



COST OF SERVICE & RATES

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Informational Update



OBJECTIVES & TAKEAWAYS



- **SUMMARIZE BACKGROUND INFORMATION OF OUR CURRENT COST OF SERVICE STUDY**
- **SHARE DETAILED RESULTS FROM COST OF SERVICE STUDY**
- **REVIEW CURRENT RATES & THEIR RELATION TO THE COST OF SERVICE**

AGENDA



- **BACKGROUND**
- **COST DRIVERS**
- **REVENUE VS. COST BY CUSTOMER GROUP**
- **FIXED & VARIABLE COST BY CUSTOMER GROUP**
- **CURRENT RATES**
- **EFFECTIVE PRICE**

BACKGROUND (1 OF 2)



- The cost of service study is a deep dive into electric & gas costs for a specific “test year”
- Every dollar used to run the business is accounted for including operations & maintenance, administrative & general, cash spent on infrastructure, payments on outstanding debt, fuel, regulatory, city payment, labor & others
- We use the Federal Energy Regulatory Commission (FERC) system of accounts (~250 accounts, >20,000 rows of data) to collect cost data
- We also collect & study detailed customer data including energy usage, demand, quantity of bills & others
- All costs are functionalized to Generation, Transmission & Distribution & allocated to customer groups

BACKGROUND (2 OF 2)



- Significant time is put into “normalizing” all aspects of the study so that the data reflects a typical, average year; as a result, these studies are applicable for several years (~3-5 years)
- Our current cost of service study is based on our fiscal year ending 2017 (i.e., FY2017)
- The global pandemic has made data from the last ~2 years unusable; the FY2017 cost of service study is still a relevant study
- The COS study is extremely complex (>80 Excel sheets, 5GB source file) & takes ~6 months to complete
- Our last study was completed in partnership with & validated by Black & Veatch

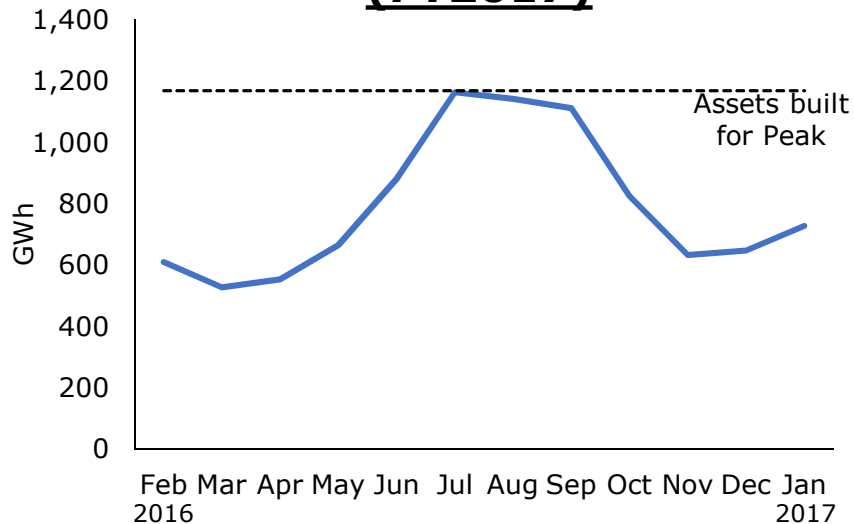
Our cost of service process aligns with the industry standard approach outlined by the Brattle Group.

QUESTIONS & DISCUSSION

CUSTOMER USAGE PROFILE DRIVES COST & PRICE



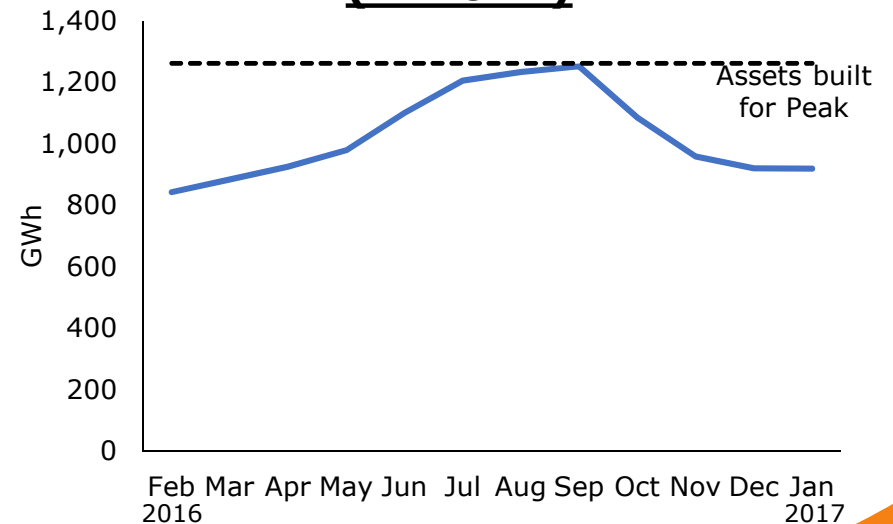
Residential Load Profile (FY2017)



Utilization = ~40%

Fixed Costs Spread Over **Fewer** kWh

Comm & Industrial Load Profile (FY2017)



Utilization = ~61%

Fixed Costs Spread Over **More** kWh

COST OF SERVICE SNAPSHOT 1



CPS Energy Electric Cost to Serve by Customer Group Based on FYE 2017 Test Year								
Description	Classification	Total (E)	RE (F)	RA (G)	PL (H)	LLP (I)	ELP (J)	SLP (K)
Production								
Non-fuel demand related	Demand	<u>Confidential – Competitively Sensitive</u>						
Steam								
Nuclear								
Other								
Non-fuel energy related	Energy	<u>Confidential – Competitively Sensitive</u>						
Subtotal non-fuel								
Fuel	Energy							
Total production								
Decommissioning	Demand	31,094,469	12,378,086	3,670,080	6,500,299	3,813,737	1,602,920	2,374,685
Transmission	Demand	70,018,317	29,512,349	6,698,788	13,881,022	9,319,485	3,694,143	5,439,671
Distribution								
Demand related		<u>Confidential – Competitively Sensitive</u>						
Substations	Demand							
Primary lines	Demand							
Secondary lines	Demand							
Transformers	Demand							
Subtotal distribution demand related								

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COST OF SERVICE SNAPSHOT 2



<i>(Continued from Prior Page)</i>		CPS Energy Electric Cost to Serve by Customer Group Based on FYE 2017 Test Year						
Description	Classification	Total (E)	RE (F)	RA (G)	PL (H)	LLP (I)	ELP (J)	SLP (K)
Customer related								
Primary lines	Customer	60,523,551	43,408,075	10,675,477	5,688,506	154,808	13,666	2,961
Secondary lines	Customer	17,294,105	12,404,853	3,050,762	1,625,621	43,372	3,537	239
Transformers	Customer	19,553,536	14,025,515	3,449,337	1,838,004	49,039	3,999	270
Services	Customer	11,444,444	6,247,638	1,536,500	2,456,206	1,092,208	89,059	6,010
Streetlights	Customer	17,561,957	0	0	0	0	0	0
Customer Installation	Customer	1,932,661	673,829	180,815	439,489	285,186	137,563	215,779
Subtotal distribution customer related		128,310,253	76,759,910	18,892,892	12,047,827	1,624,614	247,824	225,258
Total Distribution		356,478,701	173,999,858	49,332,420	58,669,278	28,239,163	10,972,743	14,274,639
Metering								
Metering		51,022,655	27,106,084	6,570,169	14,265,643	2,234,806	198,652	496,298
Meter Reading		15,421,465	9,947,568	2,446,435	2,607,201	354,765	31,318	6,786
Subtotal Metering	Customer	66,444,120	37,053,652	9,016,604	16,872,844	2,589,571	229,971	503,083
Billing	Customer	5,752,190	3,451,305	848,790	1,356,851	61,543	5,433	1,177
Customer Service								
Phone/Office Contact	Customer	33,779,903	24,315,991	5,980,104	3,186,542	86,719	7,655	1,659
Public Awareness	Customer	1,235,463	428,860	115,080	279,714	181,508	87,552	137,333
General Services-General Services	Customer	0	0	0	0	0	0	0
Subtotal CS		35,015,366	24,744,851	6,095,184	3,466,256	268,227	95,208	138,992
Energy Services								
Marketing	Customer	20,591,241	7,147,737	1,918,022	4,661,946	3,025,153	1,459,214	2,288,901
Subtotal CES		20,591,241	7,147,737	1,918,022	4,661,946	3,025,153	1,459,214	2,288,901
OTHER (Cust Deposits, int on Cust Dep, Bad Det Customer)		(3,851,779)	(1,531,949)	(392,717)	(903,119)	(507,908)	(220,302)	(295,778)
Total Revenue requirements(Basic)		1,636,014,930	677,793,749	188,473,089	330,869,836	186,364,191	80,925,476	121,973,836

REVENUE VS. COST BY CUSTOMER GROUP



Revenues

\$ in thousands

		Residential		PL		LLP		ELP		SLP	
Fixed	Customer	\$ 69,207	7%	\$ 8,032	2%	\$ 4,149	2%	\$ 2,035	2%	\$ 448	0%
	Demand	136	0%	-	0%	66,547	25%	31,418	26%	50,991	30%
Variable	Energy	737,804	93%	361,858	98%	134,192	74%	55,188	72%	68,807	69%
	Energy (fuel adj)	121,237		62,344		40,485		19,594		31,374	
	Energy (reg adj)	103,917		36,071		23,680		10,326		16,111	
Total		\$ 1,032,301	100%	\$ 468,305	100%	\$ 269,052	100%	\$ 118,560	100%	\$ 167,731	100%

Cost to Serve

		Residential		PL		LLP		ELP		SLP	
Fixed	Customer	\$ 184,004	17%	\$ 37,503	9%	\$ 7,061	3%	\$ 1,817	2%	\$ 2,862	2%
	Demand	472,529	43%	185,514	43%	109,279	44%	45,246	41%	65,160	38%
Variable	Energy	209,734	40%	107,853	48%	70,024	54%	33,862	58%	53,953	60%
	Energy (fuel adj)	121,237		62,344		40,485		19,594		31,374	
	Energy (reg adj)	103,917		36,071		23,680		10,326		16,111	
Total		\$ 1,091,421	100%	\$ 429,285	100%	\$ 250,529	100%	\$ 110,845	100%	\$ 169,459	100%

% Cost to Serve

95%

109%

107%

107%

99%

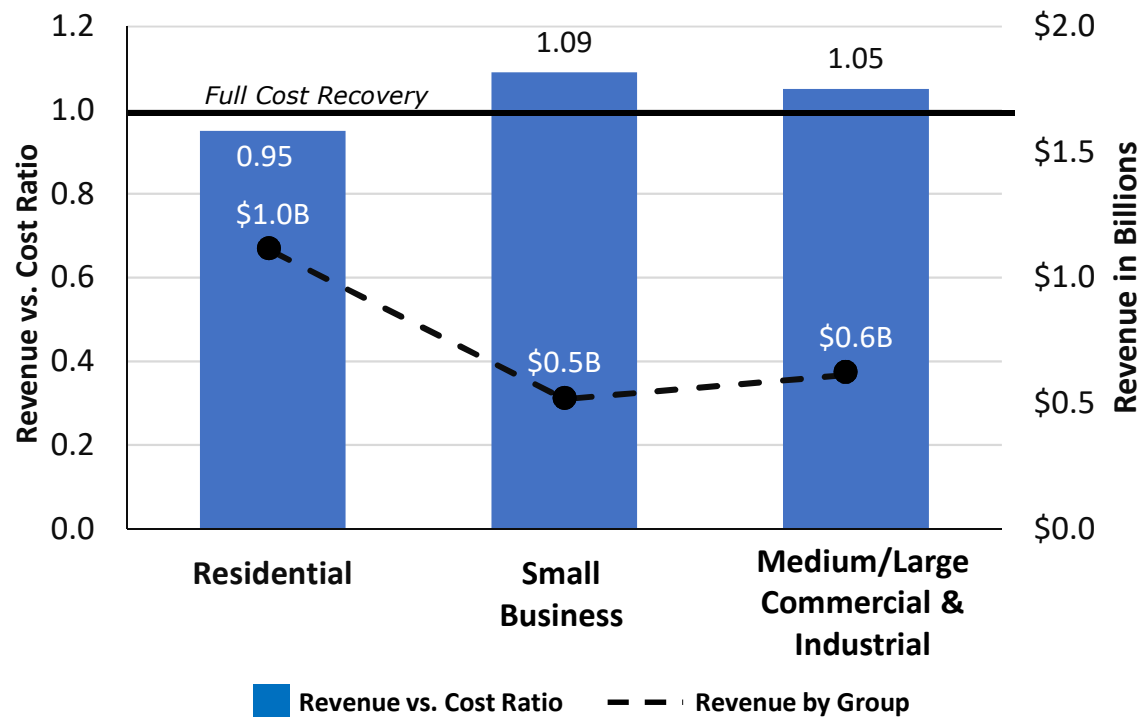
Note: Based on normalized data (i.e., total revenue = total cost to serve).

QUESTIONS & DISCUSSION

COST TO SERVE BY CATEGORY



Revenue as % of Cost to Serve & Revenue by Customer Category



System wide, our revenue vs. cost ratio is 1.0.

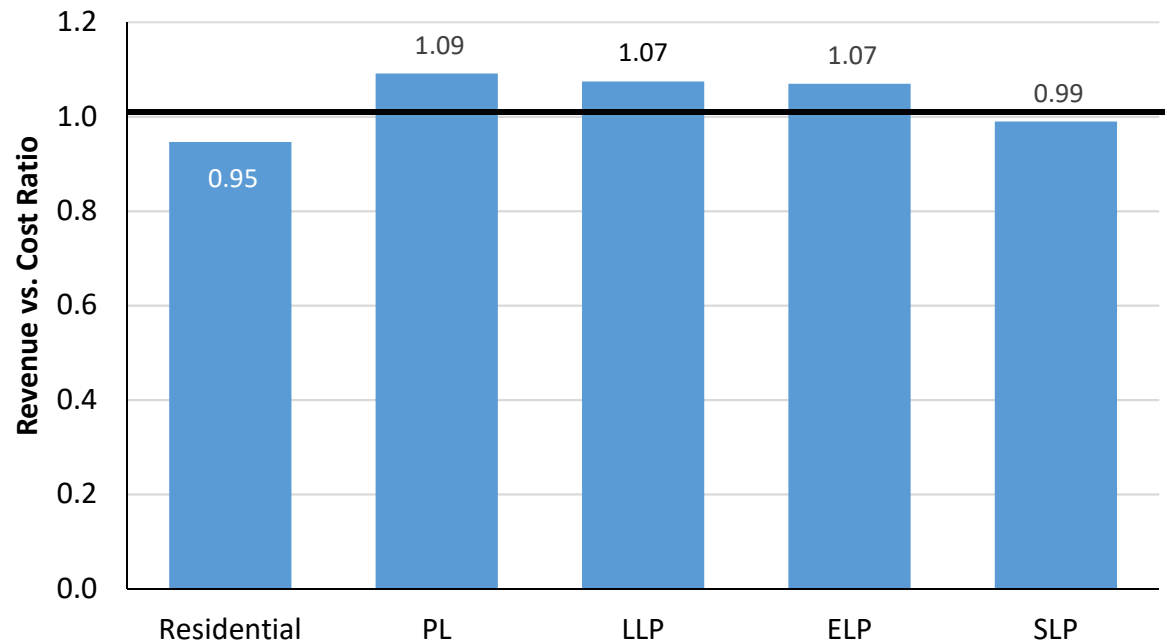
While commercial customers pay a lower effective price per kWh, they are actually contributing more than the cost to serve them.

Note: Based on FY2017 Cost of Service model; Residential includes RE, RA, & RCE; Small Business is PL; Large Commercial & Industrial (LCI) includes LLP, ELP, LPT & SLP

COST TO SERVE BY CUSTOMER GROUP



**Revenue as % of Cost to Serve
by Customer Group**



Note: Based on FY2017 Cost of Service Model

Residential customers under-recover relative to their cost of service.

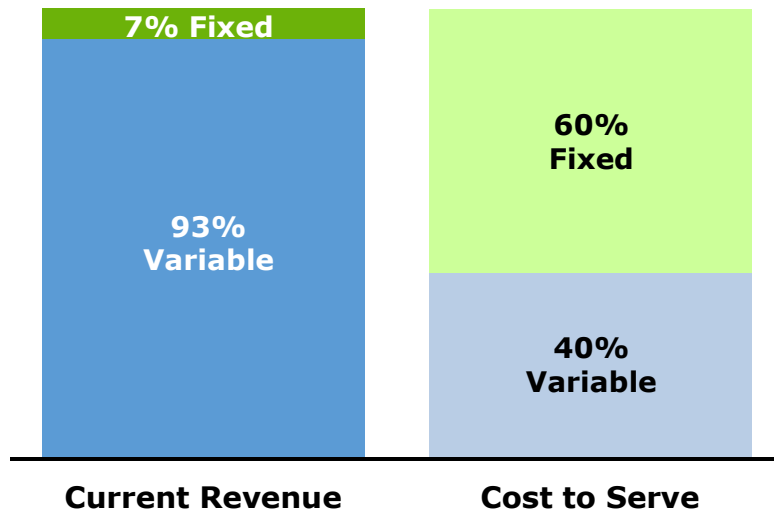
Commercial customers slightly over-recover relative to their cost of service.

On the whole, however, we have full system-wide cost recovery.

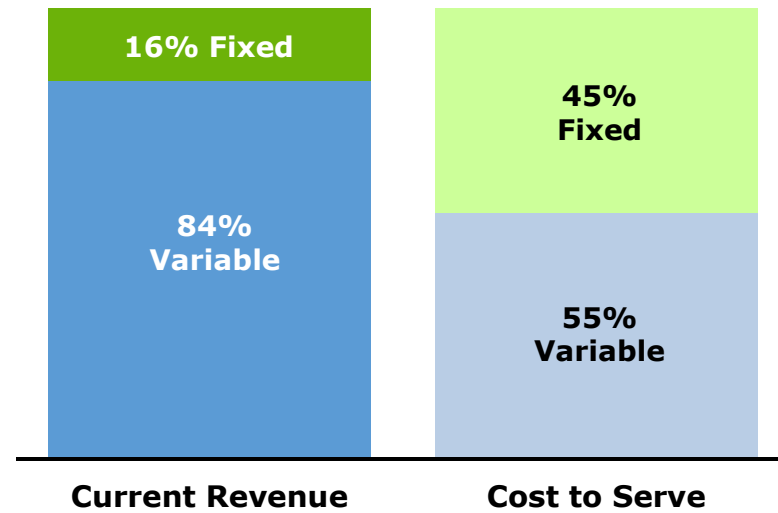
OUR RATES NEED BETTER COST-TO-BILL ALIGNMENT



Residential



Commercial & Industrial



It will be good to restructure our rates!

Note: Values based on FY2017 Cost of Service study

QUESTIONS & DISCUSSION

MONTHLY CUSTOMER COSTS BY CUSTOMER GROUP



Customer Group	Customers	Allocated Customer Costs	Monthly Customer Cost (per customer per month)
Total (Retail)	~790k	~\$234M	NA
Residential	~710k	~\$184M	\$21.60
PL	~78k	~\$38M	\$40.00
LLP	~2k	~\$7M	\$285.00
ELP	~0.2k	~\$2M	\$850.00
SLP	<0.1k	~\$3M	\$6,100.00

Customer costs vary depending on the complexity of the service provided & the number of customers within that group.

Notes: Information is based on FY2017 Cost of Service study.
Numbers for customer groups are rounded.

DEMAND COSTS (FIXED COSTS) BY CUSTOMER GROUP



Customer Group	Demand (kW)	Allocated Demand Costs	Demand Cost (per kW per month)
Total (Retail)	NA	~\$878M	NA
Residential	NA	~\$473M	NA
PL	17.0M	~\$186M	\$10.88
LLP	8.3M	~\$109M	\$13.21
ELP	3.2M	~\$45M	\$14.06
SLP	4.7M	~\$65M	\$13.97

Demand costs vary based on customers' peak usage & the underlying fixed costs supporting that peak.

Notes: Information above is based on FY2017 Cost of Service study.
Demand values approximate of billed kW.

ENERGY COSTS (VARIABLE COSTS) BY CUSTOMER GROUP



Customer Group	TWh Sold	Allocated Energy Costs	Energy Cost (per kWh)
Total (Retail)	~21.9	~\$476M	~2.2¢
Residential	~9.6	~\$210M	~2.2¢
PL	~5.0	~\$108M	~2.2¢
LLP	~3.2	~\$70M	~2.2¢
ELP	~1.6	~\$34M	~2.2¢
SLP	~2.5	~\$54M	~2.2¢

Excludes fuel adjustment

Energy costs are based on variable costs to support customers' electric usage.

Notes: Information is based on FY2017 Cost of Service study.
 Allocations to the customer groups are rounded for this illustration.
 The costs above reflect base fuel & do not contain fuel & regulatory adjustments.

CPS ENERGY'S CURRENT RATE STRUCTURES



Rate Category	MONTHLY CHARGE	DEMAND CHARGE (per kW)		Min. kW	ENERGY CHARGE (per kWh)		Fuel Adj.	Regulatory Adj.
		Summer	Non-Sumr		Summer	Non-Sumr		
Residential	\$8.75	— None —		None	\$0.0889 ¹	\$0.0691	Varies by Month ↓	Varies by Rate & Yr. ↓
PL	\$8.75	— None —		None	\$0.0917 ²	\$0.0819 ²		
LLP	\$175	\$10.00	\$7.50	100	\$0.0530 ³	\$0.0432 ³		
ELP	\$1,000	\$11.40	\$8.75	1,000	\$0.0425 ⁵	\$0.0397		
SLP	\$1,000	\$14.70	\$9.90	5,000	\$0.0380 ⁶	\$0.0339 ⁴		
						\$0.0265		

Higher energy & demand charges during summer months (Jun-Sep) encourage conservation.

Note: "Residential" is only RE rate class (does not include RA or RCE)

¹ Non-Summer price is applied to the first 600 kWh

² Per kWh for the 1st 1600 kWh, but 200 kWh are added for each kW in excess of 5 kW; 1st 600 kWh discounted \$0.0198

³ Per kWh for all additional kWh

⁴ Per kWh for the 1st 1600 kWh, but 200 kWh are added for each kW in excess of 5 kW; 1st 600 kWh discounted \$0.0100

⁵ Per kWh for the 1st 200 kWh per kW of billing demand

⁶ Per kWh for the 1st 250 kWh per kW of billing demand

QUESTIONS & DISCUSSION

SAMPLE RESIDENTIAL ELECTRIC BILL (RE)



CPS Energy
 PO Box 2678, San Antonio, Texas 78289-0001

Customer Service (210) 353-2222
 Gas or Electric Trouble (210) 353-4357
 "Se Habla Español"
 PN: 2

Customer Number: [REDACTED] 700007603821

Previous Bill	\$187.58
Payments & Adjustments	
Payment 07/16/21	-\$188.00
Subtotal	-\$188.00
Balance	-\$0.42

*** LOOK UP AND LIVE ***

When trimming trees, doing yard work or cleaning your pool, be aware of overhead power lines. People are injured every year while doing everyday tasks, because their tools come in contact with electricity. For more safety information, call (210) 353-2970 or visit cpsenergy.com.

Electric Residential Electric

Service Availability Charge	\$8.75
Energy Charge 2,235 kWh x \$0.0691	\$154.44
Peak Capacity Charge 1,635 kWh x \$0.0198	\$32.37
Fuel Adjustment 2,235 kWh x \$0.01751	\$39.13
Regulatory Adj 2,235 kWh x \$0.01236	\$27.62
Total Electric Bill (Non-Taxable)	\$262.31

Meter Read Detail (Read=R) (Estimated=E)

Electric Meter	Previous	Current	Consumption
#6692792 (R-07/28/2021)	73937	76172	2,235

Your next scheduled meter read date is Aug 26, 2021 or Aug 27, 2021

Billing Period Jun 26, 2021 - Jul 28, 2021



SAMPLE LARGE COMMERCIAL ELECTRIC BILL (ELP)



CPS Energy

PO Box 2678, San Antonio, Texas 78289-0001

Customer Service (210) 353-3333

Gas or Electric Trouble (210) 353-4357

"Se Habla Español"

PN: 2

Customer Number: XXXXXXXXXX 700007599760

Previous Bill	\$73,959.03
Payments & Adjustments	
Payment 07/12/21	<u>-\$73,959.03</u>
Subtotal	-\$73,959.03
Balance	\$0.00

*** LOOK UP AND LIVE ***

When trimming trees, doing yard work or cleaning your pool, be aware of overhead power lines. People are injured every year while doing everyday tasks, because their tools come in contact with electricity. For more safety information, call (210) 353-2970 or visit cpsenergy.com.

Electric	
Extra Large Power	
Service Availability Charge	\$1,000.00
Demand Charge 1,617 KW x \$11.40	\$18,433.80
Energy Charge 404,250 kWh x \$0.038	\$15,361.50
Energy Charge 491,750 kWh x \$0.0339	\$16,670.33
Fuel Adjustment 896,000 kWh x \$0.01751	\$15,688.96
Regulatory Adj 896,000 kWh x \$0.00706	<u>\$6,325.76</u>
Total Electric Bill (Taxable)	\$73,480.35

Meter Read Detail (Read=R) (Estimated=E)

Electric Meter	Previous	Current	Consumption
#4667679 (R-07/26/2021)	03385	03513	896,000
Meter Multiplier	7,000		
Actual Demand	1,617 KW		
Power Factor	88 %		
Billing Demand	1,617 KW		

Your next scheduled meter read date is Aug 24, 2021 or Aug 25, 2021

Billing Period Jun 24, 2021 - Jul 26, 2021

EFFECTIVE PRICE BY CUSTOMER GROUP



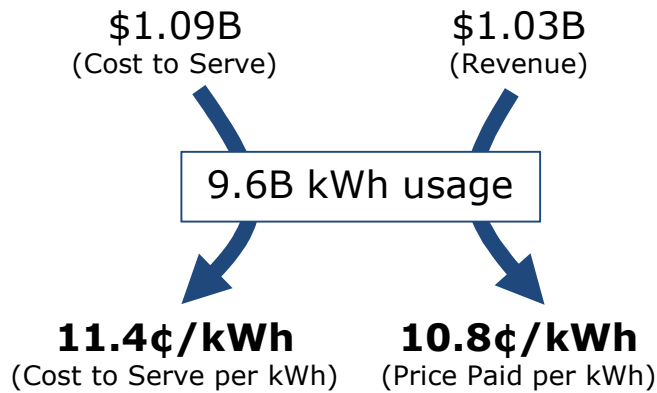
<u>Customer Group</u>	<u>Effective Price in ¢ per kWh</u>	<u>Utilization</u>	<u>Conservation Incentive</u>
Residential	10.8	40%	Yes
PL (Small & Med Business)	9.5	54%	Yes
LLP (Large Business)	8.4	60%	Yes
ELP (Extra Large Comm & Industrial)	7.6	71%	Yes
SLP (Super Large Comm & Industrial)	6.7	74%	Yes

Effective Price is the total of all fees divided by the number of units purchased. Commercial customers pay a lower effective price because they utilize our system much more efficiently than residential customers (i.e., their customer & demand charges are spread across more kWh). Rate structures for ALL customer groups include a seasonal incentive to conserve energy.

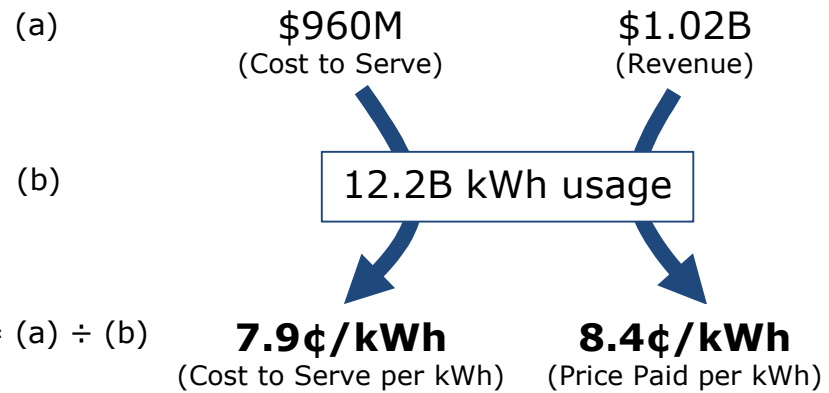
CUSTOMER PRICING



Residential



Commercial & Industrial



The price paid by residential customers is below the cost of service.

The price paid by commercial customers is above the cost of service.

COST TO SERVE VS. REVENUE

RESIDENTIAL CUSTOMERS



		<u>Customer Costs</u>		<u>Fixed Costs (Gen., Trans., Dist.)</u>		<u>Energy Costs</u>			
Cost to Serve:	(a)	\$184M	+	\$473M	+	\$435M		Total Cost: \$1.09B	Avg. Monthly Cost: \$128
Sales Units:	(b)	8.5M bills		NA		9.6B kWh			
Cost-based Rate:	(c) = (a) ÷ (b)	~\$22/month		NA		~4.5¢/kWh			95%
Actual Average Rate:	(d)	~\$9/month		NA		~10.0¢/kWh			
Revenue:	(e) = (d) x (b)	\$69M	+	NA	+	\$963M		Total Revenue: \$1.03B	Avg. Monthly Bill: \$121

On average, residential customers' bill is 95% of their cost to serve.

Note: Includes all residential customer groups (RE, RA & RCE)

COST TO SERVE VS. REVENUE

COMMERCIAL & INDUSTRIAL CUSTOMERS



		<u>Customer Costs</u>		<u>Fixed Costs (Gen., Trans., Dist.)</u>		<u>Energy Costs</u>			
Cost to Serve:	(a)	\$49M	+	\$405M	+	\$506M		Total Cost: \$960M	Avg. Monthly Cost: \$992
Sales Units:	(b)	968k bills		32.5M KW		12.2B kWh			
Cost-based Rate:	(c) = (a) ÷ (b)	~\$51/month		~\$12/KW		~4.1¢/kWh			106%
Actual Average Rate:	(d)	~\$16/month		~\$5/KW		~7.0¢/kWh			
Revenue:	(e) = (d) x (b)	\$15M	+	\$149M	+	\$860M		Total Revenue: \$1.02B	Avg. Monthly Bill: \$1,053

On average, commercial & industrial customers' revenue is 106% of their cost to serve.

Note: Includes all C&I customer groups (PL, LLP, ELP, LPT & SLP)

QUESTIONS & DISCUSSION

OUR NEXT RAC MEETING

DEDICATED TO "HOT TOPIC" DISCUSSION



- Affordability, customer assistance & community programs
- Renewable rates & cost shifting
- Energy efficiency & usage levels in San Antonio
- Benefits of market structure
- Other topics as time permits

Our next discussion will be comprised entirely of issues that committee members have highlighted in the past ~2 months.



Thank You

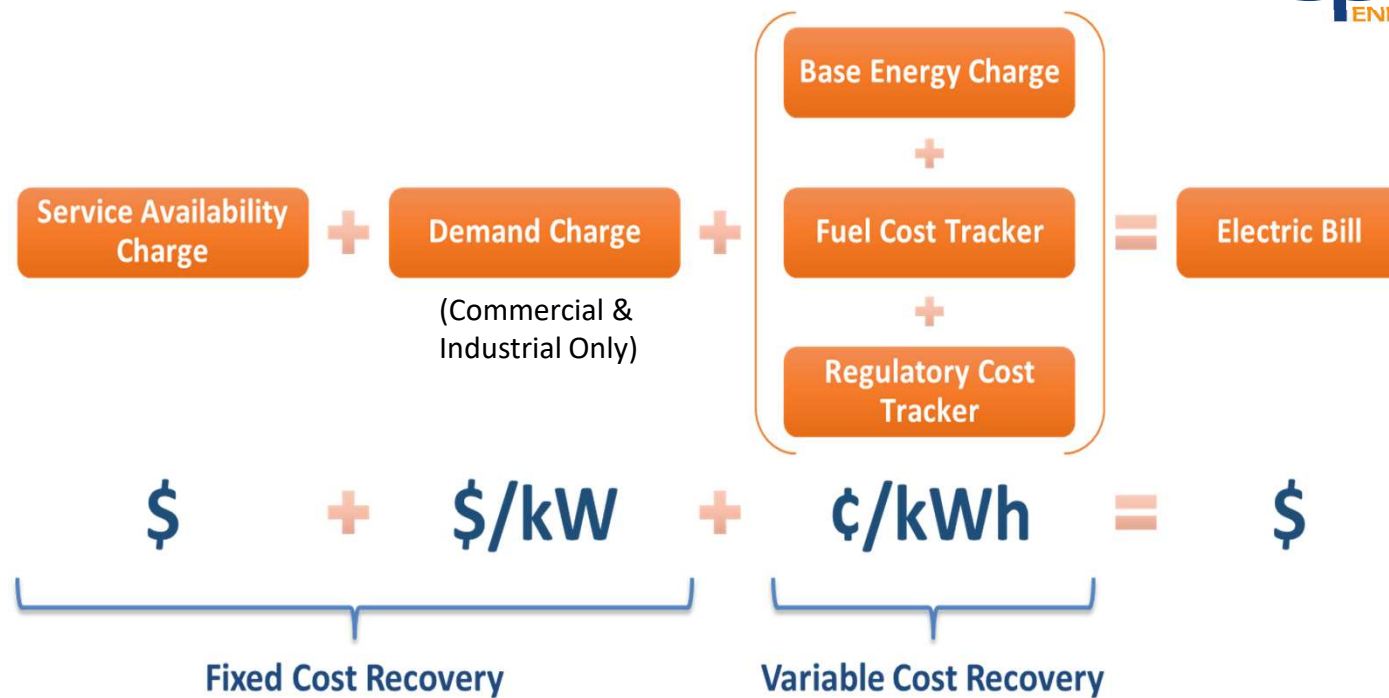




Appendix



CUSTOMER BILL COMPONENTS



Customers' bills have a fixed component & a variable component.

FUEL COSTS (VARIABLE)

FUEL COST TRACKER ALLOWS TIMELY RECOVERY OF "TRUE" VARIABLE COSTS



- Our variable cost of power is made up of natural gas, coal, nuclear, renewable PPAs, & other market purchases
- Our electric base rates include 1.416¢ of fuel cost per kWh
- Each day we sell & buy our power into & from the ERCOT market
- If our overall price is above or below 1.416¢, we build that into the monthly fuel cost tracker – reviewed by CoSA’s Office of Public Utilities
- Customers generally understand that costs for energy are typically higher in the summer

Our fuel cost tracker is a price signal for our customers to conserve when electric bills are highest.

REGULATORY COSTS (FIXED)

OUR CUSTOMERS INFLUENCE ERCOT'S FIXED COSTS



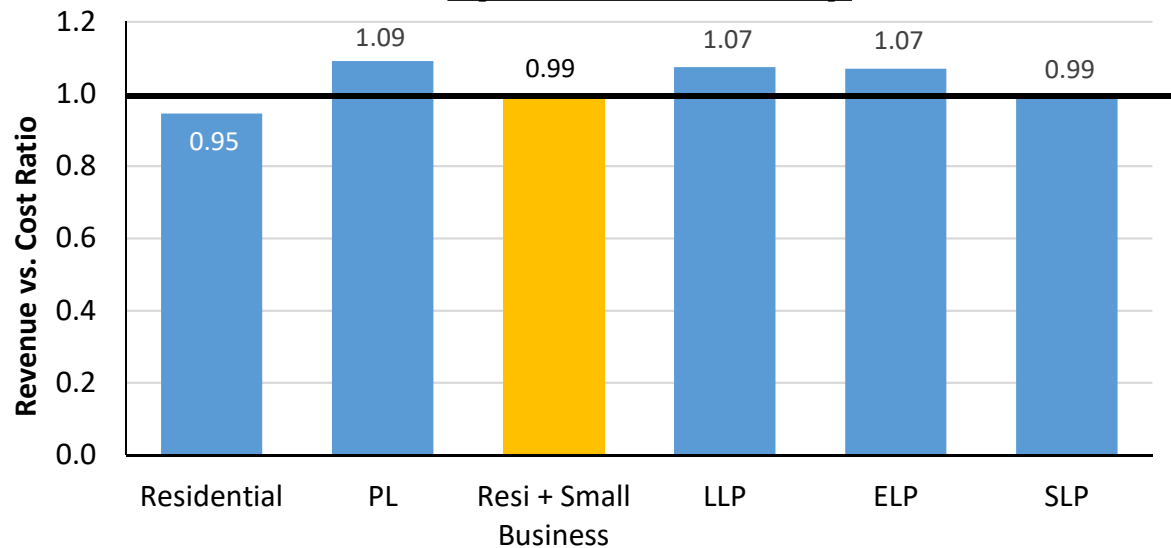
- In ERCOT, all utilities pay the average fixed cost of moving energy across the grid based on their customers' demand (MW)
- Each year, the average cost is updated based on additions to the ERCOT transmission grid
- Costs are allocated based on each utility's contribution to the ERCOT system peak for each of the months of June thru September (ERCOT 4CP)
- Within CPS Energy, we allocate these costs to each customer category based on their demand at time of the ERCOT 4CP
- Because not all of our customers have a demand charge, we convert this MW charge to a monthly kWh charge

Our regulatory cost tracker could send a better price signal if all customers had a demand charge.

ADJUSTING COST RECOVERY IMPACTS BILLS



**Revenue as % of Cost to Serve
by Customer Group**



Shifting cost recovery away from one group requires raising bills of other the groups.

Dollars to Move Ratio 1 Basis Point					
\$12M	\$5M	\$16M	\$3M	\$1M	\$2M

Note: Based on FY2017 Cost of Service Model