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Submitted On: 8/9/2024
Docket Number: 22-BSTD-07*

**City of Palo Alto Local Ordinance Application Cost Effectiveness
Report Appendix (Nonresidential New Construction)**

Appendix documenting utility tariff data used in the cost-effectiveness calculations for
Nonresidential New Construction Buildings

Additional submitted attachment is included below.

2022 Code:

Nonresidential New Construction Reach Code Cost-effectiveness Study

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Prepared for:

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Codes and Standards Program Southern California Edison

Legal Notice

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Acronym List

AC – Air Conditioner

ASHRAE - American Society of Heating, Refrigerating and Air-Conditioning Engineers

B/C – Benefit-to-Cost Ratio

BOD – Basis of Design

BSC – Building Standards Commission

Btu – British thermal unit

CAV – Constant Air Volume

CBECC - California Building Energy Code Compliance

CBECS - Commercial Building Energy Consumption Survey

CBSC - California Building Standards Commission

CEC - California Energy Commission

CPAU – City of Palo Alto Utilities

CZ – Climate Zone

DCKV – Demand-Controlled Kitchen Ventilation

DHW – Domestic Hot Water

DEER – Database for Energy Efficient Resources

DOE – U.S. Department of Energy

E3 – Energy and Environmental Economics

EUI – Energy Use Index

FDD – Fault Detection and Diagnostics

GHG - Greenhouse Gas

GPM – Gallons Per Minute

HVAC – Heating, Ventilation, and Air Conditioning

IOU – Investor-Owned Utility

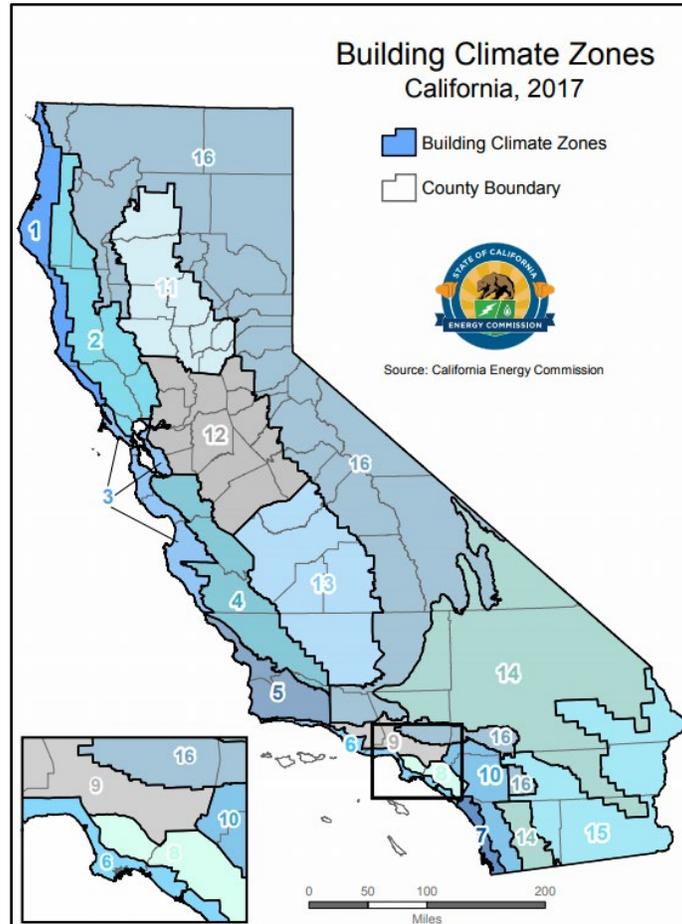


8 Appendices

8.1 Map of California CZs

Climate Zone geographical boundaries are depicted in Figure 5 below. An interactive GIS location based map and zip-code based search directory is available at: [Climate Zone tool, maps, and information supporting the California Energy Code](#)

Figure 5. Map of California CZs



8.2 Utility Rate Schedules

The Reach Codes Team used the IOU and POU rates depicted in to determine the On-Bill savings for each prototype.

Table 23. Utility Tariffs Analyzed Based on CZ – Detailed View

CZs	Utility	Electric Rate (Time of Use)				Gas Rate
		Medium Office	Medium Retail	QSR	Small Hotel	All Prototypes
CZ01	PG&E	B-10	B-1	B-1	B-1 or B-10	G-NR1
CZ02	PG&E	B-10	B-1 or B-10	B-1 or B-10	B-1 or B-10	G-NR1
CZ03	PG&E	B-10	B-1	B-1	B-1 or B-10	G-NR1
CZ04	PG&E	B-10	B-1 or B-10	B-1 or B-10	B-1 or B-10	G-NR1
CZ04-2	CPAU	E-2	E-2	E-2	E-2	G-2
CZ05	PG&E	B-10	B-1	B-1	B-1 or B-10	G-NR1
CZ05-2	SCG	B-10	B-1	B-1	B-1 or B-10	G-10 (GN-10)
CZ06	SCE	TOU-GS-2	TOU-GS-2	TOU-GS-2	TOU-GS-2	G-10 (GN-10)
CZ07	SDG&E	AL-TOU+EECC (AL-TOU)	AL-TOU+EECC (AL-TOU)	AL-TOU+EECC (AL-TOU)	AL-TOU+EECC (AL-TOU)	GN-3
CZ08	SCE	TOU-GS-2	TOU-GS-2	TOU-GS-2	TOU-GS-2	G-10 (GN-10)
CZ09	SCE	TOU-GS-2	TOU-GS-2	TOU-GS-2	TOU-GS-2	G-10 (GN-10)
CZ10	SDG&E	AL-TOU+EECC (AL-TOU)	AL-TOU+EECC (AL-TOU)	AL-TOU+EECC (AL-TOU)	AL-TOU+EECC (AL-TOU)	G-10 (GN-10)
CZ10-2	SCE	TOU-GS-2	TOU-GS-2	TOU-GS-2	TOU-GS-2	GN-3
CZ11	PG&E	B-10	B-10	B-1 or B-10	B-10	G-NR1
CZ12	PG&E	B-10	B-1 or B-10	B-1 or B-10	B-10	G-NR1
CZ12-2	SMUD	CITS-1 (CI-TOD 1)	CITS-1 (CI-TOD 1)	CITS-1 (CI-TOD 1)	CITS-1	G-NR1
CZ13	PG&E	B-10	B-10	B-1 or B-10	B-10	G-NR1
CZ14	SDG&E	AL-TOU+EECC (AL-TOU)	AL-TOU+EECC (AL-TOU)	AL-TOU+EECC (AL-TOU)	AL-TOU+EECC (AL-TOU)	G-10 (GN-10)
CZ14-2	SCE	TOU-GS-2	TOU-GS-2	TOU-GS-2	TOU-GS-2 or TOU-GS-3	GN-3
CZ15	SCE	TOU-GS-2	TOU-GS-2	TOU-GS-2	TOU-GS-2	G-10 (GN-10)
CZ16	PG&E	B-10	B-1 or B-10	B-1 or B-10	B-1 or B-10	G-NR1

8.2.1 PG&E

Figure 6. PG&E Electric Schedule - B-1

	Pacific Gas and Electric Company[®] U 39 San Francisco, California	Cancelling Revised Revised	Cal. P.U.C. Sheet No. 53377-E Cal. P.U.C. Sheet No. 52618-E
	ELECTRIC SCHEDULE B-1 SMALL GENERAL SERVICE		Sheet 3
RATES: Total bundled service charges are calculated using the total rates shown below. Direct Access (DA) and Community Choice Aggregation (CCA) charges shall be calculated in accordance with the paragraph in this rate schedule titled Billing.			
<u>Total Bundled Time-of-Use Rates</u>		<u>B-1 Rates</u>	<u>B1-ST Rates</u> (T)
<u>Total Customer Charge Rates</u>			
Customer Charge Single-phase (\$ per meter per day)	\$0.32854		\$0.32854
Customer Charge Poly-phase (\$ per meter per day)	\$0.82138		\$0.82138
<u>Demand Charge (for B1-ST only)</u> Total Demand Rate (per metered kW/month assessed from 2:00 p.m. to 11:00 p.m. only)			
Summer	---		\$4.75 (I)
Winter	---		\$4.75 (I)
<u>Total TOU Energy Rates (\$ per kWh)</u>			
Peak Summer	\$0.38827	(I)	\$0.44884 (I)
Part-Peak Summer	\$0.33904	(I)	\$0.30754 (I)
Off-Peak Summer	\$0.31824	(I)	\$0.26021 (I)
Peak Winter	\$0.31285	(I)	\$0.35089 (I)
Partial-Peak Winter (for B1-ST only)	---		\$0.32139 (I)
Off-Peak Winter	\$0.29674	(I)	\$0.23234 (I)
Super Off-Peak Winter	\$0.28032	(I)	\$0.21592 (I)
<u>PDP Rates (Consecutive Day and Five-Hour Event Option)*</u>			
PDP Charges (\$ per kWh)			
All Usage During PDP Event	\$0.60		
PDP Credits			
Energy (\$ per kWh)			
Peak Summer	(\$0.05687)		
Part-Peak Summer	(\$0.01683)		
* See PDP Detail, section g, for corresponding reduction in PDP credits and charges if other option(s) elected.			
			(Continued)
Advice Decision	6603-E-A	Issued by Robert S. Kenney Vice President, Regulatory Affairs	Submitted Effective Resolution May 31, 2022 June 1, 2022

Figure 7. PG&E Electric Schedule - B-10

 U 39	Pacific Gas and Electric Company[®] San Francisco, California	Cancelling	Revised	Cal. P.U.C. Sheet No.	53381-E
			Revised	Cal. P.U.C. Sheet No.	52969-E
ELECTRIC SCHEDULE B-10 MEDIUM GENERAL DEMAND-METERED SERVICE				Sheet 3	
RATE:					
Total bundled service charges shown on customers' bills are unbundled according to the component rates shown below. Direct Access (DA) and Community Choice Aggregation (CCA) charges shall be calculated in accordance with the paragraph in this rate schedule titled Billing.					
TOTAL BUNDLED TIME-OF-USE RATES					(T)
		Secondary Voltage	Primary Voltage	Transmission Voltage	
Total Customer Charge Rates					
Customer Charge (\$ per meter per day)	\$6.42016	(I)	\$6.42016	(I)	\$6.42016 (I)
Total Demand Rates (\$ per kW)					
Summer	\$17.47	(I)	\$17.19	(I)	\$13.66 (I)
Winter	\$17.47	(I)	\$17.19	(I)	\$13.66 (I)
Total Energy Rates (\$ per kWh)					
Peak Summer	\$0.31411	(I)	\$0.29823	(I)	\$0.23025 (I)
Part-Peak Summer	\$0.25242	(I)	\$0.23993	(I)	\$0.17351 (I)
Off-Peak Summer	\$0.21985	(I)	\$0.20909	(I)	\$0.14344 (I)
Peak Winter	\$0.23784	(I)	\$0.22538	(I)	\$0.17720 (I)
Off-Peak Winter	\$0.20236	(I)	\$0.19174	(I)	\$0.14436 (I)
Super Off-Peak Winter	\$0.16802	(I)	\$0.15540	(I)	\$0.10802 (I)
PDP Rates (Consecutive Day and Five-Hour Event Option)					
PDP Charges (\$ per kWh)					
All Usage During PDP Event	\$0.90		\$0.90		\$0.90
PDP Credits Energy (\$ per kWh)					
Peak Summer	(\$0.07825)		(\$0.07825)		(\$0.07825)
Part-Peak Summer	(\$0.02710)		(\$0.02710)		(\$0.02710)
* See PDP Details, section g, for corresponding reduction in PDP credits and charges if other option(s) elected.					
					(Continued)
Advice Decision	6603-E-A	Issued by Robert S. Kenney Vice President, Regulatory Affairs		Submitted Effective Resolution	May 31, 2022 June 1, 2022

Figure 8. PG&E Gas Schedule – G-NR1

Core Commercial Gas Rates

Rates below are effective October 1, 2022, through October 31, 2022.

Small Commercial: Schedule G-NR1 (Usage less than 20,800 therms per month)*

	HIGHEST AVERAGE DAILY USAGE**				
	0 - 5.0 THERMS	5.1 - 16.0 THERMS	16.1 - 41.0 THERMS	41.1 - 123.0 THERMS	123.1 & UP THERMS
Customer Charge (per day)	\$0.27048	\$0.52106	\$0.95482	\$1.66489	\$2.14936
		PER THERM			
		SUMMER		WINTER	
		FIRST 4,000 THERMS	EXCESS THERMS	FIRST 4,000 THERMS	EXCESS THERMS
Procurement Charge (per therm)		\$0.87890	\$0.87890	\$0.87890	\$0.87890
Transportation Charge (per therm)		\$0.93090	\$0.58273	\$1.09498	\$0.68545
Total G-NR1 Schedule Charge ^{1/}		\$1.80980	\$1.46163	\$1.97388	\$1.56435
Cap-and-Trade Cost Exemption Credit ^{2/}		\$0.10235			
Schedule G-PPPS (Public Purpose Program Surcharge) ^{1/} (per therm)		\$0.06237	\$0.06237	\$0.06237	\$0.06237

*Excluding months during which usage is less than 200 therms.

**Based on customer's highest Average Daily Usage (ADU) determined from among the billing periods occurring within the last twelve months, including current billing period. PG&E calculates the ADU for each billing period by dividing the total usage by the number of days in the billing period.

8.2.2 SCE

Figure 9. SCE Electric Schedule – TOU-GS-1

SOUTHERN CALIFORNIA EDISON
An Edison International Company
Southern California Edison
Rosemead, California (U 338-E)

Revised Cal. PUC Sheet No. 74535-E
Cancelling Revised Cal. PUC Sheet No. 73990-E

Schedule TOU-GS-1
TIME-OF-USE
GENERAL SERVICE
(Continued)

Sheet 5

RATES (Continued)

Option D	Delivery Service								Generation ⁹		
	Trans ¹	Distrib ²	NSGC ³	NDC ⁴	PPPC ⁵	WFC ⁶	DWRA ¹¹	PUCRF ⁸	Total ⁸	UG ¹⁰	DWREC ¹¹
Energy Charge - \$/Wh											
Summer Season On-Peak	(0.00039)	0.03298 (R)	0.00967 (R)	0.00010	0.01845 (R)	0.00952	(0.00208)	0.00130	0.06625 (R)	0.11330 (I)	0.00000
Mid-Peak	(0.00039)	0.03298 (R)	0.00967 (R)	0.00010	0.01845 (R)	0.00952	(0.00208)	0.00130	0.06625 (R)	0.10231 (I)	0.00000
Off-Peak	(0.00039)	0.01374 (I)	0.00967 (R)	0.00010	0.01845 (R)	0.00952	(0.00208)	0.00130	0.04731 (I)	0.06705 (I)	0.00000
Winter Season											
Mid-Peak	(0.00039)	0.03298 (R)	0.00967 (R)	0.00010	0.01845 (R)	0.00952	(0.00208)	0.00130	0.06625 (R)	0.10988 (I)	0.00000
Off-Peak	(0.00039)	0.01374 (I)	0.00967 (R)	0.00010	0.01845 (R)	0.00952	(0.00208)	0.00130	0.04731 (I)	0.07551 (R)	0.00000
Super-Off-Peak	(0.00039)	0.00520 (R)	0.00967 (R)	0.00010	0.01845 (R)	0.00952	(0.00208)	0.00130	0.03877 (R)	0.05654 (R)	0.00000
Fixed Recovery Charge - \$/Wh											
Customer Charge - \$/day		0.498 (R)							0.498 (R)		
Facilities Related Demand Charge - \$/kW											
	3.51	13.16 (I)							16.67 (I)		
Time Related Demand Charge - \$/kW											
Summer Season On-Peak		3.80 (R)							3.80 (R)	15.97 (R)	
Winter Season											
Mid-peak - Weekdays (4-6pm)		0.00							0.00	4.90 (I)	
Three-Phase Service - \$/day											
		0.048 (I)							0.048 (I)		
Voltage Discount, Energy - \$/Wh											
From 2 kV to 50 kV	0.00000	0.00000 (R)							0.00000 (R)	(0.00945) (R)	
From 51 kV to 219 kV	0.00000	0.00000 (R)							0.00000 (R)	(0.00069) (R)	
220 kV and above	0.00000	(0.01943) (R)							(0.01943) (R)	(0.00002) (R)	
Voltage Discount, Demand - \$/kW											
Facilities Related											
From 2 kV to 50 kV	0.00	(0.26) (I)							(0.26) (I)		
Above 50 kV but below 220 kV	0.00	(5.78) (R)							(5.78) (R)		
At 220 kV	0.00	(13.16) (I)							(13.16) (I)		
Voltage Discount, Summer On Peak Demand - \$/kW											
From 2 kV to 50 kV		(0.08) (I)							(0.08) (I)	(0.20)	
Above 50 kV but below 220 kV		(1.44) (I)							(1.44) (I)	(0.47)	
At 220 kV		(1.44) (R)							(1.44) (R)	(0.47)	
Voltage Disc, Winter Weekdays (4-6pm) Demand - \$/kW											
From 2 kV to 50 kV		0.00							0.00	(0.20)	
Above 50 kV but below 220 kV		0.00							0.00	(0.47)	
At 220 kV		0.00							0.00	(0.47)	
California Alternate Rates for Energy Discount - %											
		100.00*							100.00*		
California Climate Credit - \$/meter											
		(59.00)							(59.00)		

* Represents 100% of the discount percentage as shown in the applicable Special Condition of this Schedule.
 ** The ongoing Competition Transition Charge (CTC) of \$(0.00015) per kWh is recovered in the UG component of Generation.
 1 Trans = Transmission and the Transmission Owners Tariff Charge Adjustments (TOTCA) which are FERC approved. The TOTCA represents the Transmission Revenue Balancing Account Adjustment (TRBAA) of \$(0.00141) per kWh, Reliability Services Balancing Account Adjustment (RSBAA) of \$(0.00087) per kWh, and Transmission Access Charge Balancing Account Adjustment (TACBAA) of \$0.00169 per kWh
 2 Distribn = Distribution
 3 NSGC = New System Generation Charge
 4 NDC = Nuclear Decommissioning Charge
 5 PPPC = Public Purpose Programs Charge (includes California Alternate Rates for Energy Surcharge where applicable.)
 6 WFC = Wildfire Fund Non-Bypassable Charge. The Wildfire Fund Non-Bypassable Charge supports the California Wildfire Fund and is not applicable to exempt Customers pursuant to D.19-10-056.
 7 PUCRF = The PUC Reimbursement Fee is described in Schedule RF-E.
 8 Total = Total Delivery Service rates are applicable to Bundled Service, Direct Access (DA) and Community Choice Aggregation Service (CCA Service) Customers, except DA and CCA Service Customers are not subject to the DWRBC rate component of this Schedule but instead pay the DWRBC as provided by Schedule DA-CRS or Schedule CCA-CRS.
 9 Generation = The Generation rates are applicable only to Bundled Service Customers. See Special Condition below for PCIA recovery.
 10 DWREC = Department of Water Resources (DWR) Energy Credit - For more information on the DWR Energy Credit, see the Billing Calculation Special Condition of this Schedule.
 11 DWRA = A refund from the California Department of Water Resources (DWR) relating to the purchase of power during the 2000-2001 energy crisis.

(Continued)

(To be inserted by utility)
 Advice 4864-E
 Decision 22-08-001

Issued by
Michael Backstrom
 Vice President

(To be inserted by Cal. PUC)
 Date Submitted Sep 15, 2022
 Effective Oct 1, 2022
 Resolution _____

8C11

Figure 10. SCE Electric Schedule – TOU-GS-2



Southern California Edison
Rosemead, California (U 338-E)

Revised Cal. PUC Sheet No. 74551-E
Cancelling Revised Cal. PUC Sheet No. 74003-E

Schedule TOU-GS-2
TIME-OF-USE - GENERAL SERVICE - DEMAND METERED

Sheet 4

(Continued)

RATES (Continued)

TOU Pricing	Option D / Option D-CPP	Delivery Service								Generation*		
		Trans ¹	Distrib ²	NSGC ³	NDC ⁴	PPPC ⁵	WFC ⁶	DWRA ¹¹	PUCRF ⁷	Total ⁸	UG ⁹	DWREC ¹⁰
Energy Charge - \$/kWh												
	Summer Season - On-Peak	(0.00012)	0.01503 (R)	0.00940 (R)	0.00010	0.01919 (R)	0.00062	(0.00200)	0.00130	0.04694 (R)	0.10001 (R)	0.00000
	Mid-Peak	(0.00012)	0.01433 (R)	0.00940 (R)	0.00010	0.01919 (R)	0.00062	(0.00200)	0.00130	0.04694 (R)	0.06621 (R)	0.00000
	Off-Peak	(0.00012)	0.01403 (R)	0.00940 (R)	0.00010	0.01919 (R)	0.00062	(0.00200)	0.00130	0.04634 (R)	0.06365 (R)	0.00000
	Winter Season - Mid-Peak	(0.00012)	0.01503 (R)	0.00940 (R)	0.00010	0.01919 (R)	0.00062	(0.00200)	0.00130	0.04694 (R)	0.07345 (R)	0.00000
	Off-Peak	(0.00012)	0.01433 (R)	0.00940 (R)	0.00010	0.01919 (R)	0.00062	(0.00200)	0.00130	0.04694 (R)	0.07369 (R)	0.00000
	Super-Off-Peak	(0.00012)	0.01359 (R)	0.00940 (R)	0.00010	0.01919 (R)	0.00062	(0.00200)	0.00130	0.04790 (R)	0.05079 (R)	0.00000
Fixed Recovery Charge - \$/kWh										0.00089 (R)		
Customer Charge - \$/Meter/Month										189.75 (R)		
Facilities Related Demand Charge - \$/kW		5.14		16.40 (R)						21.62 (R)		
Time Related Demand Charge - \$/kW												
Summer Season - \$/kW	On-Peak			13.63 (R)						13.63 (R)	20.20 (R)	
Winter Season - \$/kW	Mid-peak - Weekdays (4-4pm)			2.20 (R)						2.20 (R)	5.30 (R)	
Single Phase Service - \$/Month				(6.58) (R)						(6.58) (R)		
Voltage Discount, Demand - \$/kW	Facilities Related											
	From 2 kV to 50 kV	0.00		(0.33) (R)						(0.33) (R)	0.00	
	Above 50 kV but below 220 kV	0.00		(7.34) (R)						(7.34) (R)	0.00	
	At 220 kV	0.00		(16.40) (R)						(16.40) (R)	0.00	
Voltage Discount, Summer On Peak - \$/kW	From 2 kV to 50 kV	0.00		(0.27) (R)						(0.27) (R)	(0.48) (R)	
	Above 50 kV but below 220 kV	0.00		(5.15) (R)						(5.15) (R)	(1.06) (R)	
	At 220 kV	0.00		(13.63) (R)						(13.63) (R)	(1.07) (R)	
Voltage Discount, Winter Weekday Mid-Peak - \$/kW	From 2 kV to 50 kV	0.00		(0.04) (R)						(0.04) (R)	(0.12) (R)	
	Above 50 kV but below 220 kV	0.00		(0.83) (R)						(0.83) (R)	(0.28) (R)	
	At 220 kV	0.00		(0.20) (R)						(0.20) (R)	(0.28) (R)	
Voltage Discount, Energy - \$/kWh	From 2 kV to 50 kV	0.00000		(0.00205) (R)						(0.00205) (R)	(0.00091) (R)	
	Above 50 kV but below 220 kV	0.00000		(0.00494) (R)						(0.00494) (R)	(0.00187) (R)	
	At 220 kV	0.00000		(0.01314) (R)						(0.01314) (R)	(0.00196) (R)	
California Alternate Rates for Energy Discount - %				100.00*						100.00*		
TOU Option	\$/Meter/Month			28.83						28.83		
	RTEM			(59.00)						(59.00)		
California Climate Credit - \$/meter												
Option D-CPP												
CPP Event Energy Charge - \$/kWh											0.80000	
Summer CPP Non-Event Credit												
On-Peak Demand Credit - \$/kW											(6.85)	
Maximum Available Credit - \$/kW*	Summer (4-6pm)										(20.20) (R)	

- * Represents 100% of the discount percentage as shown in the applicable Special Condition of this Schedule.
- ** The ongoing Competition Transition Charge (CTC) of \$(0.00015) per kWh is recovered in the UG component of Generation. (R)
- *** The Maximum Available Credit is the capped credit amount for CPP Customers dual participating in other demand response programs.
- 1 Trans = Transmission and the Transmission Owners Tariff Charge Adjustments (TOTCA) which are FERC approved. The TOTCA represents the Transmission Revenue Balancing Account Adjustment (TRBAA) of \$(0.0141) per kWh, Reliability Services Balancing Account Adjustment (RSBAA) of \$(0.00060) per kWh, and Transmission Access Charge Balancing Account Adjustment (TACBAA) of \$0.00189 per kWh.
- 2 Distribn = Distribution
- 3 NSGC = New System Generation Charge
- 4 NDC = Nuclear Decommissioning Charge
- 5 PPPC = Public Purpose Programs Charge (Includes California Alternate Rates for Energy Surcharge where applicable.)
- 6 WFC = Wildfire Fund Non-Bypassable Charge. The Wildfire Fund Non-Bypassable Charge supports the California Wildfire Fund and is not applicable to exempt Customers pursuant to D.19-10-056.
- 7 PUCRF = The PUC Reimbursement Fee is described in Schedule RF-E.
- 8 Total = Total Delivery Service rates are applicable to Bundled Service, Direct Access (DA) and Community Choice Aggregation Service (CCA Service) Customers, except DA and CCA Service Customers are not subject to the DWRBC rate component of this Schedule but instead pay the DWRBC as provided by Schedule DA-CRS or Schedule CCA-CRS.
- 9 Generation = The Generation rates are applicable only to Bundled Service Customers. See Special Condition below for PCIA recovery.
- 10 DWREC = Department of Water Resources (DWR) Energy Credit - For more information on the DWR Energy Credit, see the Billing Calculation Special Condition of this Schedule.
- 11 DWRA = A refund from the California Department of Water Resources (DWR) relating to the purchase of power during the 2000-2001 energy crisis.

(Continued)

(To be inserted by utility)
Advice 4864-E
Decision 22-08-001

Issued by
Michael Backstrom
Vice President

(To be inserted by Cal. PUC)
Date Submitted Sep 15, 2022
Effective Oct 1, 2022
Resolution _____

4C11

Figure 11. SCE Electric Schedule – TOU-GS-3



Southern California Edison
Rosemead, California (U 338-E)

Revised Cal. PUC Sheet No. 73208-E
Cancelling Revised Cal. PUC Sheet No. 72721-E

Schedule TOU-GS-3
TIME-OF-USE - GENERAL SERVICE - DEMAND METERED

Sheet 3

(Continued)

RATES (Continued)

	Delivery Service							Generation*		
	Trans ¹	Distribn ²	NSGC ³	NDC ⁴	PPPC ⁵	DWRBC ⁶	PUCRF ⁷	Total ⁸	UG**	DWREC ¹⁰
Option D / Option D-CPP										
Energy Charge - \$/Wh/Meter/Month										
Summer Season - On-Peak	0.00095	0.00098 (I)	0.00888 (R)	0.00010	0.01771 (R)	0.00652	0.00130	0.04540 (R)	0.10353 (I)	0.00000
Mid-Peak	0.00095	0.00098 (I)	0.00888 (R)	0.00010	0.01771 (R)	0.00652	0.00130	0.04540 (R)	0.09309 (I)	0.00000
Off-Peak	0.00095	0.00098 (I)	0.00888 (R)	0.00010	0.01771 (R)	0.00652	0.00130	0.04540 (R)	0.06120 (I)	0.00000
Winter Season										
Mid-Peak	0.00095	0.00098 (I)	0.00888 (R)	0.00010	0.01771 (R)	0.00652	0.00130	0.04540 (R)	0.08038 (I)	0.00000
Off-Peak	0.00095	0.00098 (I)	0.00888 (R)	0.00010	0.01771 (R)	0.00652	0.00130	0.04540 (R)	0.06747 (I)	0.00000
Super-Off-Peak	0.00095	0.00098 (I)	0.00888 (R)	0.00010	0.01771 (R)	0.00652	0.00130	0.04540 (R)	0.04329 (I)	0.00000
Customer Charge - \$/Meter/Month		496.98 (I)						496.98 (I)		
Demand Charge - \$/kW of Billing Demand/Meter/Month										
Facilities Related	5.65	13.29 (I)						18.94 (I)		
Time Related										
Summer Season - On-Peak		16.14 (I)						16.14 (I)	22.36 (I)	
Winter Season - Mid-Peak - Weekdays (4-9pm)		5.47 (I)						5.47 (I)	4.06 (I)	
Voltage Discount, Demand - \$/kW										
Facilities Related										
From 2 kV to 50 kV	0.00	(0.19) (I)						(0.19) (I)		
Above 50 kV but below 220 kV	0.00	(8.13) (I)						(8.13) (I)		
At 220 kV	0.00	(13.29) (I)						(13.29) (I)		
Voltage Discount, Summer On Peak and Winter Weekdays (4-9pm) Demand - \$/kW										
From 2 kV to 50 kV	0.00	(0.13) (I)						(0.13) (I)	(0.18) (I)	
Above 50 kV but below 220 kV	0.00	(3.93) (I)						(3.93) (I)	(0.47) (I)	
At 220 kV	0.00	(9.31) (I)						(9.31) (I)	(0.47) (I)	
Voltage Discount, Energy - \$/Wh										
From 2 kV to 50 kV	0.00000	(0.00013) (I)						(0.00013) (I)	(0.00104) (I)	
Above 50 kV but below 220 kV	0.00000	(0.00364) (I)						(0.00364) (I)	(0.00229) (I)	
At 220 kV	0.00000	(0.00870) (I)						(0.00870) (I)	(0.00250) (I)	
Power Factor Adjustment - \$/kVAR										
Greater than 50 kV		0.54						0.54		
50 kV or less		0.80						0.80		
California Alternate Rates for Energy Discount - %		100.00*						100.00*		
Option D-CPP										
CPP Event Energy Charge - \$/MWh									0.80000	
Summer CPP Non-Event Credit										
On-Peak Demand Credit - \$/kW									(7.55)	
Maximum Available Credit - \$/kW**										
Summer Weekdays (4-9pm)									(22.36) (I)	

* Represents 100% of the discount percentage as shown in the applicable Special Condition of this Schedule.
 ** The ongoing Competition Transition Charge (CTC) of \$(0.00015) per kWh is recovered in the UG component of Generation. (R)
 *** The Maximum Available Credit is the capped credit amount for CPP Customers dual participating in other demand response programs
 1 Trans = Transmission and the Transmission Owners Tariff Charge Adjustments (TOTCA) which are FERC approved. The TOTCA represents the Transmission Revenue Balancing Account Adjustment (TRBAA) of \$(0.00141) per kWh, Reliability Services Balancing Account Adjustment (RSBAA) of \$(0.00079) per kWh, and Transmission Access Charge Balancing Account Adjustment (TACBAA) of \$0.00315 per kWh.
 2 Distribn = Distribution
 3 NSGC = New System Generation Charge
 4 NDC = Nuclear Decommissioning Charge
 5 PPPC = Public Purpose Programs Charge (Including California Alternate Rates for Energy Surcharge where applicable.)
 6 DWRBC = Department of Water Resources (DWR) Bond Charge. The DWR Bond Charge is the Wildfire Fund Non-Bypassable Charge which supports the California Wildfire Fund and is not applicable to exempt Customers pursuant to D.19-10-056.
 7 PUCRF = The PUC Reimbursement Fee is described in Schedule RF-E.
 8 Total = Total Delivery Service rates are applicable to Bundled Service, Direct Access (DA) and Community Choice Aggregation Service (CCA Service) Customers, except DA and CCA Service Customers are not subject to the DWRBC rate component of this Schedule but instead pay the DWRBC as provided by Schedule DA-CRS or Schedule CCA-CRS.
 9 Generation = The Generation rates are applicable only to Bundled Service Customers. See Special Condition below for PCIA recovery.
 10 DWREC = Department of Water Resources (DWR) Energy Credit - For more information on the DWR Energy Credit, see the Billing Calculation Special Condition of this Schedule.

(Continued)

(To be inserted by utility)
Advice 4719-E
Decision _____

Issued by
Michael Backstrom
Vice President

(To be inserted by Cal. PUC)
Date Submitted Feb 15, 2022
Effective Mar 1, 2022
Resolution _____

8.2.3 SCG

Figure 12. SCG Gas Schedule – G-10

<p>SOUTHERN CALIFORNIA GAS COMPANY LOS ANGELES, CALIFORNIA</p>	<p>Revised CANCELING Revised</p>	<p>CAL. P.U.C. SHEET NO. 46445-G CAL. P.U.C. SHEET NO. 46215-G 43002-G</p>
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Schedule No. G-10	Sheet 1
<u>CORE COMMERCIAL AND INDUSTRIAL SERVICE</u>	
<u>(Includes GN-10, GN-10C and GT-10 Rates)</u>	
<u>APPLICABILITY</u>	
<p>Applicable to core non-residential natural gas service, including both procurement service (GN rates) and transportation-only service (GT rates) including Core Aggregation Transportation (CAT). This schedule is also available to residential customers with separately metered service to common facilities (swimming pools, recreation rooms, saunas, spas, etc.) only and otherwise eligible for service under rates designated for GM-C, GM-CC, GM-BC, GM-BCC, GT-MC or GT-MBC, as appropriate, if so elected by the customer. Also applicable to service not provided under any other rate schedule. Pursuant to D.02-08-065, this schedule is not available to those electric generation, refinery, and enhanced oil recovery customers that are defined as ineligible for core service in Rule No. 23.B.</p> <p>The California Alternate Rates for Energy (CARE) discount of 20%, reflected as a separate line item on the bill, is applicable to Nonprofit Group Living Facilities and Qualified Agricultural Employee Housing Facilities (migrant farmworker housing centers, privately owned employee housing, and agricultural employee housing operated by nonprofit entities) that meet the requirements for the CARE as set forth in Schedule No. G-CARE.</p>	
<u>TERRITORY</u>	
Applicable throughout the service territory.	
<u>RATES</u>	
<u>Customer Charge</u>	
Per meter, per day:	
All customers except "Space Heating Only"	49.315¢
"Space Heating Only" customers:	
Beginning Dec. 1 through Mar. 31	\$1.48760
Beginning Apr. 1 through Nov. 30	None
(Continued)	

<p>(TO BE INSERTED BY UTILITY) ADVICE LETTER NO. 4152 DECISION NO. 98-07-068 1011</p>	<p>ISSUED BY Lee Schavrien Senior Vice President Regulatory Affairs</p>	<p>(TO BE INSERTED BY CAL. PUC) DATE FILED <u>Sep 30, 2010</u> EFFECTIVE <u>Oct 1, 2010</u> RESOLUTION NO. _____</p>
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SOUTHERN CALIFORNIA GAS COMPANY Revised CAL P.U.C. SHEET NO. 60204-G
 LOS ANGELES, CALIFORNIA CANCELING Revised CAL P.U.C. SHEET NO. 60169-G

Schedule No. G-10
CORE COMMERCIAL AND INDUSTRIAL SERVICE
 (Includes GN-10, GN-10C and GT-10 Rates)

Sheet 2

(Continued)

RATES (Continued)

All Procurement, Transmission, and Commodity Charges are billed per therm.

		<u>Tier I^{1/}</u>	<u>Tier II^{1/}</u>	<u>Tier III^{1/}</u>	
<u>GN-10:</u> ^{4/}	Applicable to natural gas procurement service to non-residential core customers, including service not provided under any other rate schedule.				
	Procurement Charge: ^{2/} G-CPNR	64.959¢	64.959¢	64.959¢	R,R,R
	Transmission Charge: GPT-10	106.047¢	60.635¢	30.186¢	
	Commodity Charge: GN-10	171.006¢	125.594¢	95.145¢	R,R,R
<u>GN-10C:</u> ^{4/}	Core procurement service for previous non-residential transportation-only customers returning to core procurement service, including CAT customers with annual consumption over 50,000 therms, as further defined in Schedule No. G-CP.				
	Procurement Charge: ^{2/} G-CPNRC	72.898¢	72.898¢	72.898¢	
	Transmission Charge: GPT-10	106.047¢	60.635¢	30.186¢	
	Commodity Charge: GN-10C	178.945¢	133.533¢	103.084¢	
<u>GT-10:</u> ^{4/}	Applicable to non-residential transportation-only service including CAT service, as set forth in Special Condition 13.				
	Transmission Charge: GT-10	106.047¢ ^{3/}	60.635¢ ^{3/}	30.186¢ ^{3/}	

^{1/} Tier I rates are applicable for the first 250 therms used per month. Tier II rates are applicable for usage above Tier I quantities and up through 4,167 therms per month. Tier III rates are applicable for all usage above 4,167 therms per month. Under this schedule, the winter season shall be defined as December 1 through March 31 and the summer season as April 1 through November 30.

^{2/} This charge is applicable for service to Utility Procurement Customers as shown in Schedule No. G-CP, in the manner approved by D.96-08-037, and subject to change monthly, as set forth in Special Condition 5.

^{3/} These charges are equal to the core commodity rate less the following two components as approved in D.97-04-082: (1) the weighted average cost of gas; and (2) the core brokerage fee.

(Footnotes continue next page.)

(Continued)

(TO BE INSERTED BY UTILITY)
 ADVICE LETTER NO. 6051
 DECISION NO. 98-07-068

ISSUED BY
Dan Skopec
 Senior Vice President
 Regulatory Affairs

(TO BE INSERTED BY CAL. PUC)
 SUBMITTED Oct 31, 2022
 EFFECTIVE Nov 1, 2022
 RESOLUTION NO. _____

208

8.2.4 SDG&E

Figure 13. SDG&E Electric Schedule – AL-TOU



San Diego Gas & Electric Company
San Diego, California

Revised Cal. P.U.C. Sheet No. 35374-E
 Canceling Revised Cal. P.U.C. Sheet No. 31333-E

SCHEDULE AL-TOU Sheet 2
GENERAL SERVICE - TIME METERED

RATES*

Description – AL-TOU	Transm	Distr	PPP	ND	CTC	LGC	RS	TRAC	UDC Total
Basic Service Fees									
(\$/month)									
<u>0-500 kW</u>									
Secondary		199.35	I						199.35 I
Primary		53.75	I						53.75 I
Secondary Substation		18,717.35	I						18,717.35 I
Primary Substation		18,717.35	I						18,717.35 I
Transmission		289.91	I						289.91 I
<u>> 500 kW</u>									
Secondary		766.91	I						766.91 I
Primary		63.95	I						63.95 I
Secondary Substation		18,717.35	I						18,717.35 I
Primary Substation		18,717.35	I						18,717.35 I
Transmission		1,159.95	I						1,159.95 I
<u>> 12 MW</u>									
Secondary Substation		31,585.50	I						31,585.50 I
Primary Substation		31,644.17	I						31,644.17 I
<u>Trans. Multiple Bus</u>		3,000.00							3,000.00
<u>Distance Adjust. Fee</u>									
Secondary - OH		1.23							1.23
Secondary - UG		3.17							3.17
Primary - OH		1.22							1.22
Primary - UG		3.13							3.13

(Continued)

2C7

Advice Ltr. No. 3855-E

Decision No. 21-07-010

Issued by
Dan Skopec
 Vice President
 Regulatory Affairs

Submitted Sep 30, 2021

Effective Nov 1, 2021

Resolution No. _____



San Diego Gas & Electric Company
 San Diego, California

Revised Cal. P.U.C. Sheet No. 36350-E

Canceling Revised Cal. P.U.C. Sheet No. 35768-E

SCHEDULE AL-TOU
GENERAL SERVICE - TIME METERED

Sheet 3

RATES* (Continued)

Description – AL-TOU	Transm	Distr	PPP	ND	CTC	LGC	RS	TRAC	UDC Total
Demand Charges (\$/kW)									
<u>Non-Coincident</u>									
Secondary	18.63	12.69	I		0.00		0.00		31.32 I
Primary	18.00	12.62	I		0.00		0.00		30.62 I
Secondary Substation	18.63	0.23	I	0.52	0.37	I	0.00		19.75 I
Primary Substation	18.00	0.23	I	0.52	0.37	I	0.00		19.12 I
Transmission	17.93	0.23	I	0.52	0.37	I	0.00		19.05 I
<u>Maximum On-Peak</u>									
<u>Summer</u>									
Secondary	3.90	23.90	I						27.80 I
Primary	3.77	23.77	I						27.54 I
Secondary Substation	3.90	0.00							3.90
Primary Substation	3.77	0.00							3.77
Transmission	3.75	0.00							3.75
<u>Winter</u>									
Secondary	0.82	27.92	I						28.74 I
Primary	0.79	27.77	I						28.56 I
Secondary Substation	0.82	0.00							0.82
Primary Substation	0.79	0.00							0.79
Transmission	0.79	0.00							0.79
<u>Power Factor (\$/kvar)</u>									
Secondary		0.25							0.25
Primary		0.25							0.25
Secondary Substation		0.25							0.25
Primary Substation		0.25							0.25
Transmission		0.00							0.00

(Continued)

3C9
 Advice Ltr. No. 4004-E
 Decision No. 22-03-003

Issued by
Dan Skopec
 Vice President
 Regulatory Affairs

Submitted May 16, 2022
 Effective Jun 1, 2022
 Resolution No. _____



San Diego Gas & Electric Company
San Diego, California

Revised Cal. P.U.C. Sheet No. 36351-E

Canceling Revised Cal. P.U.C. Sheet No. 35769-E

SCHEDULE AL-TOU
GENERAL SERVICE - TIME METERED

Sheet 4

RATES* (Continued)

Description - AL-TOU	Transm	Distr	PPP	ND	CTC	LGC	RS	TRAC	UDC Total
Energy Charges (\$/kWh)									
On-Peak - Summer									
Secondary	(0.01745)	0.00132	I 0.01979	0.00007	0.00106	I 0.00289	I 0.00001		0.00769
Primary	(0.01745)	0.00132	I 0.01979	0.00007	0.00106	I 0.00289	I 0.00001		0.00769
Secondary Substation	(0.01745)	0.00068	I 0.01837	0.00007		0.00289	I 0.00001		0.00457
Primary Substation	(0.01745)	0.00068	I 0.01837	0.00007		0.00289	I 0.00001		0.00457
Transmission	(0.01745)	0.00068	I 0.01837	0.00007		0.00289	I 0.00001		0.00457
Off-Peak - Summer									
Secondary	(0.01745)	0.00132	I 0.01979	0.00007	0.00106	I 0.00289	I 0.00001		0.00769
Primary	(0.01745)	0.00132	I 0.01979	0.00007	0.00106	I 0.00289	I 0.00001		0.00769
Secondary Substation	(0.01745)	0.00068	I 0.01837	0.00007		0.00289	I 0.00001		0.00457
Primary Substation	(0.01745)	0.00068	I 0.01837	0.00007		0.00289	I 0.00001		0.00457
Transmission	(0.01745)	0.00068	I 0.01837	0.00007		0.00289	I 0.00001		0.00457
Super Off-Peak									
Secondary	(0.01745)	0.00132	I 0.01979	0.00007	0.00106	I 0.00289	I 0.00001		0.00769
Primary	(0.01745)	0.00132	I 0.01979	0.00007	0.00106	I 0.00289	I 0.00001		0.00769
Secondary Substation	(0.01745)	0.00068	I 0.01837	0.00007		0.00289	I 0.00001		0.00457
Primary Substation	(0.01745)	0.00068	I 0.01837	0.00007		0.00289	I 0.00001		0.00457
Transmission	(0.01745)	0.00068	I 0.01837	0.00007		0.00289	I 0.00001		0.00457
On-Peak - Winter									
Secondary	(0.01745)	0.00132	I 0.01979	0.00007	0.00106	I 0.00289	I 0.00001		0.00769
Primary	(0.01745)	0.00132	I 0.01979	0.00007	0.00106	I 0.00289	I 0.00001		0.00769
Secondary Substation	(0.01745)	0.00068	I 0.01837	0.00007		0.00289	I 0.00001		0.00457
Primary Substation	(0.01745)	0.00068	I 0.01837	0.00007		0.00289	I 0.00001		0.00457
Transmission	(0.01745)	0.00068	I 0.01837	0.00007		0.00289	I 0.00001		0.00457
Off-Peak - Winter									
Secondary	(0.01745)	0.00132	I 0.01979	0.00007	0.00106	I 0.00289	I 0.00001		0.00769
Primary	(0.01745)	0.00132	I 0.01979	0.00007	0.00106	I 0.00289	I 0.00001		0.00769
Secondary Substation	(0.01745)	0.00068	I 0.01837	0.00007		0.00289	I 0.00001		0.00457
Primary Substation	(0.01745)	0.00068	I 0.01837	0.00007		0.00289	I 0.00001		0.00457
Transmission	(0.01745)	0.00068	I 0.01837	0.00007		0.00289	I 0.00001		0.00457
Super Off-Peak									
Secondary	(0.01745)	0.00132	I 0.01979	0.00007	0.00106	I 0.00289	I 0.00001		0.00769
Primary	(0.01745)	0.00132	I 0.01979	0.00007	0.00106	I 0.00289	I 0.00001		0.00769
Secondary Substation	(0.01745)	0.00068	I 0.01837	0.00007		0.00289	I 0.00001		0.00457
Primary Substation	(0.01745)	0.00068	I 0.01837	0.00007		0.00289	I 0.00001		0.00457
Transmission	(0.01745)	0.00068	I 0.01837	0.00007		0.00289	I 0.00001		0.00457

Notes: Transmission Energy charges include the Transmission Revenue Balancing Account Adjustment (TRBAA) of \$(0.00130) per kWh and the Transmission Access Charge Balancing Account Adjustment (TACBAA) of \$(0.01615) per kWh. The PPP rate is composed of Energy and Demand charges. For all voltage levels, the PPP Energy charges includes Low Income PPP rate (LI-PPP) \$0.01080/kWh, Non-low Income PPP rate (Non-LI-PPP) \$0.00300/kWh (pursuant to PU Code Section 399.8, the Non-LI-PPP rate may not exceed January 1, 2000 levels), Procurement Energy Efficiency Surcharge Rate of \$0.00477/kWh. For Secondary and Primary voltage levels, the PPP Energy charge also includes California Solar Initiative rate (CSI) of \$0.00000/kWh and Self-Generation Incentive Program rate (SGIP) \$ 0.00142 /kWh. For Secondary Substation, Primary Substation and Transmission voltage levels, the PPP rate includes Demand charges for CSI of \$0.00 /kW and SGIP of \$0.52 /kW.

*These rates are not applicable to TOU Period Grandfathering Eligible Customer Generators, please refer to SC 20 for applicable rates.

(Continued)

4C8 Issued by Submitted May 16, 2022
 Advice Ltr. No. 4004-E **Dan Skopec** Effective Jun 1, 2022
 Vice President
 Decision No. 22-03-003 Regulatory Affairs Resolution No. _____

Figure 14. SDG&E Electric Schedule - EECC

		<u>Revised</u> Cal. P.U.C. Sheet No. <u>36409-E</u>
San Diego Gas & Electric Company San Diego, California		<u>Canceling</u> <u>Revised</u> Cal. P.U.C. Sheet No. <u>35858-E</u>
SCHEDULE EECC		Sheet 5
<u>ELECTRIC ENERGY COMMODITY COST</u>		
<u>Commodity Rates (Continued)</u>		
<u>Schedule A-TC</u> <u>(\$/kWh)</u>		
Summer	0.08147	R
Winter	0.08147	R
<u>Schedule TOU-M</u>		
Summer		
On-Peak Energy	0.34164	R
Off-Peak Energy	0.11656	R
Super Off-Peak Energy	0.06544	R
Winter		
On-Peak Energy	0.13581	R
Off-Peak Energy	0.07640	R
Super Off-Peak Energy	0.05903	R
<u>Schedule OL-TOU</u>		
Summer		
On-Peak Energy	0.40931	R
Off-Peak Energy	0.13921	R
Super Off-Peak Energy	0.07661	R
Winter		
On-Peak Energy	0.16089	R
Off-Peak Energy	0.09017	R
Super Off-Peak Energy	0.06966	R
<u>Schedule AL-TOU</u> <u>(\$/kW)</u>		
Maximum On-Peak Demand: Summer		
Secondary	12.18	R
Primary	12.12	R
Secondary Substation	12.18	R
Primary Substation	12.12	R
Transmission	11.60	R
Maximum On-Peak Demand: Winter		
Secondary		
Primary		
Secondary Substation		
Primary Substation		
Transmission		
On-Peak Energy: Summer <u>(\$/kWh)</u>		
Secondary	0.17868	R
Primary	0.17782	R
Secondary Substation	0.17868	R
Primary Substation	0.17782	R
Transmission	0.17021	R
Off-Peak Energy: Summer		
Secondary	0.10423	R
Primary	0.10375	R
Secondary Substation	0.10423	R
Primary Substation	0.10375	R
Transmission	0.09933	R
Super Off-Peak Energy: Summer		
Secondary	0.09960	R
Primary	0.09927	R
Secondary Substation	0.09960	R
Primary Substation	0.09927	R
Transmission	0.09526	R
(Continued)		
5C8	Issued by	Submitted <u>May 16, 2022</u>
Advice Ltr. No. <u>4004-E</u>	Dan Skopec	Effective <u>Jun 1, 2022</u>
Decision No. <u>22-03-003</u>	Vice President Regulatory Affairs	Resolution No. _____

Figure 15. SDG&E Gas Schedule – GN-3



San Diego Gas & Electric Company
 San Diego, California

Revised Cal. P.U.C. Sheet No. 18445-G
 Canceling Revised Cal. P.U.C. Sheet No. 18058-G

SCHEDULE GN-3 Sheet 1

NATURAL GAS SERVICE FOR CORE NON-RESIDENTIAL CUSTOMERS
 (Includes Rates for GN-3, GN-3C, GN-3/GTC and GN-3/GTCA)

APPLICABILITY

Applicable to core nonresidential natural gas service, including both procurement service and transportation-only service including Core Aggregation Transportation (CAT). Also applicable to service not provided under any other rate schedule. This schedule is not available to electric generation customers who generator's rated capacity exceeds one megawatt, refinery customers, and enhanced oil recovery customers, whose gas consumption exceeds 250,000 therms per year.

The GN-3 rate is applicable to natural gas procurement and transportation service to nonresidential core customers and to separately metered, common area use service to residential detached homes. This schedule is optionally available to customers with separately metered, common area use service to residential, multi-family accommodations, as defined in Rule 1.

The GN-3C cross-over rate is a core procurement service for previous transportation-only customers returning to core procurement service customers with annual consumption over 50,000 therms, as set forth in Special Condition 8.

The GN-3/GTC (GTC) and GN-3/GTCA (GTCA) rates are applicable to intrastate gas transportation-only services as set forth in Special Conditions 9-14.

Non-profit group living facilities taking service under this schedule may be eligible for a 20% low-income rate discount on their bill, if such facilities qualify to receive service under the terms and conditions of Schedule G-CARE.

Agricultural Employee Housing Facilities, as defined in Schedule G-CARE, may qualify for a 20% CARE discount on the bill if all eligibility criteria set forth in Form 142-4032 or Form 142-4035 is met.

TERRITORY

Within the entire territory served natural gas by the Utility.

<u>RATES</u>	<u>GN-3</u>	<u>GN-3-C</u>	<u>GTC/GTCA</u>
<u>Customer charges</u> , \$ per meter per month:	\$10.00	\$10.00	\$10.00

(Continued)

1C11

Advice Ltr. No. 1980-G

Decision No. _____

Issued by
Lee Schavrien
 Senior Vice President
 Regulatory Affairs

Date Filed Oct 15, 2010

Effective Nov 14, 2010

Resolution No. _____



San Diego Gas & Electric Company
 San Diego, California

Revised Cal. P.U.C. Sheet No. 26223-G

Canceling Revised Cal. P.U.C. Sheet No. 26210-G

SCHEDULE GN-3

Sheet 2

NATURAL GAS SERVICE FOR CORE NON-RESIDENTIAL CUSTOMERS
 (Includes Rates for GN-3, GN-3C, GN-3/GTC and GN-3/GTCA)

RATES (continued)

Volumetric charges, \$ per therm:

	<u>GN-3</u>	<u>GN-3C</u>		<u>GTC/GTCA²</u>
Procurement Charge (0 to 1,000)	\$0.65036	\$0.71790	R	N/A
<u>Transportation Charge</u>	<u>\$0.72856</u>	<u>\$0.72856</u>		<u>\$0.72858</u>
Total Charge	\$1.37892	\$1.44646	R	\$0.72858
Procurement Charge (1,001 to 21,000)	\$0.65036	\$0.71790	R	N/A
<u>Transportation Charge</u>	<u>\$0.48510</u>	<u>\$0.48510</u>		<u>\$0.48512</u>
Total Charge	\$1.13546	\$1.20300	R	\$0.48512
Procurement Charge (Over 21,000)	\$0.65036	\$0.71790	R	N/A
<u>Transportation Charge</u>	<u>\$0.41632</u>	<u>\$0.41632</u>		<u>\$0.41634</u>
Total Charge	\$1.06668	\$1.13422	R	\$0.41634

² The rates for core transportation-only customers, with the exception of customers taking service under Schedule GT-NGV, include any FERC Settlement Proceeds Memorandum Account (FSPMA) credit adjustments.

Standby Service Fee for GTC/GTCA Customers

Per decatherm \$10

This fee shall be assessed to customers only during curtailments of transportation services to firm noncore customers. This fee will apply only to the difference between the customer's nominations and their confirmed deliveries.

The customer's storage volumes, if available, may be used to offset the standby service fee. Revenues collected from this fee shall be credited to the Utility's Non-Margin Fixed Cost Account (NMFCA). Curtailments of standby services provided to core customers are described in Rule 14.

GTC/GTCA customers who receive service under this schedule shall also be eligible for standby services ahead of such services offered to noncore customers, including core subscription customers.

Billing adjustments may be necessary to reflect changes in volumes used in developing prior periods' transportation charges.

(Continued)

2C6
 Advice Ltr. No. 3138-G
 Decision No. _____

Issued by
Dan Skopec
 Senior Vice President
 Regulatory Affairs

Submitted Nov 7, 2022
 Effective Nov 10, 2022
 Resolution No. _____

8.2.5 CPAU

Figure 16. CPAU Electric Schedule – E-2

RESIDENTIAL MASTER-METERED AND SMALL NON-RESIDENTIAL ELECTRIC SERVICE

UTILITY RATE SCHEDULE E-2

A. APPLICABILITY:

This Rate Schedule applies to the following Customers receiving Electric Service from the City of Palo Alto Utilities:

1. Small non-residential Customers receiving Non-Demand Metered Electric Service; and
2. Customers with Accounts at Master-Metered multi-family facilities.

B. TERRITORY:

This rate schedule applies everywhere the City of Palo Alto provides Electric Service.

C. UNBUNDLED RATES:

<u>Per kilowatt-hour (kWh)</u>	<u>Commodity</u>	<u>Distribution</u>	<u>Public Benefits</u>	<u>Total</u>
Summer Period	\$0.12151	\$0.09276	\$0.00469	\$0.21896
Winter Period	0.08715	0.06171	0.00469	0.15355
<u>Minimum Bill (\$/day)</u>				0.8777

D. SPECIAL NOTES:

1. **Calculation of Cost Components**
 The actual bill amount is calculated based on the applicable rates in Section C above and adjusted for any applicable discounts, surcharges and/or taxes. On a Customer's bill statement, the bill amount may be broken down into appropriate components as calculated under Section C.
2. **Seasonal Rate Changes**
 The Summer Period is effective May 1 to October 31 and the Winter Period is effective from November 1 to April 30. When the billing period includes use in both the Summer and the Winter Periods, the usage will be prorated based on the number of days in each seasonal period, and the charges based on the applicable rates therein. For further discussion of bill calculation and proration, refer to Rule and Regulation 11.

CITY OF PALO ALTO UTILITIES
 Issued by the City Council

Supersedes Sheet No E-2-1 dated 7-1-2019



CITY OF PALO ALTO UTILITIES

Sheet No E-2-1
 Effective 7-1-2022

Figure 17. CPAU Gas Schedule – G-2



**Monthly Gas
Commodity & Volumetric Rates**

Your gas bill includes two charge types: 1) a service charge, and 2) a volumetric charge. The service charge for your gas service can be found on the appropriate rate schedule, which you can find in the following locations: [Residential Rate Schedules](#), and [Business Rate Schedules](#).

The volumetric charge depends on your consumption, and the rate varies monthly based on the current price of gas. The following tables show the volumetric rates (\$/Therm) for each gas rate schedule. The volumetric rates include a) a Commodity charge, which represents the cost of the gas, b) a Distribution rate, c) a Cap and Trade Compliance charge, a d) Carbon Offset Charge and e) a Transportation Charge. The Cap and Trade charge covers the cost of acquiring compliance instruments in California’s Cap and Trade program, and will change in response to market conditions, sales volumes, and the quantity of allowances required. The Transportation Charge is based on the current PG&E G-WSL rate for Palo Alto, accounting for delivery losses to the Customer’s Meter. Prior to November 1, 2016, it was included within the Distribution rate.

On September 15, 2014, Council adopted Resolution #9451 authorizing the City’s participation in a natural gas purchase from Municipal Gas Acquisition and Supply Corporation (MuniGas) for the City’s entire retail gas load for a period of at least 10 years. The MuniGas transaction includes a mechanism for municipal utilities to utilize their tax-exempt status to achieve a discount on the market price of gas. As of November 1, 2018, gas will begin flowing under this program, reducing the City’s gas commodity cost by about \$1 Million per year and saving gas customers approximately \$0.03 per Therm on the commodity portion of their bills.

These charges are shown on the left-hand side of the table below for information purposes, while the total volumetric rate (Commodity+ Distribution+ Cap and Trade Compliance+ Carbon Offset+ Transportation) is shown on the right-hand side of the table. To calculate your variable gas costs, apply the total rate to your consumption for each month. If you are a resident, note that your gas rate varies based on how much you consume (Tier 1 and Tier 2). For information on consumption tiers please refer to the [G-1 Residential Gas Service Rate Schedule](#).

If you have questions on your bill, please call the City of Palo Alto Utilities Customer Service Center at 650-329-2161.

Effective Date	Commodity Rate	Cap and Trade Compliance Charge	Transportation Charge	Carbon Offset Charge	Total Volumetric Rate			
					G-1 (Residential)		G-2 (Master Metered Multi-Family and Small Commercial)	G-3 (Large Commercial)
					Tier 1	Tier 2		
per Therm	per Therm	per Therm	per Therm	per Therm	per Therm	per Therm	per Therm	
3/1/22	0.5370	0.0486	0.15000	0.040	1.30460	2.12820	1.47040	1.46350
2/1/22	0.5360	0.0486	0.15000	0.040	1.30360	2.12720	1.46940	1.46250
1/1/22	0.7714	0.0486	0.15000	0.040	1.53900	2.36260	1.70480	1.69790
12/1/21	0.6321	0.0486	0.12274	0.040	1.37244	2.19604	1.53824	1.53134
11/1/21	0.7505	0.0486	0.12274	0.040	1.49084	2.31444	1.65664	1.64974
10/1/21	0.7175	0.0486	0.12274	0.040	1.45784	2.28144	1.62364	1.61674
9/1/21	0.5217	0.0486	0.12274	0.040	1.26204	2.08564	1.42784	1.42094
8/1/21	0.5492	0.0486	0.12274	0.040	1.28954	2.11314	1.45534	1.44844
7/1/21	0.4800	0.0486	0.12274	0.040	1.22034	2.04394	1.38614	1.37924
6/1/21	0.3982	0.0486	0.12214	0.040	1.11274	1.89714	1.27064	1.26404
5/1/21	0.3901	0.0486	0.12200	0.040	1.10450	1.88890	1.26240	1.25580
4/1/21	0.3375	0.0486	0.12200	0.040	1.05190	1.83630	1.20980	1.20320
3/1/21	0.3577	0.0486	0.12200	0.040	1.07210	1.85650	1.23000	1.22340

8.2.6 SMUD (Electric Only)

Figure 18. SMUD Electric Schedule – CITS-0/CITS-1

Commercial & Industrial Time-of-Day Rate Schedule CI-TOD1

C. Restructured Commercial & Industrial Time-of-Day Rates

	Effective as of October 1, 2021	Effective as of March 1, 2022	Effective as of January 1, 2023
CITS-0: C&I Secondary 0-20 kW			
Non-Summer Season (October - May)			
System Infrastructure Fixed Charge per month per meter	\$28.40	\$28.85	\$35.15
Maximum Demand Charge \$ per monthly max kW	\$0.000	\$0.000	\$0.000
Electricity Usage Charge			
Peak \$/kWh	\$0.1430	\$0.1451	\$0.1440
Off-Peak \$/kWh	\$0.1393	\$0.1414	\$0.1364
Off-Peak Saver \$/kWh	\$0.1373	\$0.1394	\$0.1323
Summer Season (June - September)			
System Infrastructure Fixed Charge per month per meter	\$28.40	\$28.85	\$35.15
Maximum Demand Charge \$ per monthly max kW	\$0.000	\$0.000	\$0.000
Electricity Usage Charge			
Peak \$/kWh	\$0.2355	\$0.2390	\$0.2554
Off-Peak \$/kWh	\$0.1331	\$0.1351	\$0.1349
CITS-1: C&I Secondary 21-299 kW			
Non-Summer Season (October - May)			
System Infrastructure Fixed Charge per month per meter	\$88.05	\$89.35	\$158.30
Site Infrastructure Charge per 12 months max kW or contract capacity	\$7.930	\$8.049	\$7.568
Electricity Usage Charge			
Peak \$/kWh	\$0.1169	\$0.1187	\$0.1230
Off-Peak \$/kWh	\$0.1136	\$0.1153	\$0.1158
Off-Peak Saver \$/kWh	\$0.1078	\$0.1094	\$0.1030
Summer Season (June - September)			
System Infrastructure Fixed Charge per month per meter	\$88.05	\$89.35	\$158.30
Site Infrastructure Charge per 12 months max kW or contract capacity	\$7.930	\$8.049	\$7.568
Summer Peak Demand Charge \$ per monthly Peak max kW	\$1.680	\$1.705	\$3.468
Electricity Usage Charge			
Peak \$/kWh	\$0.1897	\$0.1925	\$0.1983
Off-Peak \$/kWh	\$0.1102	\$0.1119	\$0.1119

New restructured commercial rates beyond 2023 are effective as shown in Section IX. Transition Schedule.

IV. Electricity Usage Surcharges

Refer to the following rate schedules for details on these surcharges:

A. Hydro Generation Adjustment (HGA). Refer to Rate Schedule HGA.

V. Rate Option Menu

A. Energy Assistance Program for Nonprofit Agencies. Refer to Rate Schedule EAPR.

B. Campus Rates. Refer to Rate Schedule CB.

C. Implementation of Energy Efficiency Program or Installation of New Solar/Photovoltaic or Storage Systems

Customers who implement a SMUD-sponsored Energy Efficiency program or who install a SMUD-approved solar/photovoltaic or storage system to offset their on-site energy usage may request, in writing, within 30 days of the project completion and commissioning, an adjustment to their twelve month maximum demand based on the anticipated reduction in kW from the Energy Efficiency Project Worksheet. The adjusted twelve month maximum demand is valid for 12 months or until it is exceeded by actual maximum demand.

SACRAMENTO MUNICIPAL UTILITY DISTRICT
Resolution No. 21-09-06 adopted September 16, 2021

Sheet No. CI-TOD1-3
Effective: **September 17, 2021**
Edition: **September 17, 2021**

8.2.7 Escalation Rates

Utility rates are assumed to escalate over time, using assumptions from research conducted by Energy and Environmental Economics (E3) in Appendix 8.2. The 2019 study *Residential Building Electrification in California* (Energy + Environmental Economics 2019a) and escalation rates used in the development of the 2022 TDV multipliers

Table 24 below demonstrate the escalation rates used for nonresidential buildings. As stated by E3 in the TDV report, this latter assumption “does not presuppose specific new investments, changes in load and gas throughput, or other measures associated with complying with California’s climate policy goals” (i.e., business-as-usual is assumed).

Table 24. Real Utility Rate Escalation Rate Assumptions Above Inflation

	Source	Statewide Electric Nonresidential Average Rate (%/year, real)	Statewide Natural Gas Nonresidential Core Rate (%/year, real)
2023	E3 2019	2.0%	4.0%
2024	2022 TDV	0.7%	7.7%
2025	2022 TDV	0.5%	5.5%
2026	2022 TDV	0.7%	5.6%
2027	2022 TDV	0.2%	5.6%
2028	2022 TDV	0.6%	5.7%
2029	2022 TDV	0.7%	5.7%
2030	2022 TDV	0.6%	5.8%
2031	2022 TDV	0.6%	3.3%
2032	2022 TDV	0.6%	3.6%
2033	2022 TDV	0.6%	3.4%
2034	2022 TDV	0.6%	3.4%
2035	2022 TDV	0.6%	3.2%
2036	2022 TDV	0.6%	3.2%
2037	2022 TDV	0.6%	3.1%

8.3 HVAC and SHW System Cost Scalers

Table 25 shows the material and labor adjustment factors used to determine the costs.

Table 25. Materials and Labor Adjustment Factors by Climate Zone

	Materials	Labor
CZ 01	0.963	0.994
CZ 02	0.963	1.387
CZ 03	1.001	1.291
CZ 04	0.998	1.298
CZ 05	0.964	0.997
CZ 06	0.960	0.997
CZ 07	0.999	0.985
CZ 08	0.998	0.996
CZ 09	0.964	0.996
CZ 10	0.998	0.996
CZ 11	1.002	0.990
CZ 12	1.000	1.000

CZ 13	1.000	0.990
CZ 14	0.964	0.980
CZ 15	0.963	0.996
CZ 16	0.967	0.990

Table 26 shows the contractor markup values used to determine the costs.

Table 26. Contractor Markup Values

	Contractor 1	Contractor 2
General Conditions and Overhead	15%	20%
Design and Engineering	5%	10%
Permit, testing and inspection	5%	3%
Contractor Profit/Market Factor	10%	10%

8.4 Mixed Fuel Baseline Figures

Table 27. Mixed Fuel Baseline Model – Medium Office

Climate zone	Utility	Annual Electricity Consumption (kWh)	Annual Natural Gas Consumption (therms)	Total kTDV/ft2	Total TDV Compliance kTDV/ft2	Efficiency TDV Compliance kTDV/ft2	GHG Emissions tons/yr	Total TDV Compliance Margin	Proposed Elec Utility Cost	Proposed Gas Utility Cost
CZ01	PG&E	186,894	5,331	130	10	72	63	1	\$67,234	\$10,377
CZ02	PG&E	163,979	3,253	142	12	107	52	2	\$67,798	\$6,493
CZ03	PG&E	176,640	2,672	131	5	83	48	1	\$67,999	\$5,352
CZ04	PG&E	163,768	2,003	125	-2	107	46	1	\$68,366	\$4,093
CZ04-2	CPAU	163,768	2,003	125	-2	107	46	1	\$30,988	\$6,966
CZ05	PG&E	170,544	2,575	113	-8	76	46	1	\$66,040	\$5,156
CZ05-2	SCG	170,544	2,575	113	-8	76	46	1	\$66,040	\$4,242
CZ06	SCE	163,722	1,066	122	-7	76	39	0	\$76,817	\$1,980
CZ07	SDG&E	169,611	747	114	-9	76	38	0	\$120,127	\$1,150
CZ08	SCE	191,703	941	130	-2	76	41	1	\$83,752	\$1,763
CZ09	SCE	169,514	1,119	135	0	76	41	1	\$82,274	\$2,046
CZ10	SDG&E	185,682	1,445	141	10	76	45	2	\$134,646	\$2,113
CZ10-2	SCE	185,682	1,445	141	10	76	45	2	\$86,338	\$2,474
CZ11	PG&E	209,343	3,309	166	40	136	59	2	\$81,001	\$6,669
CZ12	PG&E	178,461	2,864	145	19	118	53	2	\$72,381	\$5,784
CZ12-2	SMUD	178,461	2,864	145	19	118	53	2	\$26,576	\$5,784
CZ13	PG&E	211,193	2,377	165	37	139	55	2	\$81,491	\$4,852
CZ14	SDG&E	156,689	3,058	147	13	139	52	3	\$128,390	\$4,337
CZ14-2	SCE	156,689	3,058	147	13	139	52	3	\$83,690	\$4,756
CZ15	SCE	209,720	662	161	32	139	47	2	\$101,041	\$1,311
CZ16	PG&E	177,562	5,799	127	9	94	67	4	\$68,281	\$11,409

Table 28. All-electric Baseline Model – Medium Retail

Climate zone	Utility	Annual Electricity Consumption (kWh)	Annual Natural Gas Consumption (therms)	Total kTDV/ft2	Total TDV Compliance kTDV/ft2	Efficiency TDV Compliance kTDV/ft2	GHG Emissions tons/yr	Total TDV Compliance Margin	Proposed Elec Utility Cost	Proposed Gas Utility Cost
CZ01	PG&E	138,367	0	192	110	162	28	-8	\$43,917	\$0
CZ02	PG&E	131,521	0	211	125	198	28	-15	\$50,499	\$0
CZ03	PG&E	112,237	0	176	91	156	25	-1	\$36,206	\$0
CZ04	PG&E	122,256	0	197	111	193	27	-5	\$47,522	\$0
CZ04-2	CPAU	122,256	0	197	111	193	27	-5	\$22,961	\$0
CZ05	PG&E	108,753	0	159	76	146	24	-8	\$35,179	\$0
CZ05-2	SCG	108,753	0	159	76	146	24	-8	\$35,179	\$0
CZ06	SCE	111,442	0	175	89	146	24	-8	\$42,572	\$0
CZ07	SDG&E	109,079	0	172	87	146	23	0	\$71,108	\$0
CZ08	SCE	129,105	0	196	107	146	26	-10	\$47,404	\$0
CZ09	SCE	123,673	0	193	105	146	26	-3	\$46,830	\$0
CZ10	SDG&E	114,235	0	174	87	146	25	4	\$77,903	\$0
CZ10-2	SCE	114,235	0	174	87	146	25	4	\$45,763	\$0
CZ11	PG&E	144,411	0	229	144	218	30	-6	\$54,592	\$0
CZ12	PG&E	141,639	0	221	136	211	30	-4	\$53,798	\$0
CZ12-2	SMUD	141,639	0	221	136	211	30	-4	\$21,079	\$0
CZ13	PG&E	153,371	0	244	158	236	32	-15	\$56,701	\$0
CZ14	SDG&E	145,499	0	223	135	236	31	-8	\$86,177	\$0
CZ14-2	SCE	145,499	0	223	135	236	31	-8	\$52,840	\$0
CZ15	SCE	146,092	0	244	158	236	29	-24	\$56,750	\$0
CZ16	PG&E	157,944	0	224	144	214	34	-31	\$57,190	\$0

Table 29. Mixed Fuel Baseline Model – Quick-Service Restaurant

Climate zone	Utility	Annual Electricity Consumption (kWh)	Annual Natural Gas Consumption (therms)	Total kTDV/ft2	Total TDV Compliance kTDV/ft2	Efficiency TDV Compliance kTDV/ft2	GHG Emissions tons/yr	Total TDV Compliance Margin	Proposed Elec Utility Cost	Proposed Gas Utility Cost
CZ01	PG&E	63,187	12,237	1,974	820	820	80	5	\$20,126	\$23,401
CZ02	PG&E	66,343	11,170	1,989	839	839	74	20	\$21,332	\$21,422
CZ03	PG&E	67,877	10,605	1,922	769	769	71	1	\$21,657	\$20,336
CZ04	PG&E	77,615	10,277	2,062	910	910	71	-4	\$24,931	\$19,725
CZ04-2	CPAU	77,615	10,277	2,062	910	910	71	-4	\$15,041	\$30,442
CZ05	PG&E	69,442	10,655	1,898	744	744	71	-2	\$22,105	\$20,416
CZ05-2	SCG	69,442	10,655	1,898	744	744	71	-2	\$22,105	\$14,924
CZ06	SCE	78,813	9,600	1,934	778	744	67	-1	\$19,698	\$13,599
CZ07	SDG&E	76,653	9,425	1,898	739	744	66	18	\$26,903	\$13,116
CZ08	SCE	77,418	9,554	1,948	792	744	66	28	\$20,356	\$13,542
CZ09	SCE	77,625	9,687	1,993	837	744	67	7	\$20,405	\$13,709
CZ10	SDG&E	81,897	9,907	2,032	877	744	69	26	\$31,166	\$13,782
CZ10-2	SCE	81,897	9,907	2,032	877	744	69	26	\$21,407	\$13,986
CZ11	PG&E	85,725	10,748	2,259	1,109	1,109	75	-12	\$27,885	\$20,664
CZ12	PG&E	74,131	10,726	2,080	928	928	72	2	\$24,000	\$20,605
CZ12-2	SMUD	74,131	10,726	2,080	928	928	72	2	\$11,272	\$20,605
CZ13	PG&E	88,060	10,441	2,240	1,089	1,089	73	-2	\$28,620	\$20,070
CZ14	SDG&E	87,498	10,655	2,251	1,097	1,089	74	-31	\$30,692	\$14,728
CZ14-2	SCE	87,498	10,655	2,251	1,097	1,089	74	-31	\$22,471	\$14,925
CZ15	SCE	118,353	9,194	2,444	1,289	1,089	71	-13	\$28,746	\$13,090
CZ16	PG&E	75,373	12,242	2,143	983	983	82	2	\$24,194	\$23,494

Table 30. Mixed Fuel Baseline Model – Small Hotel

Climate zone	Utility	Annual Electricity Consumption (kWh)	Annual Natural Gas Consumption (therms)	Total kTDV/ft2	Total TDV Compliance kTDV/ft2	Efficiency TDV Compliance kTDV/ft2	GHG Emissions tons/yr	Total TDV Compliance Margin	Proposed Elec Utility Cost	Proposed Gas Utility Cost
CZ01	PG&E	230,187	16,824	299	161	173	137	7	\$72,520	\$32,208
CZ02	PG&E	243,164	13,161	287	152	169	117	5	\$77,188	\$25,351
CZ03	PG&E	232,511	12,725	272	136	151	113	6	\$73,496	\$24,461
CZ04	PG&E	251,386	11,608	280	146	165	109	5	\$80,034	\$22,342
CZ04-2	CPAU	251,386	11,608	280	146	165	109	5	\$48,175	\$34,218
CZ05	PG&E	232,585	12,375	264	127	143	111	6	\$73,479	\$23,746
CZ05-2	SCG	232,585	12,375	264	127	143	111	6	\$73,479	\$17,084
CZ06	SCE	251,627	10,100	260	124	143	100	4	\$53,976	\$14,227
CZ07	SDG&E	250,625	9,977	257	120	143	100	3	\$77,312	\$13,878
CZ08	SCE	271,204	9,874	269	136	143	101	3	\$60,488	\$13,943
CZ09	SCE	265,607	10,246	273	140	143	103	4	\$60,896	\$14,411
CZ10	SDG&E	276,218	9,903	276	142	143	102	3	\$91,917	\$13,642
CZ10-2	SCE	276,218	9,903	276	142	143	102	3	\$63,534	\$13,980
CZ11	PG&E	285,482	12,457	315	179	197	118	4	\$82,170	\$24,172
CZ12	PG&E	263,561	11,890	293	158	176	112	2	\$76,104	\$23,029
CZ12-2	SMUD	263,561	11,890	293	158	176	112	2	\$34,853	\$23,029
CZ13	PG&E	293,124	11,309	310	175	193	113	1	\$84,632	\$21,924
CZ14	SDG&E	276,292	12,071	298	166	193	115	2	\$89,492	\$16,232
CZ14-2	SCE	276,292	12,071	298	166	193	115	2	\$63,611	\$16,703
CZ15	SCE	349,319	7,895	309	174	193	98	-4	\$78,507	\$11,458
CZ16	PG&E	228,611	17,363	310	170	195	142	9	\$72,664	\$33,471

8.5 GHG Savings Summary

This section shows the percent GHG savings for each package. GHG multipliers in CBECC software have utility emissions multipliers assigned only to each of the California’s sixteen climate zones, does not vary by utility within each zone. Individual utility assumptions may vary widely. In the Medium Office, the GHG emissions increases in all-electric package because the proposed all-electric system is electric resistance VAV system instead of a more efficient heat pump boiler system.

Figure 19. Percentage GHG Savings – Medium Office

CZ	Mixed Fuel	All-Electric		
	EE	Code Min	EE	EE + LF
cz01	0%	3%	4%	12%
cz02	1%	0%	1%	8%
cz03	1%	0%	1%	8%
cz04	2%	-1%	1%	7%
cz04-2	2%	-1%	1%	7%
cz05	1%	0%	2%	9%
cz05-2	1%	0%	2%	9%
cz06	2%	0%	2%	8%
cz07	3%	0%	3%	8%
cz08	3%	0%	2%	8%
cz09	2%	-1%	2%	7%
cz10	2%	-2%	0%	6%
cz11	1%	-3%	-1%	5%
cz12	1%	-2%	-1%	5%
cz13	2%	-3%	-1%	5%
cz14	2%	-4%	-2%	5%
cz15	3%	-1%	2%	7%
cz16	1%	1%	2%	7%

Figure 20. Percentage GHG Savings – Medium Retail

CZ	Utility	Mixed Fuel		All-Electric
		Code Min	EE	EE
cz01	PG&E	-4%	-2%	9%
cz02	PG&E	-21%	-13%	10%
cz03	PG&E	-18%	-8%	11%
cz04	PG&E	-14%	-5%	10%
cz05	PG&E	-15%	-5%	12%
cz06	SCE	-7%	4%	13%
cz07	SDG&E	-5%	7%	14%
cz08	SCE	-7%	4%	12%
cz09	SCE	-8%	3%	13%
cz10	SDG&E	-12%	-9%	3%
cz11	PG&E	-23%	-21%	2%

cz12	PG&E	-19%	-11%	9%
cz13	PG&E	-17%	-8%	10%
cz14	SDG&E	-15%	-5%	10%
cz15	SCE	-3%	0%	3%
cz16	PG&E	-34%	-33%	2%

Figure 21. Percentage GHG Savings – Quick Service Restaurant

CZ	Utility	Mixed Fuel	All-electric "HS" (HVAC+SHW)				All-electric	
		EE	Code Min	EE	EE + LF	EE + PV	Code Min	EE
cz01	PG&E	10%	21%	26%	28%	27%	47%	52%
cz02	PG&E	7%	16%	19%	21%	21%	45%	49%
cz03	PG&E	8%	14%	20%	22%	22%	45%	51%
cz04	PG&E	7%	12%	17%	19%	19%	43%	49%
cz05	PG&E	8%	14%	20%	22%	22%	45%	51%
cz06	SCE	7%	9%	15%	16%	17%	43%	48%
cz07	SDG&E	6%	8%	14%	15%	16%	43%	48%
cz08	SCE	4%	9%	12%	13%	14%	43%	46%
cz09	SCE	5%	9%	12%	13%	15%	43%	46%
cz10	SDG&E	5%	10%	13%	14%	15%	42%	46%
cz11	PG&E	6%	13%	17%	18%	18%	43%	46%
cz12	PG&E	6%	14%	17%	18%	19%	44%	48%
cz13	PG&E	6%	12%	15%	16%	17%	43%	46%
cz14	SDG&E	6%	13%	16%	17%	18%	42%	46%
cz15	SCE	4%	7%	9%	11%	12%	40%	42%
cz16	PG&E	8%	18%	23%	24%	24%	44%	49%

Figure 22. Percentage GHG Savings – Small Hotel

CZ	Utility	Mixed Fuel	All-Electric			All-Electric
		EE	Code Min	EE	EE + PV	Code Min (PTHP)
cz01	PG&E	13%	47%	48%	50%	47%
cz02	PG&E	11%	42%	44%	47%	43%
cz03	PG&E	12%	43%	45%	48%	43%
cz04	PG&E	11%	41%	44%	46%	42%
cz05	PG&E	11%	43%	45%	48%	43%
cz06	SCE	10%	41%	43%	46%	41%
cz07	SDG&E	10%	41%	43%	47%	41%

cz08	SCE	10%	40%	42%	46%	40%
cz09	SCE	10%	40%	42%	46%	40%
cz10	SDG&E	11%	37%	39%	43%	37%
cz11	PG&E	12%	39%	41%	43%	39%
cz12	PG&E	12%	38%	41%	43%	39%
cz13	PG&E	11%	37%	39%	42%	37%
cz14	SDG&E	12%	38%	40%	44%	38%
cz15	SCE	10%	33%	35%	40%	33%
cz16	PG&E	13%	43%	46%	48%	45%

Get In Touch

The adoption of reach codes can differentiate jurisdictions as efficiency leaders and help accelerate the adoption of new equipment, technologies, code compliance, and energy savings strategies.

As part of the Statewide Codes & Standards Program, the Reach Codes Subprogram is a resource available to any local jurisdiction located throughout the state of California.

Our experts develop robust toolkits as well as provide specific technical assistance to local jurisdictions (cities and counties) considering adopting energy reach codes. These include cost-effectiveness research and analysis, model ordinance language and other code development and implementation tools, and specific technical assistance throughout the code adoption process.

If you are interested in finding out more about local energy reach codes, the Reach Code Team stands ready to assist jurisdictions at any stage of a reach code project.



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