

Price Spiked: How Oil Refiners Gouge Californians On Their Gasoline And What It Costs

An analysis of recent and past gasoline price spikes in California.



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Executive Summary

At the beginning of February 2015, Tesoro shut down its Martinez refinery in the face of a steelworkers' strike, rather than let it run at less than full capacity during planned maintenance. Just a few weeks later, Exxon's refinery in Torrance had an explosion and fire, hobbling its ability to make gasoline. In the space of that month, California gasoline prices spiked by more than one dollar a gallon, even though crude oil costs remained low and national gasoline prices rose only moderately.

Californians have perennially experienced steep gasoline price spikes since 1999 when California's Attorney General formed a Gasoline Pricing Taskforce that identified market consolidation and limited inventories as causes of prices spikes. Consumer Watchdog's president Jamie Court represented the California Assembly on that taskforce along with leading industry and government representatives.

"Price Spiked: How Oil Refiners Gouge California and What It Costs" analyzes gasoline prices during the last decade and finds the forces identified by the Attorney General's taskforce fifteen years ago have intensified due to the lack of government action. During a gasoline price spike, the persistent gap between what Californians and Americans pay for their gasoline typically grows larger. This analysis shows that California's oil refiners profit greatly from these price spikes and California drivers pay a huge price.

In this analysis, Consumer Watchdog utilized government and private data from sources including the Energy Information Administration, GasBuddy.com, the California Energy Commission, and the California Board of Equalization.

We charted the difference between the average price of gas in California and nationally over the last decade and uncovered the reasons for the gap. The forces causing price increases are consistent with the findings of the Attorney General's task force: California's gasoline market is structured for volatility that benefits the downstream profits of oil refiners. California refineries consistently keep one week less of gasoline inventory than in the rest of the country. A lack of transparency about their refining operations in real time makes it difficult for government to understand the reasons for volatility and react by taking steps to reduce its swings.

Our findings after reviewing ten years of data collected by the federal and state government, include:

- California gasoline prices have averaged 32 cents more per gallon than the national average for gasoline prices over the last decade: \$3.30 in California vs. \$2.98 in the rest of the nation.
- Californians paid \$47 billion extra, or \$13 million dollars per day more, due to the extra 32 cents per gallon charged in the state, over the last ten years.
- While the rest of America averaged 18 days of gasoline supply in refineries and bulk terminals, California refiners only kept 10.7 days of gasoline supply on hand (48% less) – making the system vulnerable to price spikes when refineries experienced problems, as two refineries did recently.
- Refinery consolidation, identified as a source of higher prices in the 1999 California Attorney General Gas Pricing Taskforce report, has worsened with two refiners – Chevron and Tesoro – now controlling 55% of the market. Four refiners control 76% of the market.
- The lack of transparency about refinery outages and real time information about inventories, which lag by three months, makes it difficult for policymakers and regulators to take action in response to events.
- Chevron, the largest refiner in the state, saw steep increases in its profits from downstream operations (refining, marketing and transportation as opposed to drilling and crude oil operations) that mirrored many of the gasoline price spikes. Chevron's profits escalated in the fourth quarter of 2014 even as gasoline prices fell– suggesting a huge windfall for the company from the latest gasoline price spikes.

Consumer Watchdog recommends:

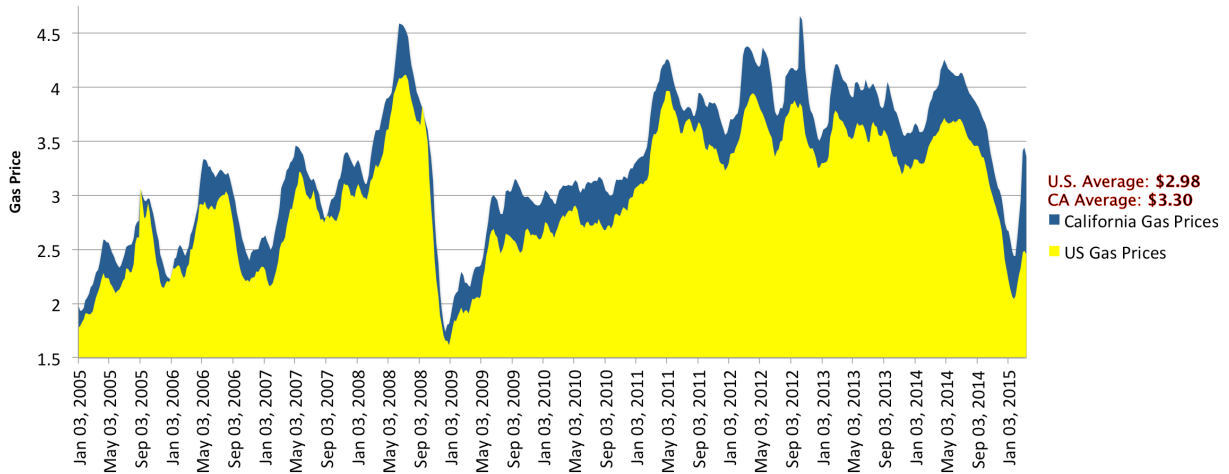
- Transparency and accountability for refiners: California should publish refinery outages and accidents in real time, and ask refiners to publicly disclose maintenance schedules in advance and weekly supply figures in real time.
- The state should require refiners to keep an additional week's worth of supply on hand so that it matches national days of supply.
- The state should accelerate the transition to alternative transportation technologies such as electric vehicles.

Report Analysis

Over the last decade, California gas prices have consistently been higher than the national average. California is an isolated gasoline market where consolidation has left 14 refineries producing a special, environmentally friendly blend of gasoline (CARB gasoline), and gasoline supplies on hand are far lower than the nation’s reserves. This leaves the market vulnerable to price spikes whenever there are refinery outages or accidents. The following graph illustrates the difference over the last decade between California’s average price per gallon of gasoline versus the nation’s average price per gallon using the Energy Information Administration’s data on historical gas prices. The average difference has been 32 cents a gallon.

Over the last ten years Californians have been hit hard at the pump, but the large scale numbers are even more staggering. This 32-cent difference between California and national gas prices per gallon accounts for an extra \$47 billion in consumer spending on gasoline over the last ten years alone. Californians pay over \$13 million dollars a day extra for their gasoline. Keeping gas prices in check is not just about saving consumers money at the pump. Higher gasoline prices ripple through the economy – dragging down economic activity for businesses in most sectors through higher than expected costs and raising consumer prices for goods and services of all kinds.

California vs. Nationwide Gas Prices



Source: http://www.eia.gov/dnav/pet/pet_pri_gnd_dcus_sca_w.htm

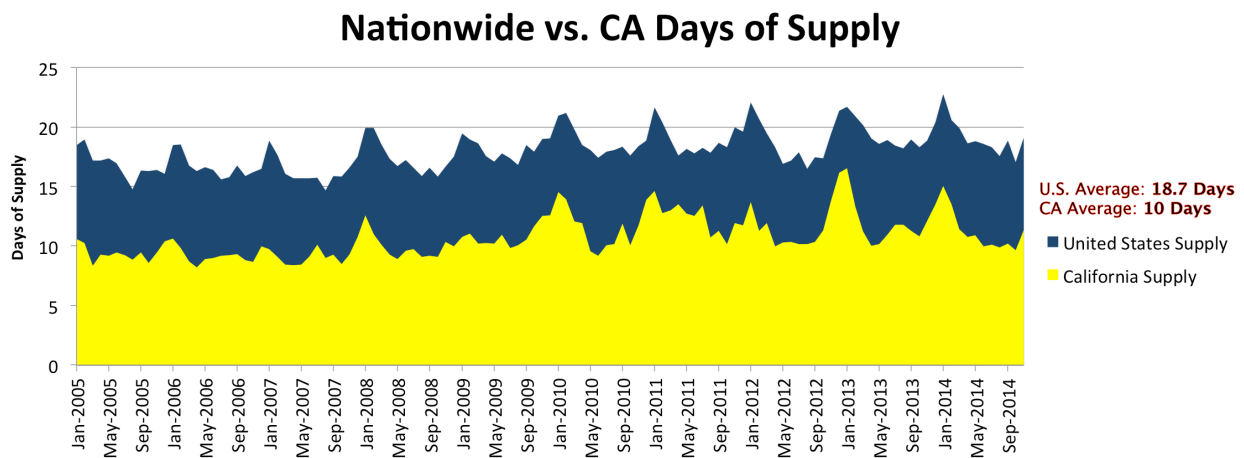
How Much Californians Paid Extra for Gasoline

| | |
|--------|---------------------|
| 2005 | \$3,346,949,554.20 |
| 2006 | \$3,798,092,812.56 |
| 2007 | \$5,171,870,229.57 |
| 2008 | \$4,058,702,090.01 |
| 2009 | \$4,887,722,903.91 |
| 2010 | \$4,609,356,763.97 |
| 2011 | \$4,380,040,128.90 |
| 2012 | \$6,092,013,553.08 |
| 2013 | \$5,522,518,883.78 |
| 2014 | \$5,637,089,519.88 |
| Total: | \$47,504,356,439.86 |

While the rest of America averages 18 days of supply in refineries and bulk terminals, California refiners only kept 10.7 days of gasoline supply on hand (46 percent less than the rest of the nation). Low inventories make the system more vulnerable to price spikes when refineries experience problems, as two California refineries recently did.

The data in the following graph for United States days of supply came from the Energy Information Administration's tracking of national and statewide refinery and bulk terminal gasoline inventories divided by their nationwide consumption data.

We arrived at California's days of supply by using the Energy Information Administration's data on statewide refinery and bulk terminal gasoline inventories divided by the California Board of Equalization's gasoline consumption data for the state.



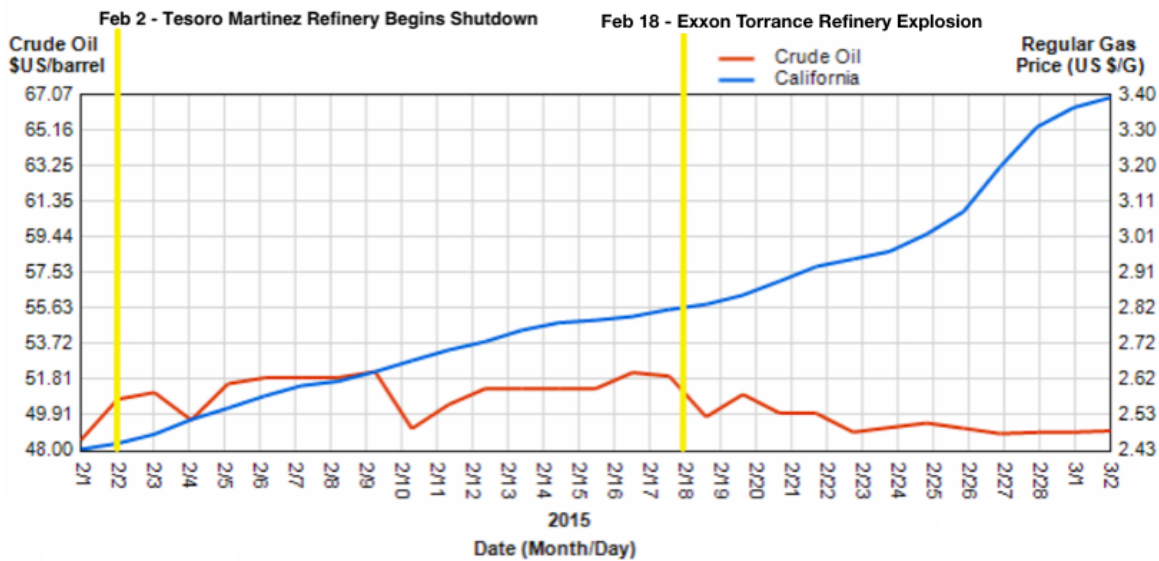
Source:
http://www.eia.gov/dnav/pet/pet_stoc_st_dc_SCA_mbbld_m.htm
http://www.eia.gov/dnav/pet/pet_cons_psup_a_EPM0F_VPP_mbbldpd_m.htm
www.boe.ca.gov/sptaxprog/reports/mvf_10_year_report.pdf

California’s inventories are lower than what we would expect for the third-largest consumer of gasoline in the world. California refineries over the last ten years have produced mainly CARB gasoline, but 12 percent of the gasoline produced has been conventional gasoline for export, according to the California Energy Commission. Using capacity in this manner contributes to lower days of supply. Thus, gasoline prices are particularly sensitive to fluctuations in CARB supply. When days of supply peak, the price of gas drops significantly. The reverse is also true. When supplies thin, prices spike.

At the beginning of February, Tesoro decided to close its Martinez refinery, which was running at lower capacity, as steel workers began a strike. The shutdown came despite a statement to investors by Tesoro’s CEO, Geoff Goff, that, “We can keep running with the staffing levels that we have...for a very long time,” according to the Associated Press.¹

On the heels of the Tesoro shutdown, on February 18, Exxon’s Torrance refinery experienced an explosion and fire, hobbling its ability to make gasoline. The two events together precipitated a sharp spike in gasoline prices. Over the course of a month, gasoline prices rose almost one dollar a gallon. The following graph illustrates this continuing price spike while the price of crude oil used to make gasoline remained constant or dropped over the second half of February. The data comes from GasBuddy.com, an industry price tracker.

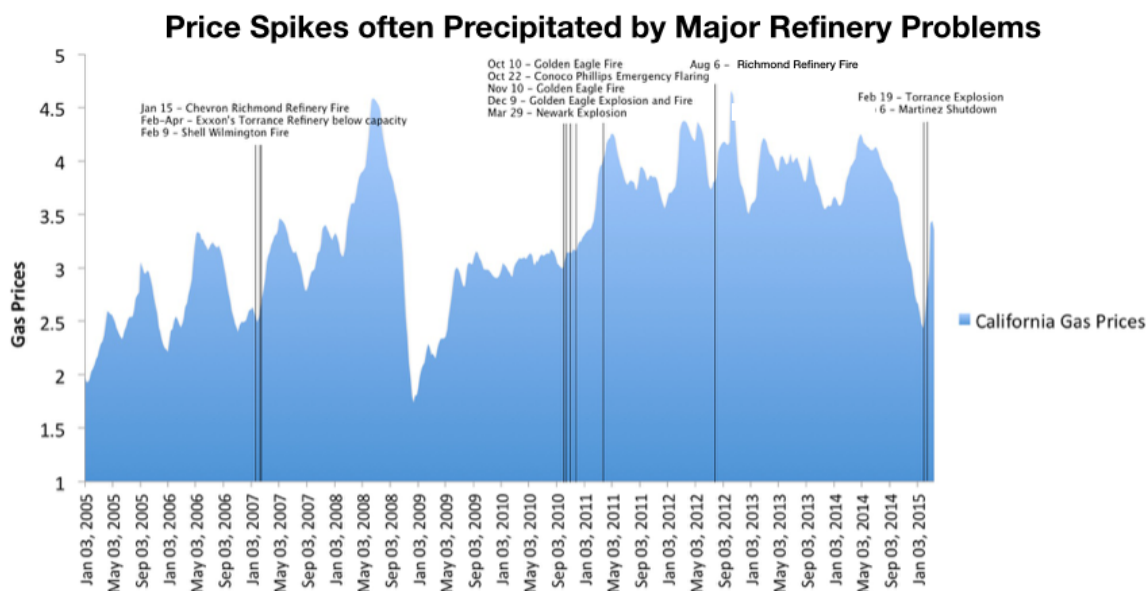
Californians Spent an Extra \$550 Million in February



Calculation based on average February consumption over the last 5 years

¹ Fahey, Jonathan. "Why Refinery Strike Has Had Little Bite at Gas Pump." The Big Story. Associated Press, 17 Feb. 2015. Web. <http://bigstory.ap.org/article/becc4200c913434f9e222d91d87fc6660/why-refinery-strike-has-had-little-bite-gas-pump>

The price spike that occurred in February is not an isolated incident. Over the last decade, this pattern has repeated itself. Likely more price spikes could be accurately documented if industry data were reported and made public on outages and maintenance schedules. The graph below illustrates major price spikes. In January 2007, Chevron's Richmond refinery experienced a fire.² Three weeks later, Shell's Wilmington refinery experienced a fire.³ At the same time Exxon's Torrance facility began to operate at less than full capacity.⁴ Prices that hovered at \$2.50 a gallon before these outages quickly jumped almost a dollar a gallon. In late 2010, Tesoro's Martinez refinery experienced fires three times in the space of three months.⁵ Prices spiked again from around \$3 a gallon to more than \$4 a gallon. Spikes happened again in August of 2012 when Chevron's Richmond refinery exploded and touched off a massive fire.⁶ Tesoro's Martinez shutdown this February⁷ and the Exxon Torrance fire⁸ on its heels spiked prices precipitously again by a dollar a gallon.



Sources available here : <http://www.consumerwatchdog.org/resources/RefineryOutageSources.pdf>

² "Major Accidents at Chemical/Refinery Plants." *Contra Costa Health Services*. Web. <http://cchealth.org/hazmat/accident-history.php>

³ "4 Workers Are Injured in Electrical Fire at Refinery." *Los Angeles Times*. 09 Feb. 2007. Web. <http://articles.latimes.com/2007/feb/09/local/me-briefs9.1>

⁴ "Major Accidents at Chemical/Refinery Plants." *Contra Costa Health Services*. Web. <http://cchealth.org/hazmat/accident-history.php>

⁵ "Major Accidents at Chemical/Refinery Plants." *Contra Costa Health Services*. Web. <http://cchealth.org/hazmat/accident-history.php>

⁶ "Chevron Refinery Fire." *US Chemical Safety Board*. Web. <http://www.csb.gov/chevron-refinery-fire/>

⁷ Avalos, George. "Tesoro Refinery in Martinez Completely Idle as Strike Goes on." *San Jose Mercury News*. 06 Feb. 2015. Web. http://www.mercurynews.com/business/ci_27476997/tesoro-refinery-martinez-completely-idled-strike-goes

⁸ Lloyd, Jonathan, and Toni Guinyard. "Explosion Rips Through Torrance Refinery." *NBC Southern California*. 19 Feb. 2015. Web. <http://www.nbclosangeles.com/news/local/Torrance-Refinery-Exxon-Mobil-Explosion-292413021.html>

These sorts of refinery outages and attendant price spikes are nothing new. Back in 1999, when a similar spike in gas prices occurred, former Attorney General Bill Lockyer formed a task force to look at the reasons these price spikes happen and why California generally has higher gas prices. Consumer Watchdog's Jamie Court was on this task force, representing the California State Assembly, along with academics, and industry representatives. The task force found that California refiners had little capacity to cover outages, maintained relatively low inventory levels compared to the rest of the nation, and had significant market control, all of which made the price of gas more volatile in the wake of refinery outages.⁹ These are among the Attorney General Taskforce's conclusions.

Attorney General Report



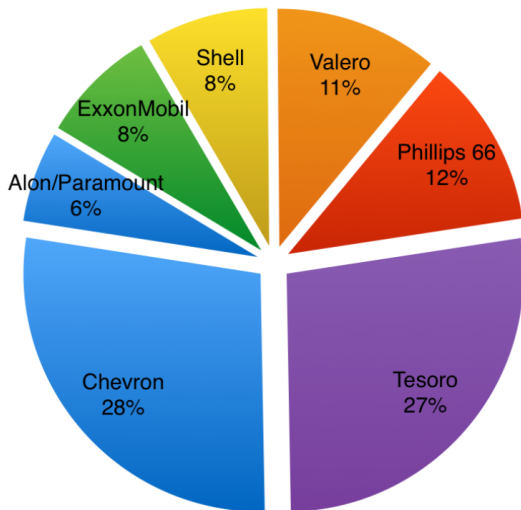
"Supply disruptions that contributed to major price spikes of 1999 are likely to continue ... because (1) California refiners have little spare capacity to cover outages; (2) California refiners maintain relatively low inventory levels." The report noted: "Refiners have significant market control."

"A key factor in rising prices and price spikes in California is the supply of CARB gasoline."

The former Attorney General's report also found that another factor that exacerbated these price spikes was industry consolidation and thus, "the relative lack of competition associated with the structure of the state's refining and marketing industry." That consolidation has continued over the last 15 years. Today, 14 refineries produce the state's CARB gas supply. According to the California Energy Commission's page on refinery locations and capacities, consolidation has led to two refineries—Tesoro and Chevron—controlling 55 percent of the state's refining capacity. Only four companies control 76 percent of this total capacity, including Phillips 66 and Valero, based on the California Energy Commission's data.

⁹ California, Attorney General. *Report on Gasoline Prices in California*. By Bill Lockyer. *California Attorney General*. May 2000. Web. <http://oag.ca.gov/sites/all/files/agweb/pdfs/antitrust/gasstudy/gasstudy2.pdf>

California Oil Refinery Capacity by Company



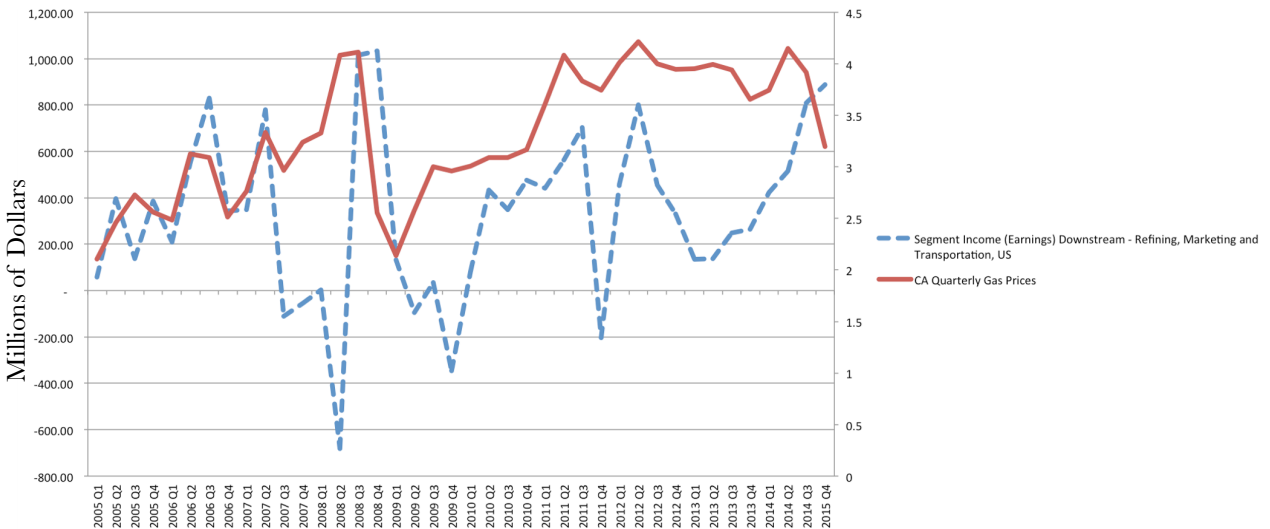
Source: California Energy Commission
<http://energyalmanac.ca.gov/petroleum/refineries.html>

Though the industry is far more consolidated than it was 15 years ago, another complicating factor is the total lack of industry transparency. Refineries keep tight control over data concerning their industry and operations. The California Energy Commission, which is the state’s primary energy policy and planning agency, does not release any public estimates of days of supply. Indeed, it is not even clear that the agency has the data necessary to make this calculation with 100 percent accuracy.

This information would be critical to know in case of a statewide or national disaster. No real time collection of data exists. The EIA’s inventory data is three months behind, and this federal agency does not keep track of

current days of supply. No federal or state agency maintains centralized information on current or historical refinery status, whether a refinery is closed, for how long, whether the refinery had an accident, how much of its capacity the refinery is utilizing, and how big its gas reserves are on hand. Thus the public remains in the dark on refinery operations, and traders can run up the price of gas more easily on mere speculation.

Chevron Downstream Profits Increase with Price Spikes



Source: Securities and Exchange Commission – Chevron 10-K & 10-Q

In the case of Chevron, the largest refiner in the state, profits from domestic refining, marketing and transportation, or downstream operations as opposed to drilling and crude oil extraction, mirrored the gasoline price spikes documented by Consumer Watchdog over a

decade. The higher the gas prices, the higher Chevron's profits were. The graph below, put together using Chevron's filings with the US Securities and Exchange Commission, shows that the trend line held, except between the market downturn in October 2007, the crash that touched off the Great Recession in September 2008, and the second quarter of 2010 when the economy began to emerge from recession and profits went up together with a rise in gas prices. In the fourth quarter of 2014, Chevron's profits were escalating even as gas prices fell, suggesting a huge windfall for the company from the latest gasoline price spikes.

Internal Chevron memos obtained and released by Senator Ron Wyden show that Chevron's strategy has to do with finding ways to produce less gas to create shortages to spike prices. In 1995, a Chevron memo stated that the only way for the refining industry to boost its profits substantially was to restrict the capacity to refine gasoline. At that time, inventories were low, and demand was healthy, just the way Chevron likes it. But the fact that refineries were maximizing output was hurting Chevron's bottom line because of a lack of scarcity that could drive the price up much higher. Chevron suggested that refinery capacity should be reduced in order to reap a windfall.

At the same time, refineries keep tight control over data concerning their industry and operations. The California Energy Commission, which is the state's primary energy policy and planning agency, does not release any public estimates of days of supply. No real time collection of data exists. The EIA's inventory data is three months behind, and this federal agency does not keep track of current days of supply. No federal or state agency maintains centralized information on current or historical refinery status, whether a refinery is closed, for how long, if they had an accident, how much capacity is being utilized, and how big gas reserves are. Thus the public remains in the dark on refinery operations.

Internal Chevron Memo

1995 Chevron Memo released by Senator Ron Wyden

"If the U.S. petroleum industry doesn't reduce its refining capacity, it will never see any substantial increase in refinery margins (profits)...I months, gasoline demand has been he inventories remained close to record lo that should normally lead to higher prices. However, refining utilization has been rising, sustaining high levels of operations, thereby keeping prices low."

- Chevron Memo

Conclusion

Consumer Watchdog's analysis recommends that California legislature take the following steps to benefit consumers:

- Create greater transparency and accountability for refiners. California should publish refinery maintenance schedules, outages, and accidents in real time, and ask refiners to publicly disclose weekly supply figures.
- The state should require refiners to keep another week's worth of gas supply on hand so that it matches national days of supply.
- The state should accelerate the transition to alternative transportation technologies such as electric vehicles.

About Consumer Watchdog: Consumer Watchdog is a nonprofit, nonpartisan public interest group that has fought corporate and government corruption since 1985. The nationally recognized consumer group is based in Santa Monica and has offices in Washington, DC. Consumer Watchdog's president Jamie Court sat on Attorney General Lockyer's Gasoline Pricing Taskforce in 1999 as a representative for the California Assembly. The co-author of this report, Court has studied California's gasoline market for the last decade and half, and founded [Oilwatchdog.org](http://www.oilwatchdog.org). He is a frequent national media commentator on gasoline prices and has written about gasoline price manipulation in his last two books; *Corporateering: How Corporate Power Steals Your Freedom and What You Can Do About It* (Tarcher Putnam, 2003) and *The Progressive's Guide To Raising Hell* (Chelsea Green, 2012). Learn more at www.consumerwatchdog.org

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