

Austin Energy 2022 Base Rate Review

Joint Committee on Sustainability

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Chief Financial Officer



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Austin Energy 2022 Base Rate Review

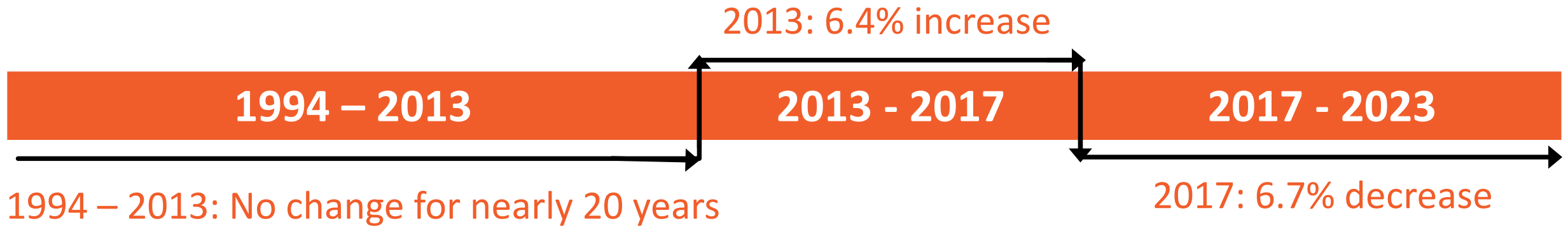
Introduction to the Base Rate Review

<https://austinenergy.com/ae/rates/2022-base-rate-review>



Austin Energy 2022 Base Rate Review

Only Two Base Rate Changes Since 1994



Austin Energy's Proposed Base Rate Increase for 2023 is 5.6%



Austin Energy 2022 Base Rate Review

Base Rates Are Used to Recover Fixed Costs – Not the Cost of the Electricity



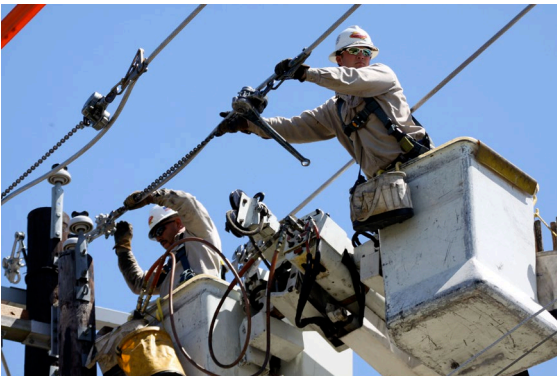
Supplies & Equipment



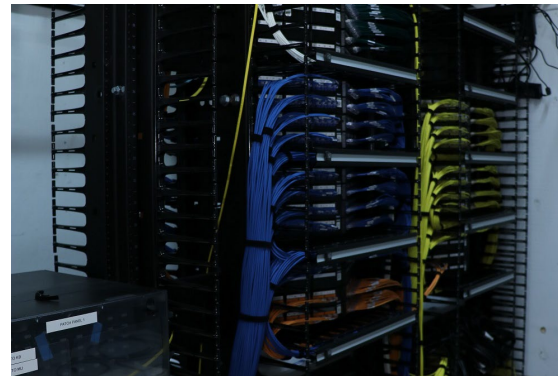
Tree Trimming



Principal + Interest
Payments



Employees



Technology



General Fund Transfer

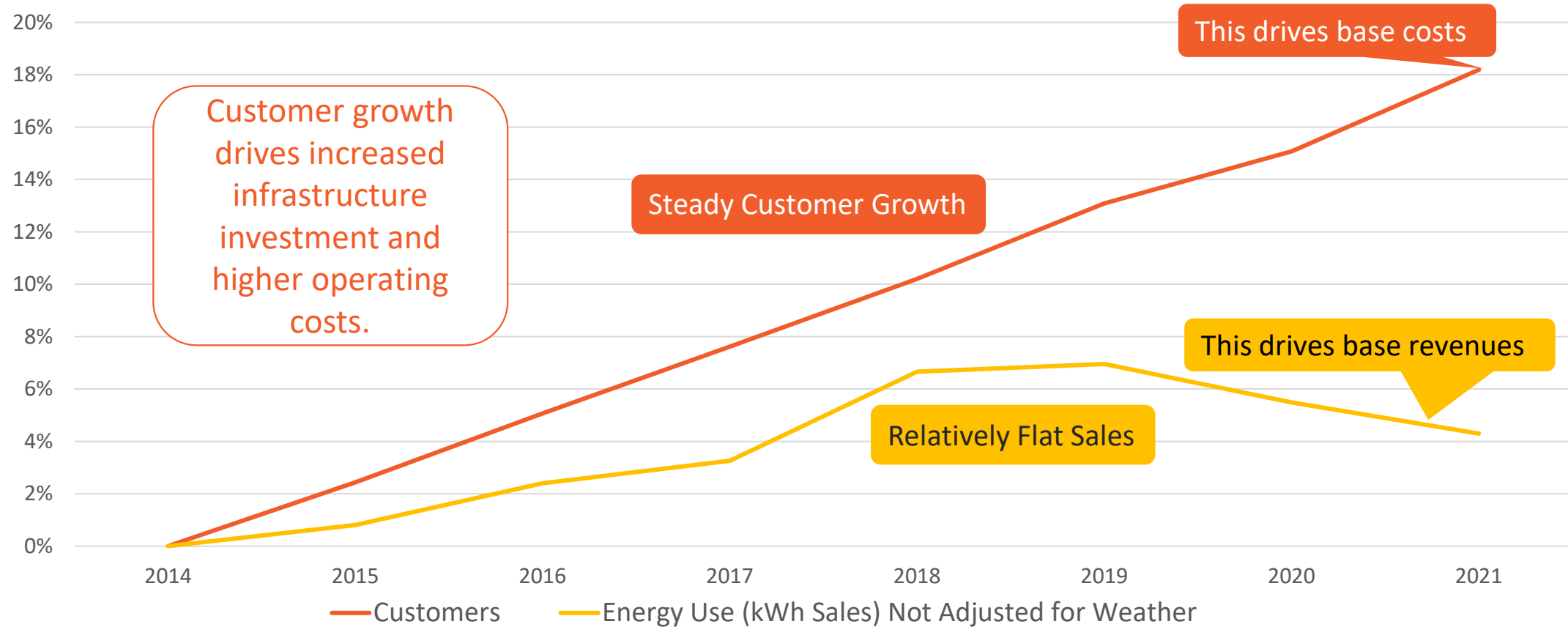
Excluded:

- Power Supply Cost
- Customer Assistance Program
- Energy Efficiency Programs
- Streetlights
- Transmission-related Costs
- District Energy and Cooling



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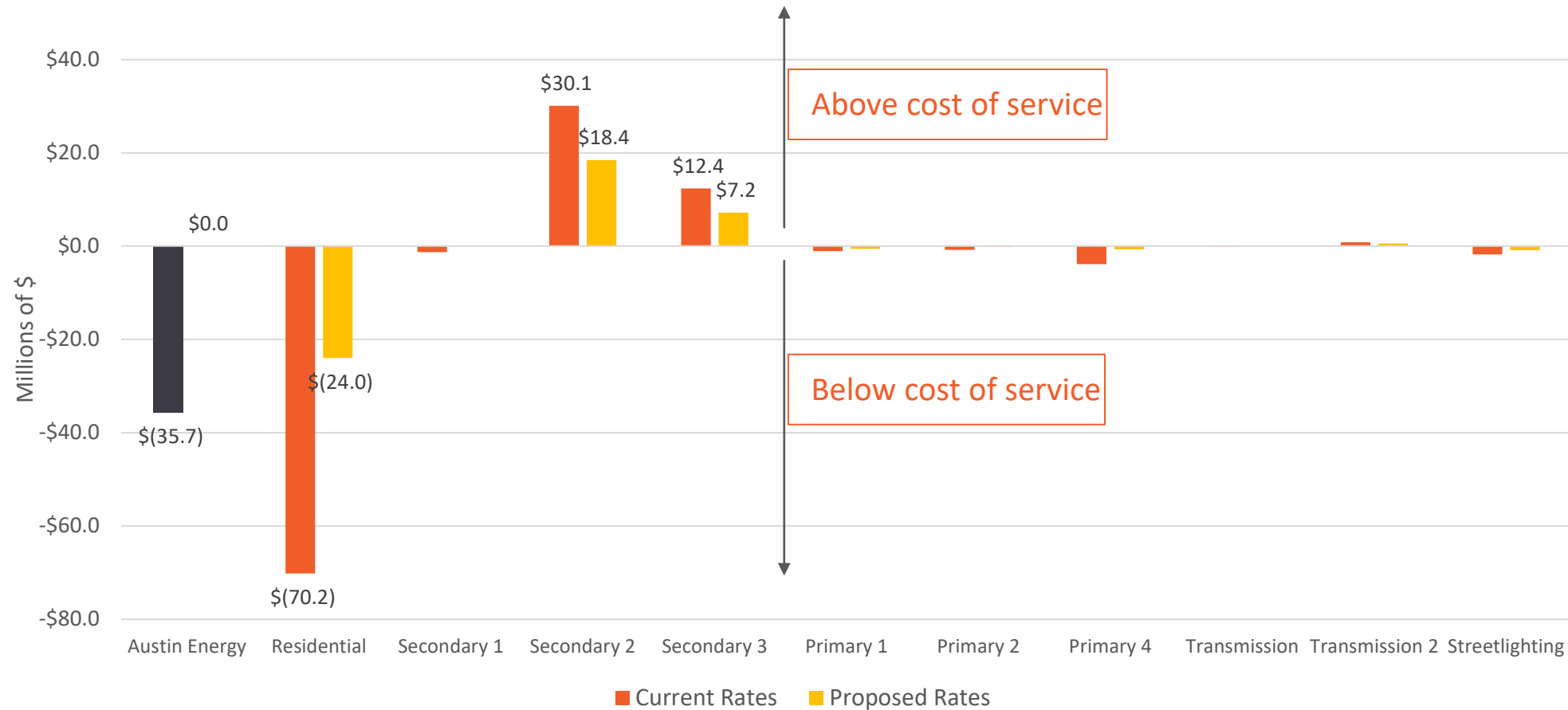
Recovering Fixed Costs at a Variable Energy Rate (kWh) is the Challenge



Source: Fund Summary Statements 2014-2021

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Commercial Customers Continue to Subsize the Residential Customers



Data presented in Comparison of Cost of Service, Current Base Rates, and Proposed Base Rates, Schedule G-10.2
Austin Energy Base Rate Review 2022

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Timeline of Major Events for the Base Rate Review Process

Key Events	Dates
Release of Austin Energy Base Rate Proposal and Cost of Service Model to the Public	April 18, 2022
Eight Public Outreach Meetings (Virtual and In-Person)	April 19 – May 12, 2022
Two Technical Conferences for Intervenors	May 5 and 18, 2022
Discovery Period	April 18 – June 8, 2022
Three-Day Conference with Impartial Hearings Examiner	July 13 – 15, 2022
Impartial Hearings Examiner's Report	September 9, 2022
City Council Work Session	November 1, 2022
Austin Energy Utility Oversight Commission – invited testimony from AE, IHE, ICA, all base rate participants	November 9, 2022
Electric Utility Commission – testimony allowed	November 14, 2022
City Council - Public Hearing – testimony allowed	November 15, 2022
City Council Work Session and Austin Energy Utility Oversight Commission	November 29, 2022
Austin City Council Regular Meeting, Public Hearing, and Vote on Base Rates – testimony allowed	December 1, 2022
New Base Rates Effective	~90-days after adoption



Austin Energy 2022 Base Rate Review

Assumptions Used in Policy Recommendations



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Assumptions in the Joint Sustainability Committee Recommendation on Austin Energy Residential Rates

WHEREAS, proposed changes to Austin Energy's Residential electric rate structure threaten further progress in energy efficiency by dramatically removing price signals to conserve; and

WHEREAS, since low-income utility customers generally use less energy than average customers, changing Austin's progressive electric Residential rate structure that discourages consumption will make bills more burdensome to the lower and moderate income residents; and

WHEREAS, Austin Energy has made a proposal in its current rate case to completely replace the current progressive rate structure with one that rewards more consumption; and

WHEREAS, Austin Energy's current \$10 per month Customer Charge is on par with other Texas municipal utilities and the proposed \$25 per month Customer Charge would be an outlier compared to other Texas municipal utilities;



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When Consumers Use Less, They Can Reduce Their Variable Costs

Car Cost
(Fixed)



Fuel Cost
(Variable)



Efficiency or
Conservation
Measure

Take the bus to
work and drive
fewer miles

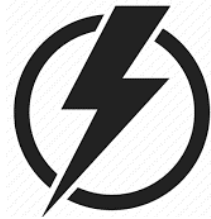
Impact

Same car cost but
less fuel cost

Base Rate Cost
(Fixed)



Power Supply Cost
(Variable)



Efficiency or
Conservation
Measure

Turn the
thermostat up to
consume fewer
kWh

Impact

Same base rate
cost but less
power supply cost



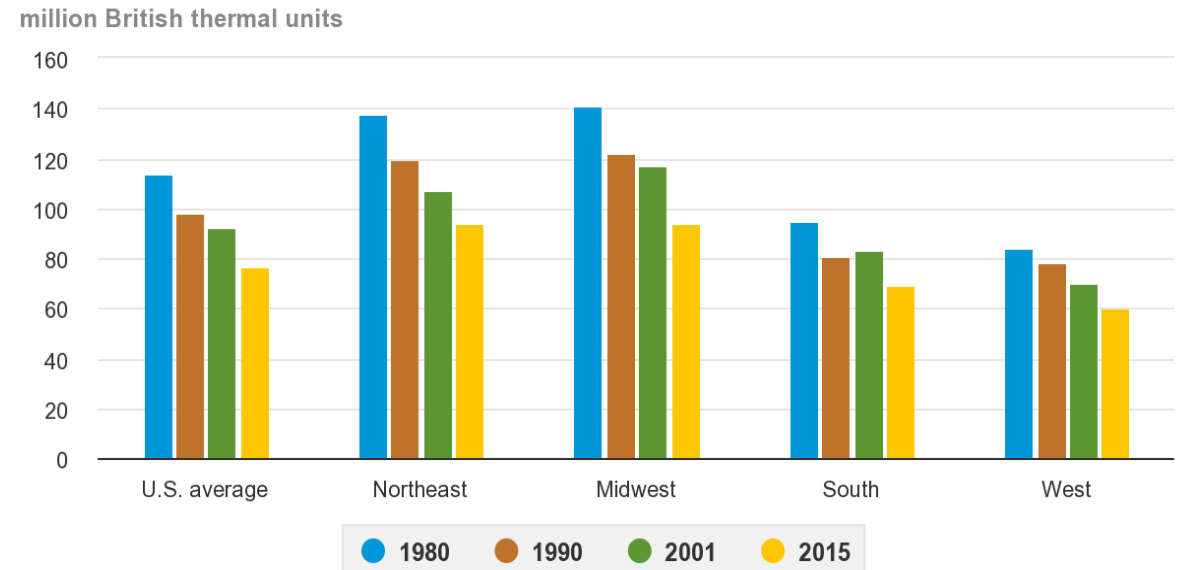
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Energy Efficiency and Conservation are Driving Reduction in Electric Use

The typical U.S. household now uses more air conditioning, appliances, and consumer electronics than ever before. However, average annual site energy use per home has declined. The reasons for this decline include:

- Improvements in building insulation and materials
- Improved efficiencies of heating and cooling equipment, water heaters, refrigerators, lighting, and appliances
- Population migration to regions with lower heating—and thus lower total energy—demand

Energy consumption per household, U.S. average and by census region in selected years



Data source: U.S. Energy Information Administration, *Residential Energy Consumption Survey* for indicated years



Note: Excludes losses in electricity generation and delivery, and consumption of wood fuels.

The decline in average household site energy consumption has offset the increase in the number of homes overall, resulting in relatively flat residential sector energy consumption since the mid-1990s



<https://www.eia.gov/energyexplained/use-of-energy/homes.php>

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Trend in Residential Consumption: All Homes are Becoming More Energy Efficient

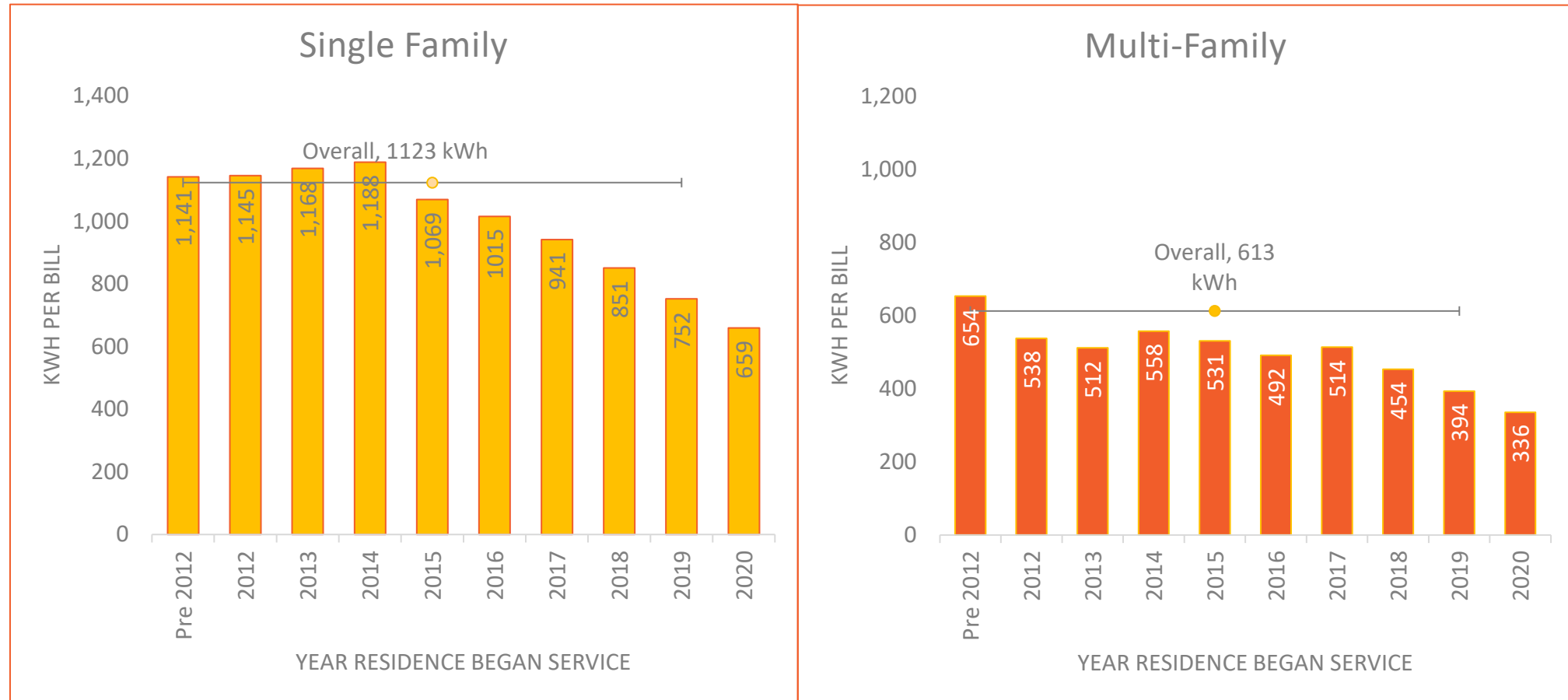
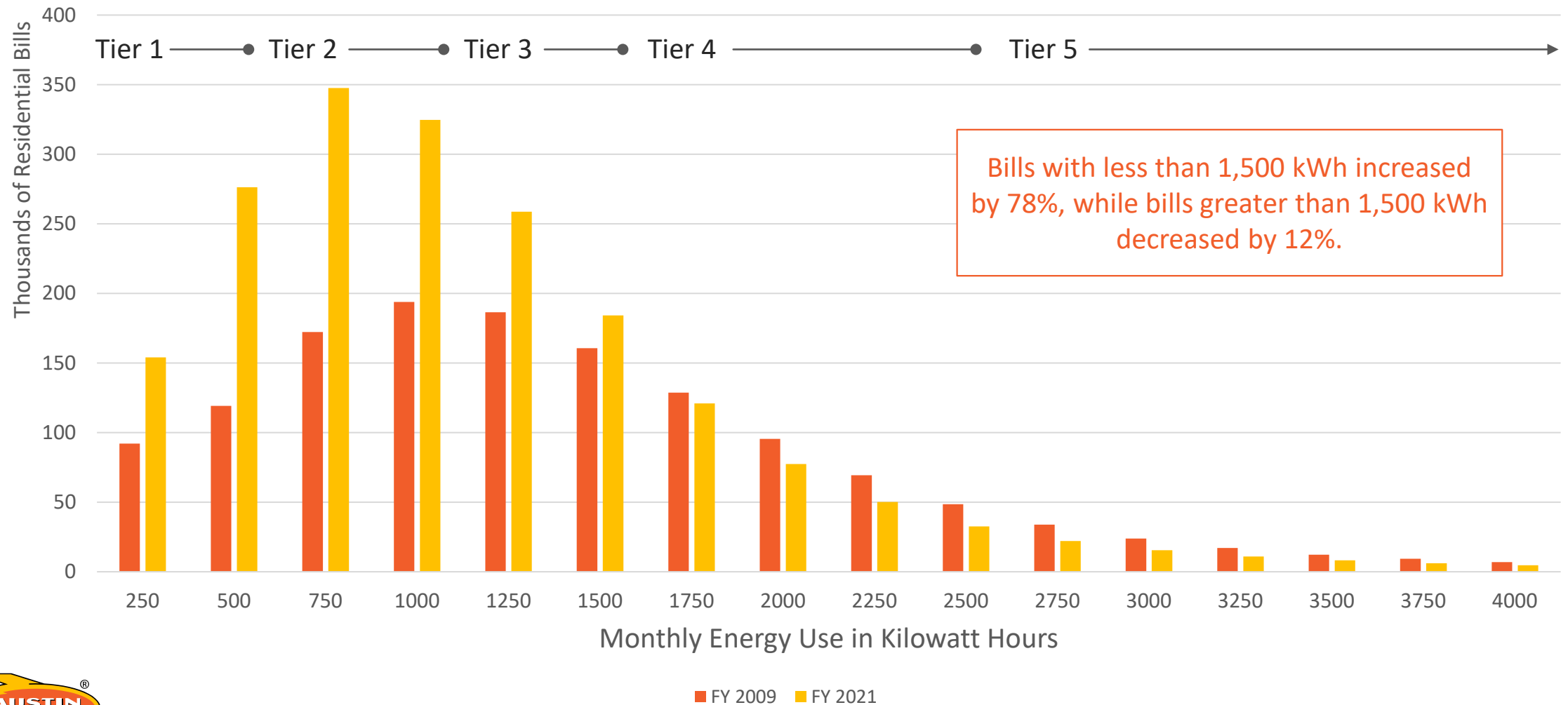


Figure 7-9: Consumption per Premise by Year of Initiation of Service, Single-Family v. Multi-Family
Austin Energy Base Rate Review 2022, page 85, published April 18, 2022

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Residential Summer Consumption Patterns Dramatically Changed Between 2009 and 2021



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Bunching Analysis: Elasticity of Demand for Electricity

The Theory: Customers respond to tiered prices by reducing consumption.

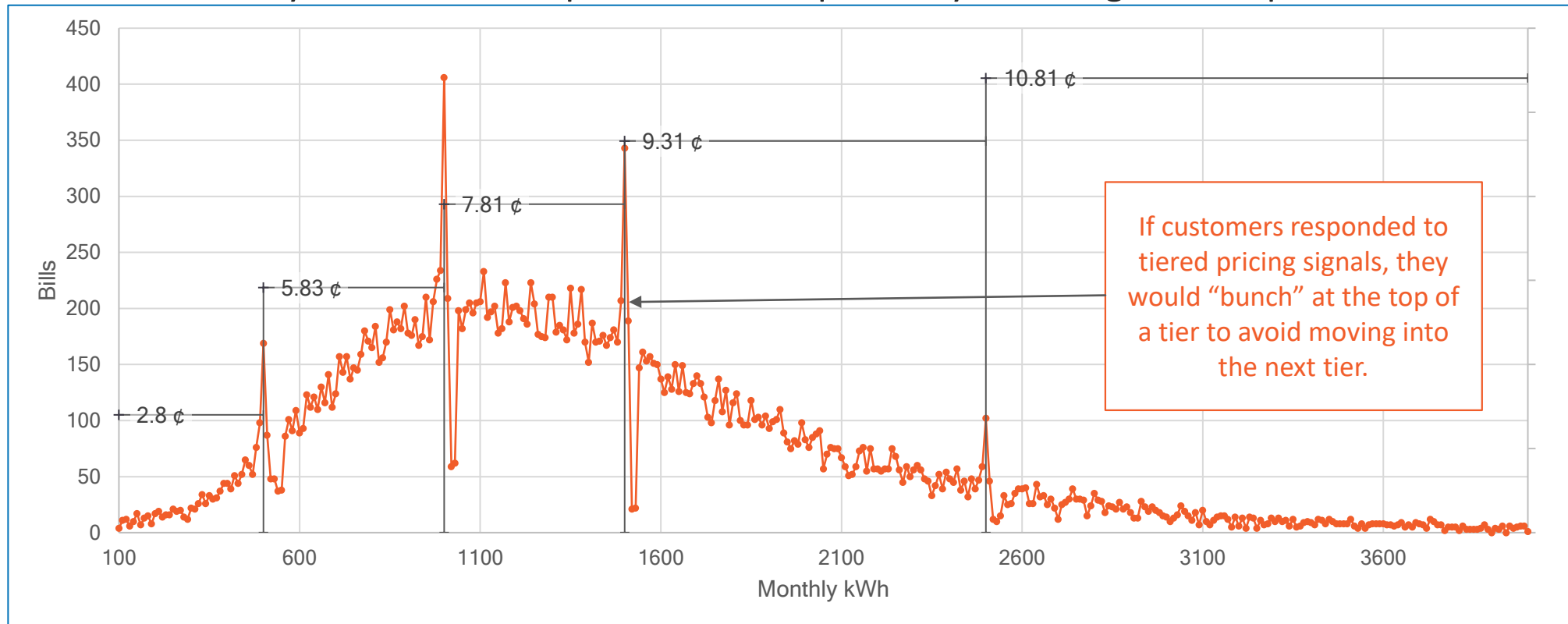


Figure 7-13: Hypothetical Bill Frequency Histogram under Hypothetical “Bunching”
Austin Energy Base Rate Review 2022, page 91, published April 18, 2022

Austin Energy 2022 Base Rate Review

Bunching Analysis: Elasticity of Demand for Electricity

The Reality: Customers do not respond to tiered prices⁽¹⁾.

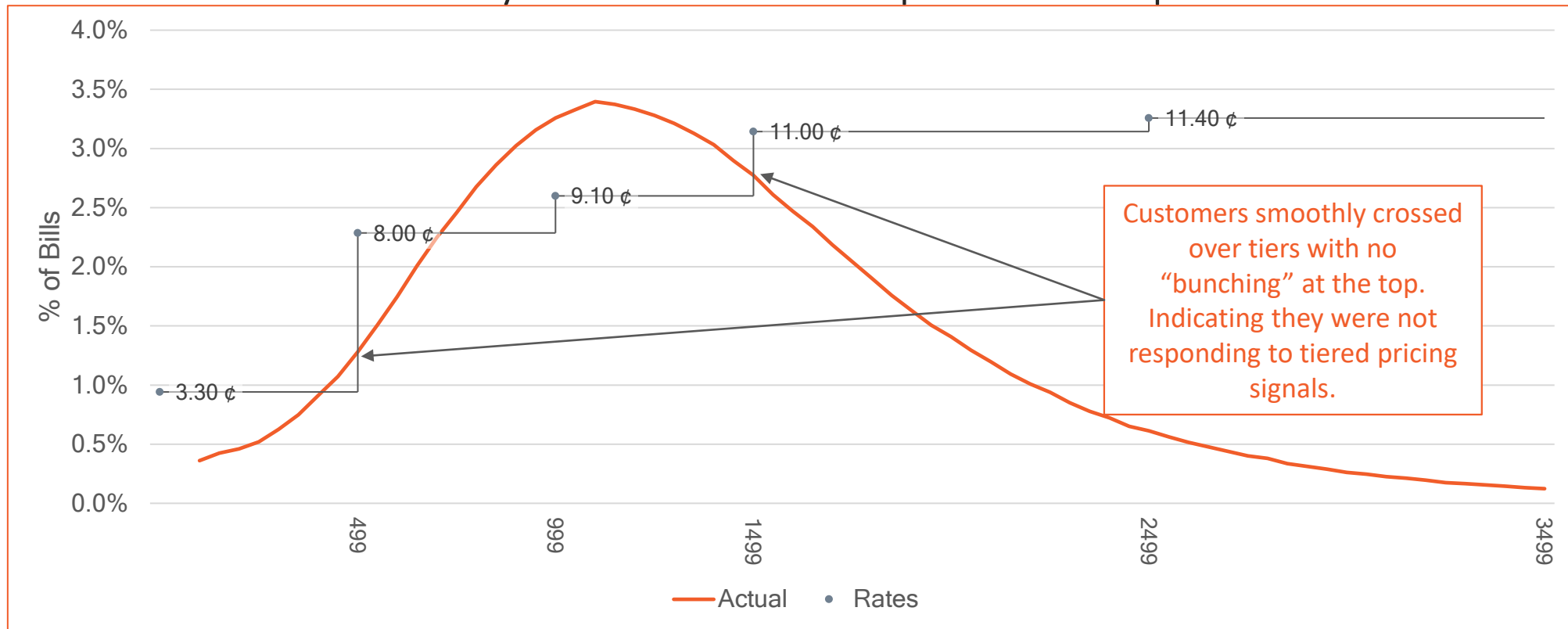


Figure 7-14: Actual Residential Bill Frequency Histogram, kWh per Month, using 2013 – 2016 Billing Data
Austin Energy Base Rate Review 2022, page 92, published April 18, 2022

(1) Figure represents a population of 145,000 customers with continuous service who resided in single-family residences within the City of Austin from 2013 through 2016. Tier pricing reflects summer base rates approved in the 2012 Base Rate Review.



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Reduction in Residential Consumption Nearly Identical for Both 3-Tiered and 5-Tiered Pricing

- Residential customers outside the City of Austin have seen a similar reduction in the average kWh per month as customers inside the City of Austin
- Outside the City of Austin, customers use 3 tiers rather than 5 tiers of pricing
- Indicates the number of tiers does not directly contribute to reduced energy consumption

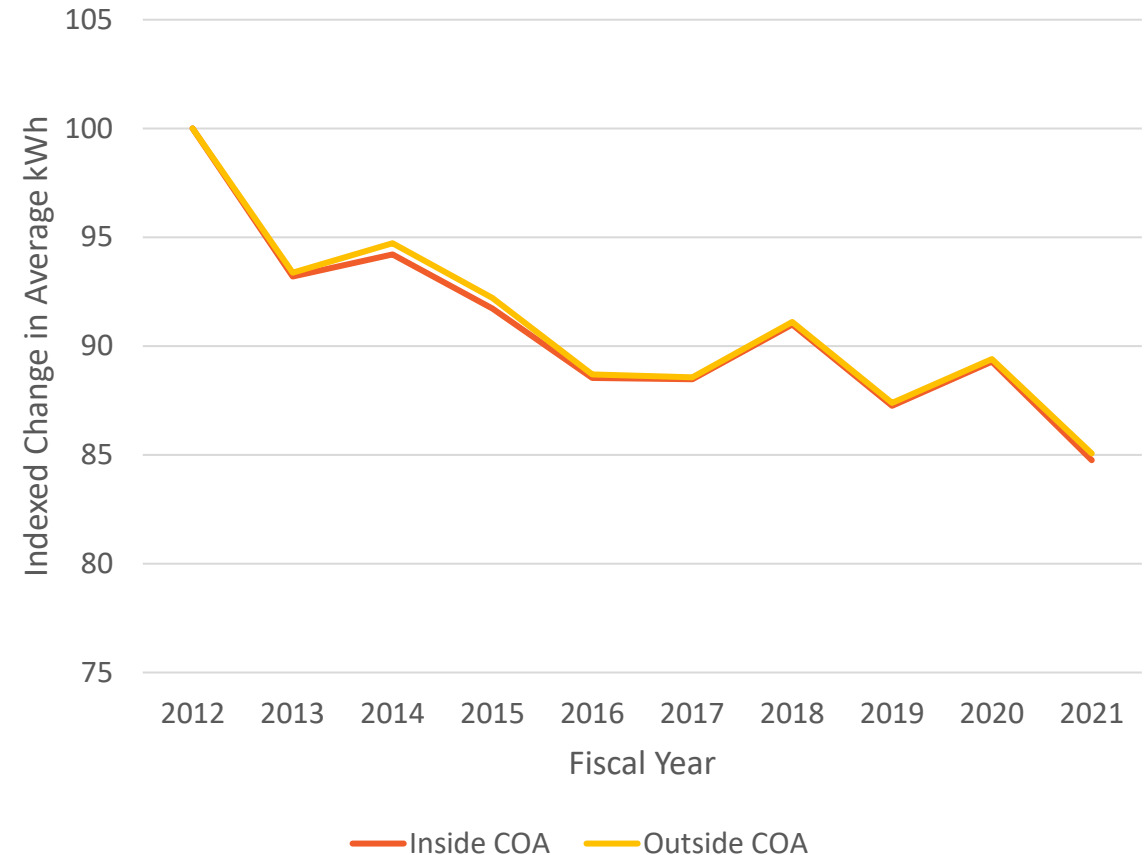


Figure 7-12: Indexed Trends in Average kWh Energy Consumption, Inside-City v Outside-City Residential Customers, 2012 to 2021
Austin Energy Base Rate Review 2022, page 89, published April 18, 2022



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Tiered-Based Rates and Social Policy

- The concept of progressive and regressive rates is inspired by tax policy and not utility rate making. A progressive tax imposes a lower tax rate on lower-income consumers. In contrast, a regressive tax is imposed uniformly, resulting in lower-income consumers using a larger portion of their income for tax.
- Utility fees and charges are not taxes. A tax has the primary purpose of raising revenues for a governmental entity. A utility recovers the cost of providing a commodity from consumers.
- Tiered rates are “income blind” and apply to all customers. All customers have kWh sold in Tier 1 and receive a heavy subsidy from commercial customers and residential customers with sales in higher tiers, regardless of income level. All customers with kWh sold to them in Tiers 4 and 5 subsidize sales in Tiers 1 and 2, regardless of income level.



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5-Tiered Structure Disproportionately Recovers Costs from Our Vulnerable Customers

- On average, in FY 2020 CAP customers used 11.1% more energy than non-CAP
- 39.6% of our CAP customers are billed at the higher tiered rates, while only a 29.4% of non-CAP customers are in those tiers
- Some high-income households do not use much electricity, and some low-income households use a lot

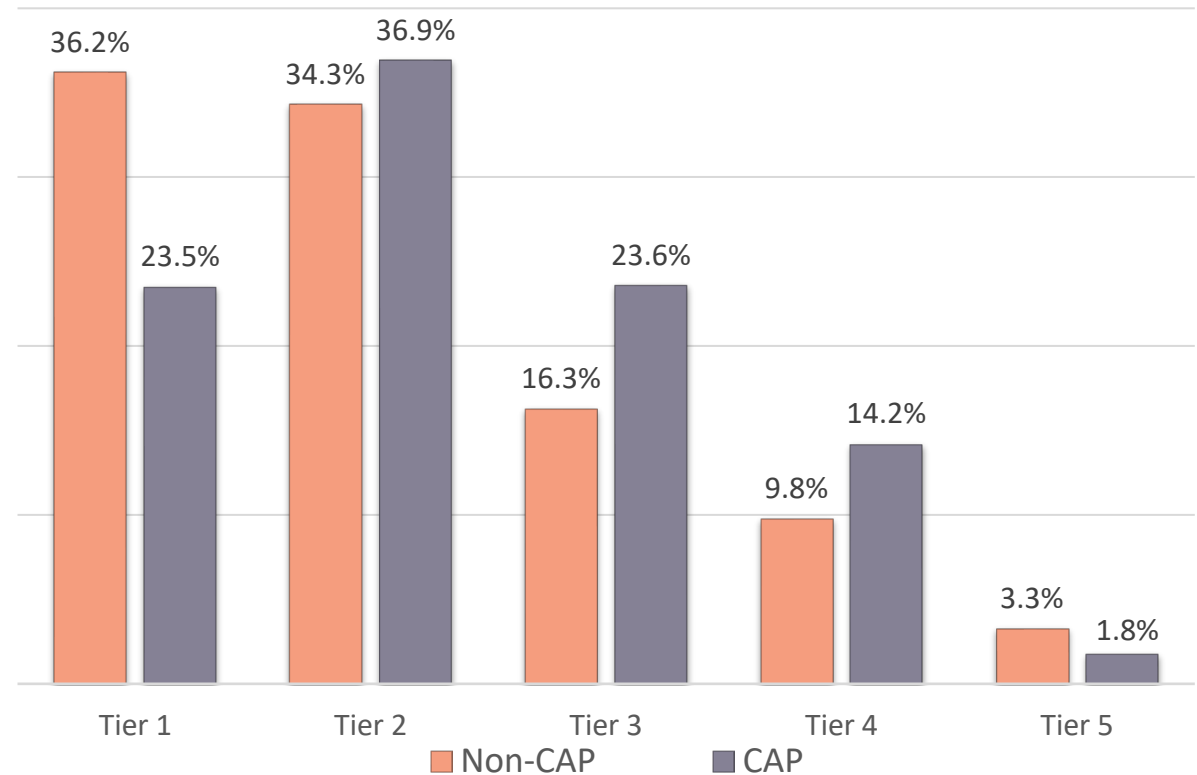


Figure 7-29: Proportion of Consumption in Each Tier Under Current Rates, CAP v. Non-CAP Residential Customers, FY2020
Austin Energy Base Rate Review 2022, page 107, published April 18, 2022



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Lower Income does not Always Translate to Lower Consumption: Unintended Consequences

78701 (Downtown)

- \$448k (median housing value)
- **\$122k (household median income)**
- **0.2% (CAP)**
- 78% (Bachelor or higher)
- 1.6 (household size)
- \$3.4m (revenue)
- **\$66 (average bill)**
- 18.4% Single Family
- 26.3% Built post-December 2014

78724 (Northeast)

- \$147k (median housing value)
- **\$50k (household median income)**
- **21.9% (CAP)**
- 15% (Bachelor or higher)
- 3.7 (household size)
- \$10.7m (revenue)
- **\$102 (average bill)**
- 74.4% Single Family
- 19.4% Built post-December 2014

2020 Monthly kWh Consumption Boxplot

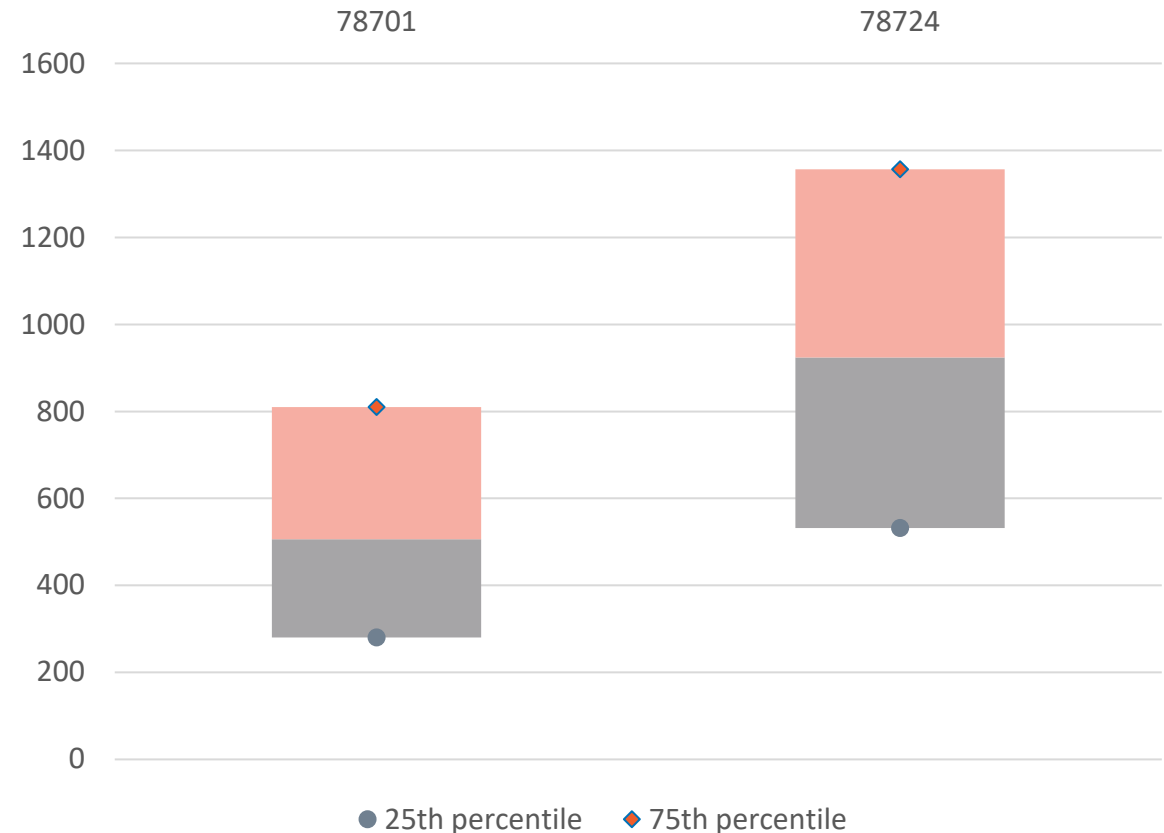


Figure 7-30: Comparison of Income-Related Demographics, Census Data, Zip Codes 78701 and 78724
Austin Energy Base Rate Review 2022, page 108, published April 18, 2022

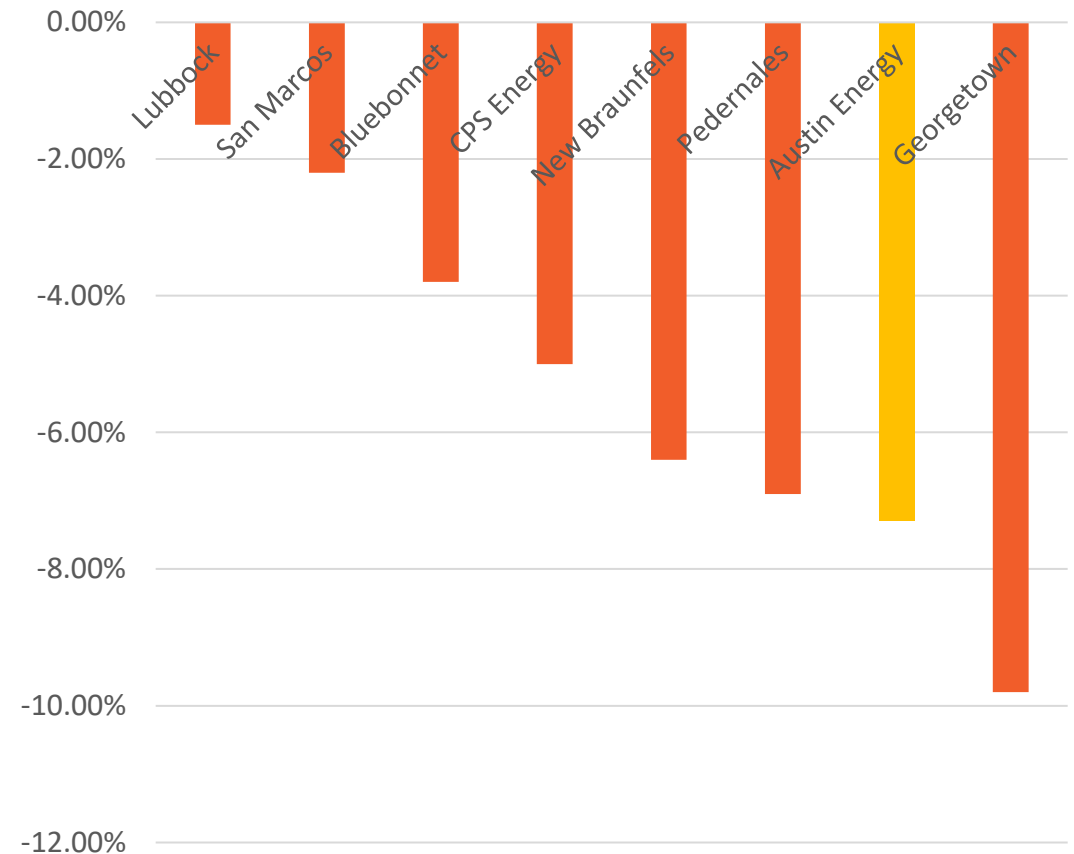


Austin Energy 2022 Base Rate Review

Residential Consumption, Customer Charges, and Tiered Base Rates for Texas Utilities

Utility	Customer Charge ⁽¹⁾	Number of Tiers ⁽¹⁾	Average Consumption 2020 (kWh) ⁽²⁾
Lubbock ⁽³⁾	\$8.07	One	959
San Marcos	\$10.25	One	917
Bluebonnet Co-op	\$22.50	One	1,225
CPS Energy	\$9.10	One Summer adder >600kWh	1,099
New Braunfels	\$17.06	One	1,209
Pedernales Co-op	\$22.50	One	1,209
Austin Energy	\$10.00	5 Inside City 3 Outside City	851
Georgetown	\$24.80	One	860

Reduction In Average Residential Consumption Between 2013-2020 ⁽²⁾



- (1) Respective published tariffs as of September 19, 2022
- (2) Energy Information Administration Form 861 Data for Calendar Year 2020, published October 2021
- (3) Lubbock Power and Light was not located in ERCOT in 2021

Austin Energy 2022 Base Rate Review

Inside City of Austin Residential Rate Structure and Pricing Comparison

\$10.00 Customer Charge	Price per kWh	Current	kWh ⁽¹⁾	As a %
Below Cost of Service	2.801	Tier 1: 0-500 kWh	2,193,948,158	56.9%
Below Cost of Service	5.832	Tier 2: 501-1000 kWh	1,024,259,393	26.6%
Approximately Cost of Service	7.814	Tier 3: 1001 – 1500 kWh	374,842,802	9.7%
Above Cost of Service	9.314	Tier 4: 1501 – 2500 kWh	193,880,427	5.0%
Above Cost of Service	10.814	Tier 5: > 2500 kWh	68,248,112	1.8%
		Total	3,855,178,893	

\$25.00 Customer Charge	Price per kWh	Proposed	kWh ⁽¹⁾	As a %
Below Cost of Service	3.633	Tier 1: 0-300 kWh	1,443,616,801	37.4%
Approximately Cost of Service	4.133	Tier 2: 301-1200 kWh	1,970,938,514	51.1%
Above Cost of Service	4.633	Tier 3: > 2500 kWh	440,623,577	11.4%
		Total	3,855,178,893	



(1) kWh represents Test Year 2021 weather normalized sales as used in the Austin Energy Base Rate Proposal

Austin Energy 2022 Base Rate Review

Austin Energy and the Joint Sustainability Committee Have Shared Goals

- Encourage and incentivize energy efficiency and conservation
 - In FY 2023, the Customer Energy Services budget was increased from \$45 million to \$47 million
 - The single largest increase in FY 2023 was in the solar budget, increasing from \$3 million to \$6 million
 - In FY22, Austin Energy Green Building partnered with Austin Housing and Planning department to ensure more than 66% of the multifamily projects and 18% of the single-family homes were in SMART housing developments. Austin Energy Green Building is holistically addressing sustainability, helping customers save not only on their energy bills, but also helping to reduce water use and promote healthier buildings
- Customers who use more energy will continue to see higher bills
 - Austin Energy proposes to maintain 3-tiered pricing in base rates
 - Customers who conserve energy will continue to enjoy lower power supply costs
 - Recovering fixed costs from a fixed charge (Customer Charge) helps to ensure new customers are paying their share of system growth
- Low-income customers on CAP can be protected from base rate increases
 - Customer Charge is waived from CAP customers and 10% on the remainder of the bill
 - Recognized that CAP customers tend to have slightly higher consumption than non-CAP
 - Auto-enrollment plus greater community outreach can expand participation in the program





**Customer Driven.
Community Focused.SM**

