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The Affordable Way for California

REPORT

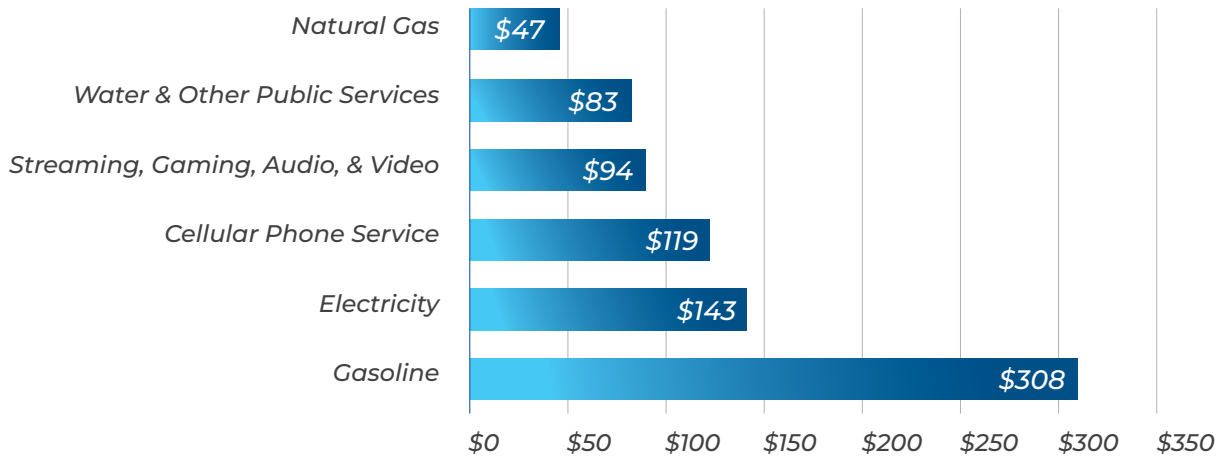
While California is the world's fifth largest economy with sustained innovation across industries, Californians face a persistent affordability crisis.[1] The crisis is driven by inflationary pressures, housing supply constraints, labor market uncertainty, and rising energy costs. UCLA reports that 1 in 5 California adults struggle to pay mortgage or rent.[2] The State Legislature's nonpartisan analyst reports that California home prices far exceed the rest of the country.[3] The Public Policy Institute of California found that while 62% of California adults believe climate change affects the state, more than 50% are unwilling to pay more for energy.[4] Californians are concerned about costs, which suggests that a rigorous examination of energy costs and value delivered is in the public interest.

Examining trends in energy costs and assessing factors driving affordability trends sheds light on the value and benefits that different energy sources deliver to Californians. *The Affordable Way for California* report compares the cost of natural gas to other essential household services. The work highlights six major themes:

1. Natural Gas is California's Most Affordable Monthly Household Bill

Natural gas is among the lowest-cost services paid for by California households each month. According to the Bureau of Labor Statistics, Californians' average monthly natural gas bill was approximately $47. Every month, on average, Californians spend about fifty percent more on water and other public services than they do on natural gas,[5] and they spend nearly twice as much on streaming, gaming, audio, and video, as shown in Figure i.[6] In addition, Californians spend more than double their monthly gas bill on mobile phone service, three times as much on electricity, and about six times as much on gasoline.[7]

Figure i. Select Average Monthly Expenditures per California Consumer Unit, 2022-2023

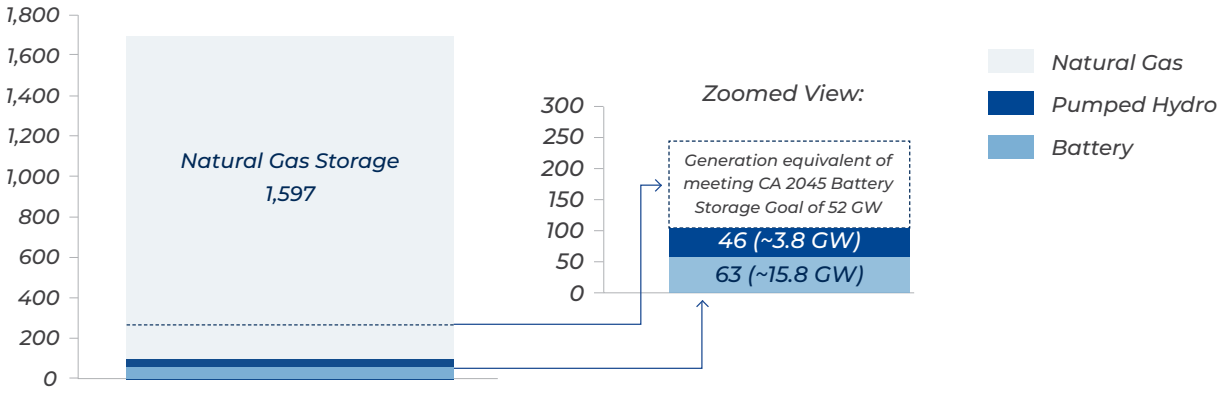


From a national perspective, California natural gas bills are lower than in thirty other states in the nation.[8]

2. Utilizing Existing Natural Gas Infrastructure Keeps Costs Low

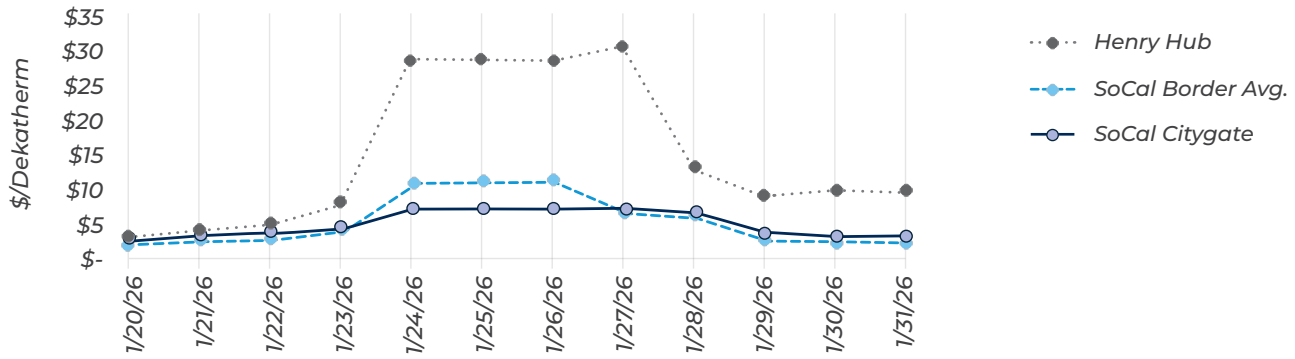
Natural gas is affordably transported, stored, and delivered primarily through underground pipelines, reducing exposure to severe weather events, high winds, extreme temperatures, and wildfires. Pipelines can transport multiple forms of gases; they currently deliver renewable natural gas (RNG) and have the potential to deliver other zero- and lower-carbon fuels, like hydrogen blends and synthetic gas. Looking ahead, California's natural gas distribution and transmission lines are not expected to require significant expansion to meet future demand; infrastructure investments will be driven by safety, reliability, and/or environmental needs. Overall, the operational flexibility of integrated natural gas system resources provides notable cost advantages, and, when compared to battery or pumped hydro storage, storing natural gas underground has a higher roundtrip efficiency.[9] While electric energy storage is expected to scale and evolve, natural gas will remain essential to maintaining energy system integrity affordably. California's underground storage facilities have the capacity to store 323 billion cubic feet (Bcf) of natural gas, equivalent to the electricity needed to power every home (~15.3 million) in California for more than a year.[10] Figure ii illustrates the relative scale of California's natural gas storage system.[11]

Figure ii. Estimated Daily California Storage Potential Energy Output by Resource, 2026, GWh/day



When Winter Storm Fern brought severe cold weather to much of the country in January 2026, diverting natural gas supplies to colder regions and reducing natural gas deliveries into Southern California, SoCalGas met customer demand by withdrawing more than 8 Bcf of natural gas from its storage fields, roughly enough energy to power about 350,000 California homes for a year.[12] Storage became the main source of gas supply for customers, supplying nearly 60 percent of system demand at the storm's peak. Natural gas storage helped Southern Californians avoid over $120 million in energy costs during the storm.[13] Figure iii shows the difference between the natural gas daily spot price at the Henry Hub, SoCal Border, and SoCal Citygate during the storm.[14] SoCalGas's storage assets contributed to Southern California gas prices remaining below the national benchmark, with Citygate being priced at a discount to Henry Hub.

Figure iii. Natural Gas Daily Spot Price during Winter Storm Fern ($/Dekatherm)



3. Natural Gas Enables Integration of Renewable Electricity and Decreases Reliance on Electric Imports

Cost-effective, reliable power generation in California depends on natural gas. Renewable solar and wind are outstanding energy sources, but they are seasonal and intermittent, whereas stored natural gas can be dispatched whenever needed. In 2024, natural gas supplied 40 percent of total in-state electric generation, even as in-state renewable generation grew to 32 percent.[15]

The natural gas system helps manage costs by meeting electricity demands in the morning and evening year-round, storing energy over extended periods of time, and addressing winter electric load as thermal end uses are electrified, providing a reliable backstop when solar and wind output is limited.

Natural gas storage cost-effectively complements battery storage by meeting demand when battery resources are depleted. As more batteries connect to the California electric grid, natural gas generation will continue to be a flexible resource, integrating new technologies, as it has for decades.

In addition, natural gas infrastructure has played a key role in decarbonizing California's electric sector by enabling the transition away from coal. Natural gas also supports affordable integration of renewables while potentially avoiding or deferring the need for costly new electric infrastructure. As neighboring states reduce electricity exports, in-state natural gas generation has filled the gap. With electricity demand expected to increase from data centers and electrification of transportation and buildings, natural gas remains a reliable, affordable, and resilient resource to help support California's grid.

Figure iv. CAISO Supply Curve, 2018 vs. 2024, Solar and Natural Gas Generation

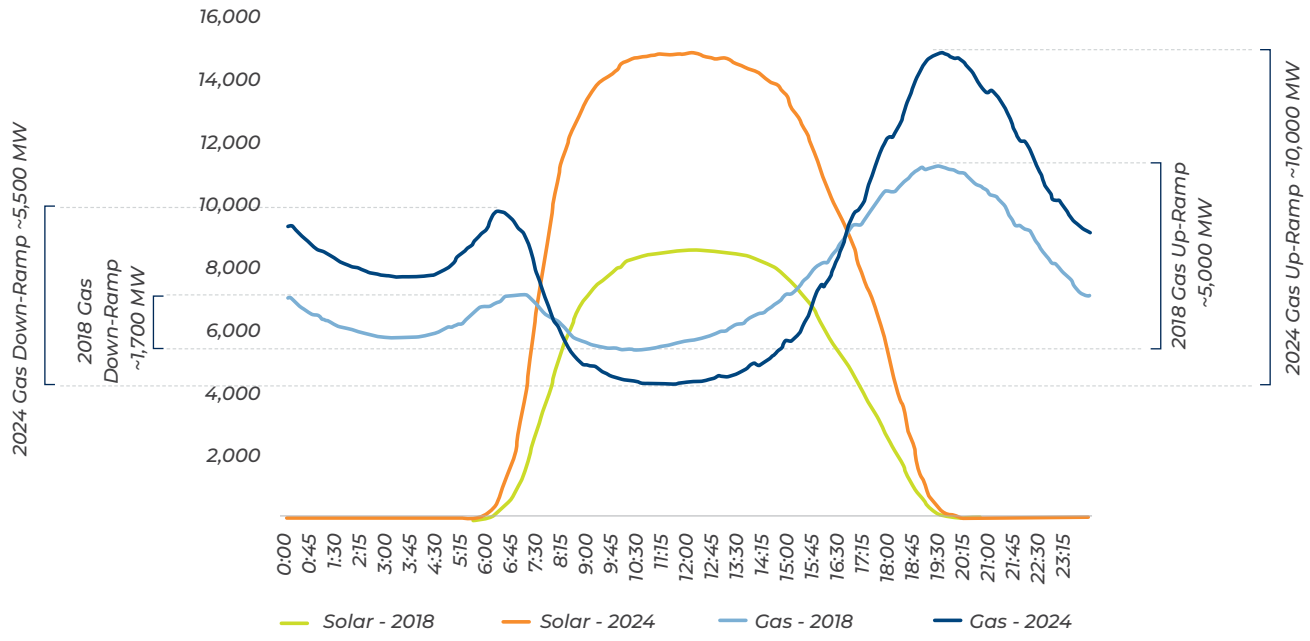
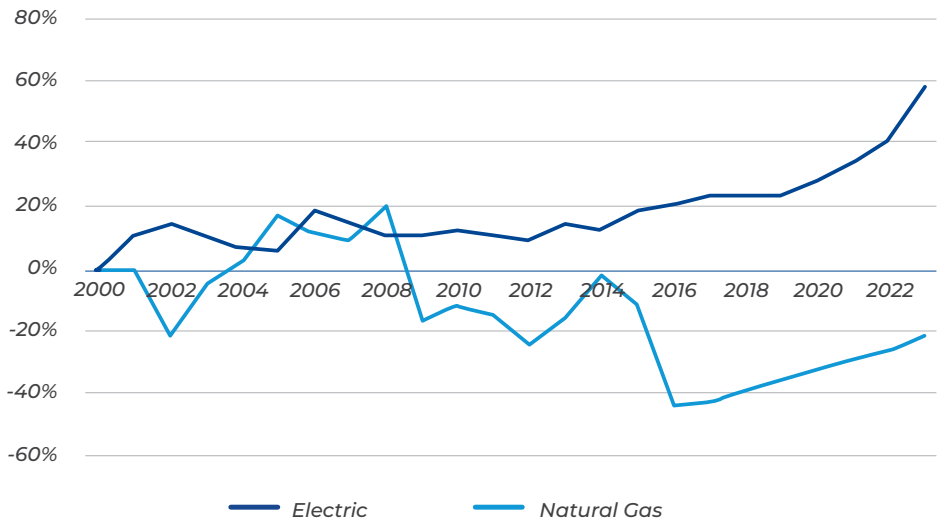


Figure iv above shows the synergistic relationship between solar and natural gas for power generation over the past several years.[16] Between 2018 and 2024, average solar generation at noon increased by about 6,500 MW but the average natural gas generation only decreased by about 1,500 MW; each MW of renewable generation does not result in a one-for-one decrease in natural gas generation even during the most solar productive times. It also demonstrates how natural gas generation ramps up to meet energy demand when there is no or limited solar generation in the morning and evening and ramps down when solar generation is ample. Natural gas generation has increased during the morning and evening peaks, while midday generation has decreased. Between 2018 and 2024, the natural gas ramp from midday to evening nearly doubled from about 5,000 MW to about 10,000 MW.

4. Keeping a Balanced Energy Mix, Including Natural Gas, Helps to Moderate Rising Energy Costs Driven by Long-Term Climate Policies and Persistent Wildfire Risks

Electricity and natural gas are complementary components of California's energy ecosystem, each adapting to different policy shifts and external forces. In recent decades, electricity has faced additional cost pressures, resulting in higher rates. Adjusting for inflation, Figure v below shows average California residential electricity rates have increased approximately 60 percent since 2000, while average SoCalGas residential natural gas rates declined by approximately 25 percent over the same 25 years.[17] Historically, electricity bills in California were below the national average, due to more temperate weather. In the late 2010s, this trend reversed, with average electric bills rising slightly above the U.S. average by 2023.[18]

Figure v. Historical Inflation-Adjusted Percentage Change, 2000-2023 – CA Electric vs. SoCalGas Residential Rates



Lower natural gas rates mean lower natural gas bills. As depicted in Figure vi below, natural gas accounts for more than 60 percent of energy consumed by an average California household, yet represents less than 30 percent of the total home energy bill (specifically electricity and gas).[19, 20]

Figure vi. Southern California Household Average Share of Residential Energy Use and Bill

Electricity cost pressures are driven primarily by external forces, such as climate-driven wildfire risks and state policies to advance decarbonization. These factors are largely beyond the direct control of electric utilities and include rising transmission and distribution costs, legacy effects of early Net Energy Metering (NEM) rooftop solar incentive designs, ambitious climate and energy mandates under Assembly Bill (AB) 32 and AB 1279 (enacted in 2006 and 2022 respectively), and growing investments in wildfire system hardening and mitigation.[21]

Some policies have had positive impacts on affordability, such as energy efficiency. Because California has led in energy efficiency programs since the 1970s, California now ranks third lowest in energy consumption per GDP in the nation.[22] California continues to demonstrate strong energy efficiency, keeping electricity and natural gas bills lower than they would be otherwise.

5. Natural Gas Can Help Address the "Energy Burden" Borne by Lower-Income Households

Lower-income California households devote a larger share of their income to energy costs, and the problem has exacerbated post-COVID-19.[23] Even as retail energy rates rose above national averages over the past decade, low-income household incomes did not keep pace, resulting in higher "energy burden," as the California Public Utilities Commission (CPUC) terms the percentage of income spent on energy.[24] Policies such as NEM shift costs onto non-solar customers, who tend to be moderate- to low-income customers,[25] while electrification adoption is generally concentrated among higher-income individuals.

Created in response to affordability concerns, the California Alternate Rates for Energy (CARE) program provides vital relief to vulnerable ratepayers by providing utility bill discounts of 20 percent (natural gas) and 30 to 35 percent (electric) for qualifying low-income households. Approximately 30 percent of investor-owned utility residential customers are enrolled in CARE, including approximately 1.76 million customers at SoCalGas.[26] Table a shows average residential CARE and non-CARE monthly bills for each of the largest electric and natural gas investor-owned utilities (IOUs) from the CPUC Rate Change Advisory.[27]

Table a. California Large IOU Average Monthly Bills (2025)

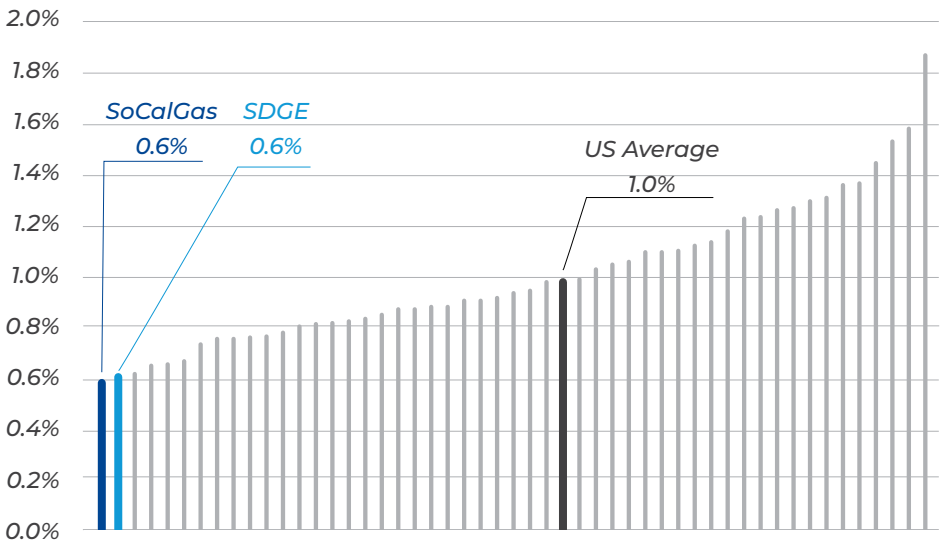
Utility	*Average Electric Bill*		*Average Natural Gas Bill*	
	Non-CARE Customers	*CARE Customers*	*Non-CARE Customers*	*CARE Customers*
PG&E	*$220*	*$135*	*$89*	*$59*
SCE (electric only)	*$193*	*$122*		
SDG&E	*$176*	*$103*	*$65*	*$43*
SoCalGas (natural gas only)			*$74*	*$42*

Despite this assistance, millions of Californians fall into an affordability gap. Low-middle-income households earn more than the income-qualified assistance thresholds but lack sufficient resources to pay for essential services.[28] If higher-income customers depart the natural gas system, the remaining fixed costs will be increasingly concentrated on low and low-middle income ratepayers who lack the financial resources to electrify.[29]

Low bills lessen economic burdens in challenging times. SoCalGas's residential bills are among the lowest compared to its U.S. peer utilities and below the average gas bill paid by California residents. Additionally, SoCalGas comes in at the top of the peer group for wallet share, or the percentage of the state's median income used to pay for an average natural gas bill. The wallet share numbers in Figure vii below show that average SoCalGas residential customers pay about 0.6 percent of household income for natural gas service – the lowest among its U.S. peers – while peer utilities' bills represent up to nearly 2 percent of customer income.[30, 31]

California policymakers' central challenge is to protect lower-income Californians from being burdened by rising energy costs amid structural changes in how energy is delivered and consumed.

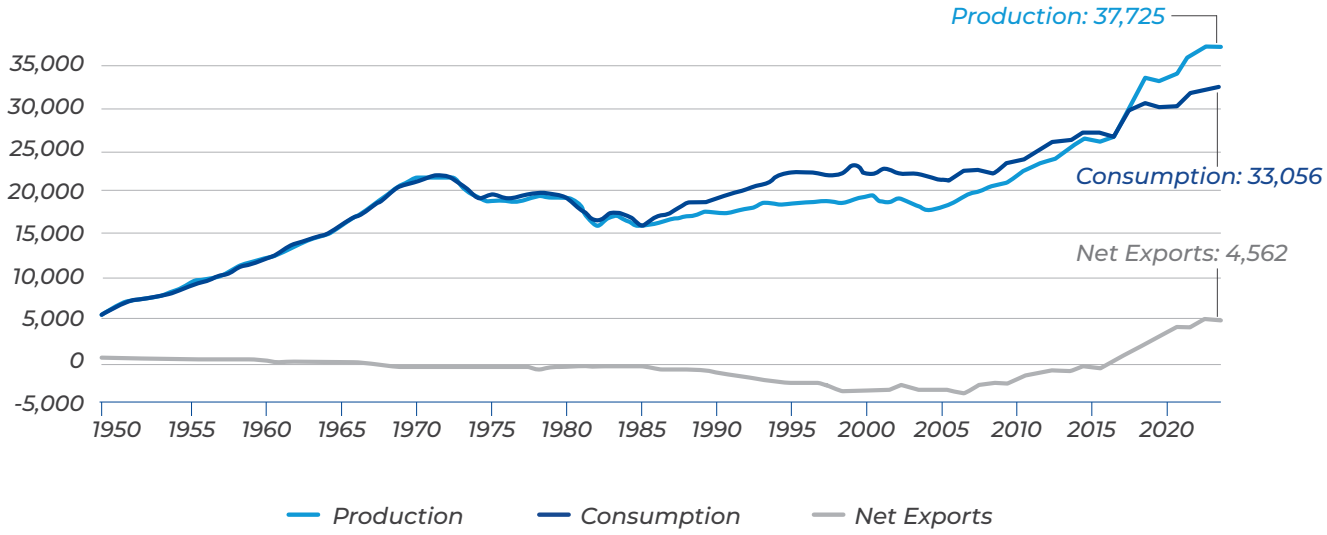
Figure vii. Residential Wallet Share – Natural Gas Bill as Percent of Median Income, 2024



6. As Advances in Technology Have Expanded Affordable Supplies from Other States, California Increasingly Relies on In-State Storage to Keep Natural Gas Costs Low and Stable

In the early 21st century, technological advancements transformed natural gas production. Expanded supply complements existing infrastructure to stabilize costs. Rising domestic shale gas production propelled the U.S. in 2009 to become the world's leading natural gas producer, reshaping the national energy landscape and significantly increasing domestic supply, immediately stabilizing commodity prices. Figure viii shows U.S. natural gas production was stagnant between 1970 and 2005, while production has almost doubled in the last 20 years.[32]

Figure viii. U.S. Natural Gas Production, Consumption, and Exports, 1950-2024 (Bcf)



California natural gas production, on the other hand, has decreased by about 80 percent from its peak in the late 1960s. During that same period, natural gas underground storage withdrawals have increased by about three times on average; the gas system has become more reliant on underground storage.

California has most of the underground storage capacity in the western United States; California's underground storage represents about 70 percent of the working capacity west of the Rocky Mountains.[33] Figure ix to the right depicts the locations of underground storage and size by storage field.

Figure x below shows annual California natural gas production and underground storage withdrawals from the past 50 years.[34]

Figure ix. Natural gas underground storage in the Western U.S.

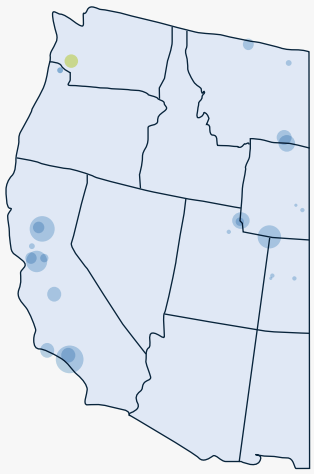
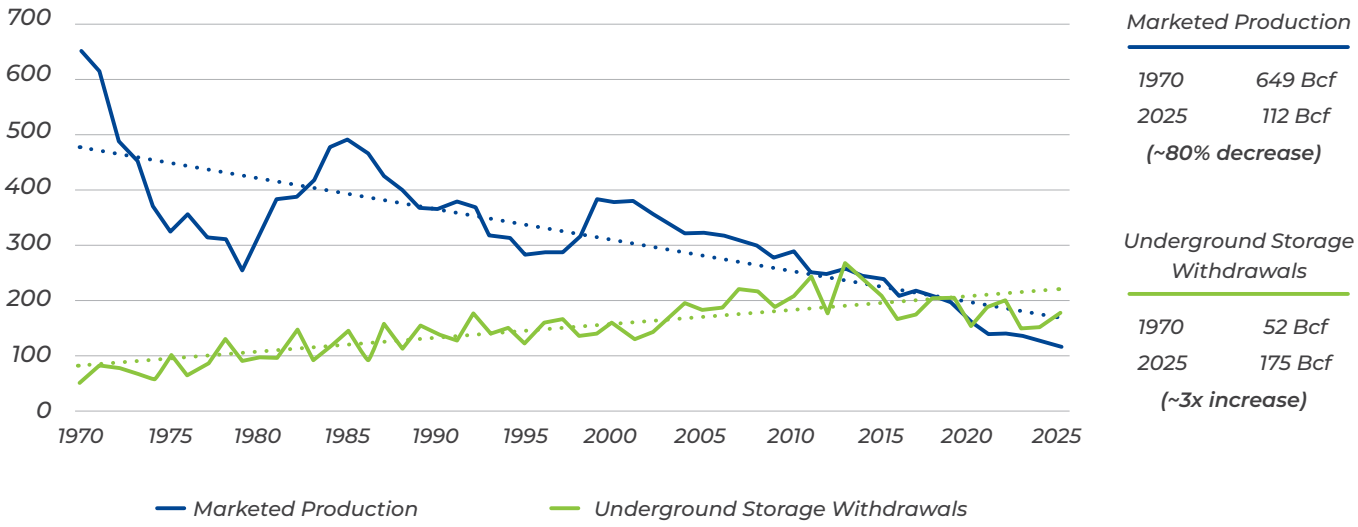


Figure x. California Natural Gas Production and Storage Withdrawals, 1970-2025 (Bcf)



Conclusion

California's affordability challenges make it essential to understand the value energy sources provide. The Affordable Way for California analysis shows that natural gas remains one of the state's most affordable and reliable resources, supported by extensive pipeline and storage infrastructure that keeps costs stable and provides critical backup for renewables. While electricity costs have risen due to policy, infrastructure, and wildfire-related pressures, natural gas rates, when adjusted for inflation, have declined over time, helping reduce the energy burden on lower-income households. With U.S. natural gas supply strengthened by technological advances and California increasingly reliant on storage to meet demand, natural gas continues to play a vital role in maintaining grid reliability and protecting Californians from rising energy bills.

End Notes

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2 UCLA Newsroom, "Millions of Californians Struggle with Costs of Housing, Health Care, Latest California Health Interview Survey Shows," UCLA, October 9, 2025, https://newsroom.ucla.edu/releases/struggles-housing-health-costs-ucla-california-health-interview-survey.

3 California Legislative Analyst's Office, "California Housing Affordability Tracker (4th Quarter 2025)," January 22, 2026, https://lao.ca.gov/LAOEconTax/Article/Detail/793.

4 Mark Baldassare, et al., "Californians and the Energy Transition," Public Policy Institute of California (PPIC), August 2025, https://www.ppic.org/publication/californians-and-the-energy-transition/.

5 Bureau of Labor Statistics (BLS), "Average annual expenditures and characteristics of all consumer units, Consumer Expenditure Surveys, 2022-2023," U.S. Department of Labor, accessed February 3, 2026, https://www.bls.gov/cex/tables.htm. 2022-2023 remains the latest data available at the state level. Differing somewhat from other metrics such as households, BLS defines consumer units as consisting of families, single persons living alone or sharing a household with others but financially independent, or two or more persons living together who share major expenses. "Consumer Expenditures Survey – Glossary," BLS, accessed April 1, 2026, https://www.bls.gov/cex/csxgloss.htm.

6 *Id.* The expenditure total for Streaming, Gaming, Video & Audio corresponds to the BLS Consumer Expenditure Surveys category for Audio and Visual Equipment and Services, which includes video and audio streaming and on-demand services, cable and satellite television, and audio, video, and musical video equipment and services.

7 These figures are drawn from BLS data from 2022-2023 to provide a like-for-like comparison and do not reflect the crisis in the oil markets stemming from global unrest in the spring of 2026. About 20% of global oil supply flows through the Strait of Hormuz. During the 1973 OPEC crisis, when 5-7% of global oil supply was impacted, gasoline prices quadrupled and the U.S. economy entered a recession. Since that time the United States created strategic petroleum reserves, dramatically expanded oil production, and developed alternative energy sources. Entering 2026, the oil market was well supplied, and the average annual price of crude oil was at its lowest point since 2020 when adjusted for inflation. While these factors suggest that the economy will be more resilient in 2026 than 1973, geopolitical instabilities and the scale of the oil market impacted make forecasting the situation uncertain. "Short-Term Energy Outlook," U.S. Energy Information Administration (EIA), https://www.eia.gov/outlooks/steo/report/global_oil.php; IEA (2026), Oil Market Report - March 2026, IEA, Paris https://www.iea.org/reports/oil-market-report-march-2026; "Projecting Oil and Gas Prices Toward 2025," Enerdata, March 26, 2026, https://www.enerdata.net/publications/executive-briefing/oil-gas-price-forecast-2026-2050.html.

8 American Gas Association (AGA), Table 9-5: "Average Residential Gas Bills by State, 2005-2023," from "Gas Facts: Prices," https://www.aga.org/research-policy/resource-library/gas-facts-prices/.

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11 Pumped hydro generation assumes maximum of 12 hours of generation per day based on licensed capacities at FERC, "Complete List of Active Licenses," 3,838 MW, accessed April 2, 2026, https://www.ferc.gov/sites/default/files/2026-03/ActiveLicense_3.10.2026.xlsx. Battery storage generation assumes 4 hours per day of discharge based on installed battery capacity from CAISO Key Statistics, 15,810 MW, December 2025, at https://www.caiso.com/documents/key-statistics-dec-2025.pdf. Natural gas storage daily winter withdrawals from 2025 California Gas Report at "2025 California Gas Report Supplement," https://www.socalgas.com/sites/default/files/2025-07/2025-CA-Gas-Report-FINAL.pdf, table 8. NRG Energy conversion calculator used to convert Bcf to GWh, *supra*, note 10. California 2045 State Goal for Battery Storage, accessed April 1, 2026, https://www.energy.ca.gov/data-reports/energy-almanac/california-electricity-data/california-energy-storage-system-survey.

12 Calculations assume 1 Bcf equals 293.1 GWh from NRG's Energy Conversion Calculator, *supra*, note 10. Average Southern California annual electricity usage (6,424 kWh/home) is based on Southern California Edison's average residential electricity consumption from the 2019 California RASS, *supra*, note 10.

13 Analysis is based on daily SoCalGas storage withdrawals as reported on ENVOY and a comparison of Henry Hub and SoCal Citygate prices as reported by *Natural Gas Intelligence* for January 23, 2026, through January 31, 2026. SoCalGas ENVOY is a web-based dashboard that helps businesses manage natural gas supplies, trade pipeline capacity, and optimize gas service selections.

14 Average daily spot market prices at Henry Hub, SoCal Border Average, and SoCal Citygate published by *Natural Gas Intelligence*.

15 California Energy Commission (CEC), "California Electrical Energy Generation: 2001-Current," accessed October 30, 2025, https://www.energy.ca.gov/media/4001.

16 California Independent System Operator (CAISO), "Production and Curtailment Data," https://www.caiso.com/library/production-curtailments-data. Based on annual aggregation of 15-minute increment data.

17 Natural gas rates provided by CEC staff for SoCalGas residential rates (2023$) and electric rates based on 2024 IEPR Demand Forecast statewide rates (2023$). CEC, Baseline Demand Forecast Files: "CEDU 2024 Baseline Forecast – Total State," accessed October 1, 2025, https://efiling.energy.ca.gov/GetDocument.aspx?tn=260931. (All forecast files available at CEC, "California Energy Demand, 2024-2040," n.d., https://www.energy.ca.gov/data-reports/reports/integrated-energy-policy-report-iepr/2024-integrated-energy-policy-report-0). Periodic wholesale price spikes have occurred during this period. The most notable spike occurred during the winter of 2022—23, when natural gas prices surged due to unusually cold weather, supply shortages, and constraints on pipeline and storage capacity. On wholesale natural gas prices this century, see EIA, "Natural Gas Citygate Price in California (Dollars Per Thousand Cubic Feet), Monthly," released September 30, 2025, https://www.eia.gov/dnav/ng/hist/n3050ca3m.htm.

18 Eric McGhee, "A Closer Look at California's Surging Electricity Rates," Public Policy Institute of California (blog), April 1, 2025, https://www.ppic.org/blog/a-closer-look-at-californias-surging-electricity-rates/.

19 Household energy use based on 6,424 kWh for Southern California Edison and 358 therms for SoCalGas from CEC, "2019 California Residential Appliance Saturation Study (RASS)," https://www.energy.ca.gov/sites/default/files/2021-08/CEC-200-2021-005-ES.pdf. Energy conversion factor based on 29.3 kWh per therm from https://www.unitconverters.net/energy/therm-to-kilowatt-hour.htm. Average bills do not include fixed charges.

20 Natural gas residential rate of $1.69 per therm provided by CEC staff for SoCalGas residential rates (2023$), and electric rate of 30.416 cents per kWh based on 2024 IEPR Demand Forecast Southern California Edison residential rate (2023$), https://efiling.energy.ca.gov/GetDocument.aspx?tn=260931. Bills do not include fixed charges. Figure does not include household expenditures on gasoline.

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30 Reflects 2024 (latest available). Peer group includes the American Gas Association's (AGA) 50 largest U.S. gas corporations by number of residential customers.

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33 Calculations based on EIA, "191 Field Level Storage Data (Annual) – 2024," data collected from operators on Form 191 via the "Natural Gas Annual Respondent Query System" (NGARQS), accessed April 1, 2026, https://www.eia.gov/naturalgas/ngqs/#?report=RP7, with the working capacity of the Aliso Canyon Storage Facility reduced from 86.2 Bcf to 68.6 Bcf to reflect the currently approved volume.

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