for energy, before discounts

- Electricity costs make up **85%** total energy bills for customers in the 1st and 2nd income quintiles
- Base rates make up the **largest portion** of electricity and gas bills
- Customers in the 1st and 2nd income quintiles customers faced negative variable charges for gas service in 2019 due to a negative fuel adjustment



Sources and Notes: Annual Electric Power Industry Report, Form EIA-861, U.S. Energy Information Administration, 2019 and Annual Report of Volumes, Revenues, and Customers by Company (2002 – 2019), American Gas Association. Estimates are not weather-normalized. Gas estimates are based on Municipally and Investor Owned Distributors. Internal billing data provided by CPS Energy.

Our methodology for estimating the impact of rate changes is very straightforward

We apply a 3.85% base rate increase to the most economically vulnerable customers (customers in the 1st and 2nd income quintiles)

1. We used 2019 customer bill data from CPS Energy to estimate the share of base rates from electricity and gas bills
2. We estimated the 2019 base rate charge for electricity and gas bills using the base rate share of the bill and the estimated annual electricity and gas bills for 1st and 2nd income quintile customers
3. We multiplied the proposed base rate increase of 3.85% with the estimated base rate charges for electricity and gas to derive the total bill impact of the proposed base rate increase

Sources and Notes: Annual Electric Power Industry Report, Form EIA-861, U.S. Energy Information Administration, 2019 and Annual Report of Volumes, Revenues, and Customers by Company (2002 – 2019), American Gas Association. Estimates are not weather-normalized. Gas estimates are based on Municipally and Investor Owned Distributors. Data on base rates and proposed bill increases was provided by CPS Energy.

Base Rate Increases for 1st Income Quintile Customers

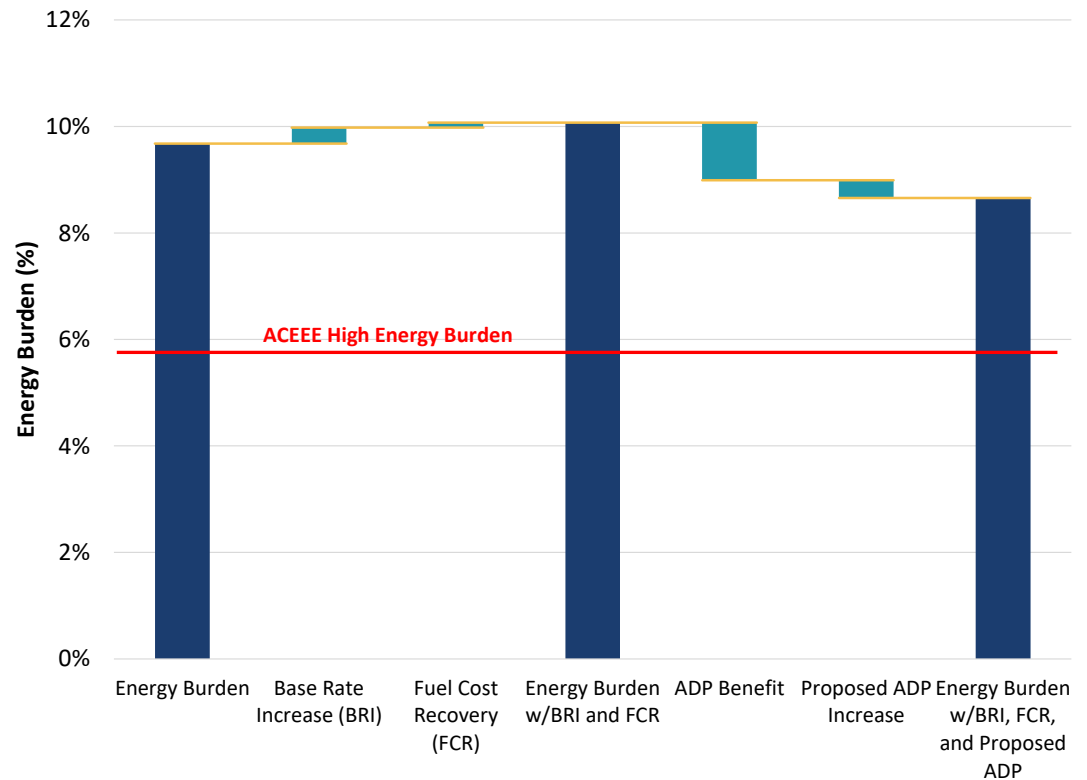
Energy Bill	Notes	
Electricity		
Current Electricity Bill (\$)	[1]	\$1,143
Base Rate Share of Bill (%)	[2]	75.76%
Base Rate Charge (\$)	[3] = [1] x [2]	\$866
Proposed Base Rate Increase (%)	[4]	3.85%
Proposed Base Rate Increase (\$)	[5] = [3] x [4]	\$33
Proposed New Base Rate (\$)	[6] = [4] + [5]	\$899
Proposed New Electricity Bill (\$)	[7] = [1] + [5]	\$1,176
Gas		
Current Gas Bill (\$)	[8]	\$183
Base Rate Share of Bill (%)	[9]	107.81%
Base Rate Charge (\$)	[10] = [8] x [9]	\$198
Proposed Base Rate Increase (%)	[11]	3.85%
Proposed Base Rate Increase (\$)	[12] = [10] x [11]	\$8
Proposed New Base Rate (\$)	[13] = [11] + [12]	\$205
Proposed New Gas Bill (\$)	[14] = [8] + [12]	\$191
Base Rate Increase for Electricity (\$)	[15] = [5]	\$33
Base Rate Increase for Gas (\$)	[16] = [12]	\$8
Total Base Rate Increases to Bills (\$)	[17] = [15] + [16]	\$41

The impact of rate changes on 1st Income Quintile customers is derived below

The 2019 energy burden with a \$12.30 per month ADP is 8.6% compared to 8.7% with the proposed changes to the base rate, the fuel cost recovery, and an ADP benefit of \$16.14

- Customers in the 1st income quintile are expected to pay **\$7 more** for energy bills
 - Despite the increase, the proposed ADP increase **largely mitigates** the impact of the base rate increase and the fuel cost recovery
- The proposed changes to the base rate and the fuel cost recovery increases the energy burden from **9.7% to 10.1%** before discounts
- The impact of the base rate increase on the energy burden is **considerably larger** than the impact from the fuel cost recovery
- The proposed ADP changes (including the base rate increase and the fuel cost recovery) maintains a similar energy burden of **8.7%**

Energy Burdens for 1st Income Quintile CPS Customers



Sources and Notes: Annual Electric Power Industry Report, Form EIA-861, U.S. Energy Information Administration, 2019 and Annual Report of Volumes, Revenues, and Customers by Company (2002 – 2019), American Gas Association. Estimates are not weather-normalized. Gas estimates are based on Municipally and Investor Owned Distributors. Data on proposed bill increases was provided by CPS Energy.

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This table provides the details of the computation



Energy Burden Impacts (1st Income Quintile Customers)

Energy Burden Component	Notes	Energy Bill (\$)	Energy Burden (%)
Previous Energy Costs, Pre-Discount	[1]	\$1,326	9.68%
Base Rate Increase (BRI)	[2]	\$41	0.30%
Fuel Cost Recovery (FCR)	[3]	\$13	0.09%
Estimated Energy Costs After BRI and FCR	[4] = [1] + [2] + [3]	\$1,380	10.07%
Original ADP Benefit	[5]	-\$148	-1.08%
Proposed ADP Increase	[6]	-\$46	-0.34%
Energy Costs After BRI, FCR, and Proposed ADP	[7] = [4] + [5] + [6]	\$1,186	8.66%
Previous Energy Costs, Post-ADP Discount	[8]	\$1,179	8.60%
Change in Annual Energy Costs	[9] = [7] - [8]	\$7	0.05%

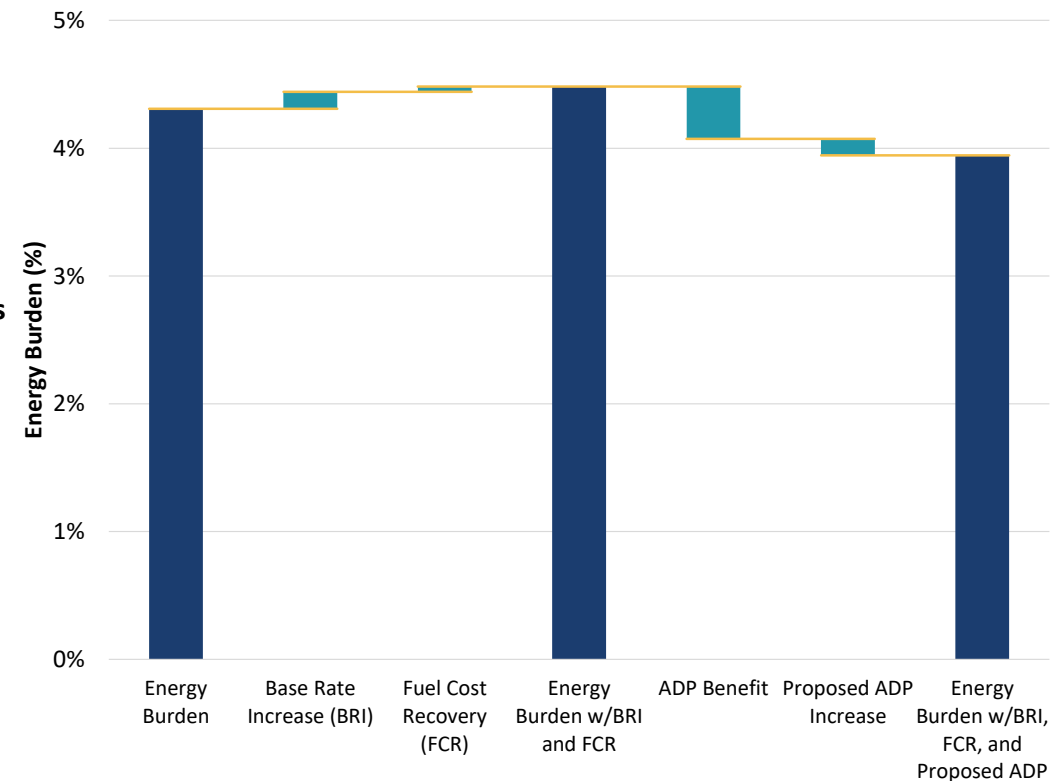
Sources and Notes: Annual Electric Power Industry Report, Form EIA-861, U.S. Energy Information Administration, 2019 and Annual Report of Volumes, Revenues, and Customers by Company (2002 – 2019), American Gas Association. Estimates are not weather-normalized. Gas estimates are based on Municipally and Investor Owned Distributors. Data on proposed bill increases was provided by CPS Energy.

The impact of rate changes on 2nd income quintile customers is derived below

The 2019 energy burden with a \$12.30 per month ADP is 3.9% compared to 4.0% with the proposed changes to the base rate, the fuel cost recovery, and an ADP benefit of \$16.14

- Customers in the 2nd income quintile are expected to pay **\$17 more** for energy bills
 - Despite the increase, the proposed ADP increase **largely mitigates** the impact of the base rate increase and the fuel cost recovery
- The proposed changes to the base rate and the fuel cost recovery increases the energy burden from **4.3% to 4.5%** before discounts
- The impact of the base rate increase on the energy burden is **considerably larger** than the impact from the fuel cost recovery
- The proposed ADP changes reduces the energy burden (including the base rate increase and the fuel cost recovery) to **3.9%**

Energy Burdens for 2nd Income Quintile CPS Customers



Sources and Notes: Annual Electric Power Industry Report, Form EIA-861, U.S. Energy Information Administration, 2019 and Annual Report of Volumes, Revenues, and Customers by Company (2002 – 2019), American Gas Association. Estimates are not weather-normalized. Gas estimates are based on Municipally and Investor Owned Distributors. Data on proposed bill increases was provided by CPS Energy.

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The table below provides the details of the computations for the 2nd income quintile



Energy Burden Impacts (2nd Income Quintile Customers)

Energy Burden Component	Notes	Energy Bill (\$)	Energy Burden (%)
Previous Energy Costs, Pre-Discount	[1]	\$1,550	4.31%
Base Rate Increase (BRI)	[2]	\$48	0.13%
Fuel Cost Recovery (FCR)	[3]	\$15	0.04%
Estimated Energy Costs After BRI and FCR	[4] = [1] + [2] + [3]	\$1,613	4.48%
Original ADP Benefit	[5]	-\$148	-0.41%
Proposed ADP Increase	[6]	-\$46	-0.13%
Energy Costs After BRI, FCR, and Proposed ADP	[7] = [4] + [5] + [6]	\$1,419	3.94%
Previous Energy Costs, Post-ADP Discount	[8]	\$1,402	3.90%
Change in Annual Energy Costs	[9] = [7] - [8]	\$17	0.05%

Sources and Notes: Annual Electric Power Industry Report, Form EIA-861, U.S. Energy Information Administration, 2019 and Annual Report of Volumes, Revenues, and Customers by Company (2002 – 2019), American Gas Association. Estimates are not weather-normalized. Gas estimates are based on Municipally and Investor Owned Distributors. Data on proposed bill increases was provided by CPS Energy.

Key Takeaways

- CPS Energy is proposing to raise base rates by **3.85%** and introduce a **\$1.26 per month** fuel cost recovery surcharge over the next 25 years
- We quantified the impact of the change in the base rate and the fuel cost recovery surcharge on the energy burden of CPS Energy customers in the 1st and 2nd income quintiles
 - We found that the energy burden for customers in 1st and 2nd income quintiles increases to **10%** and **5%**, respectively
- After we account for the impact of the current and proposed ADP programs, the energy burden falls to **8.7%** and **3.9%** for customers in the 1st and 2nd income quintile, respectively
- The increases in the proposed ADP program reduces the combined impact of base rate increase and the fuel cost recovery surcharge by **86%** and **73%** for customers in the 1st and 2nd income quintile, respectively

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