

## Refiners exported inventory in run up to record gas price spike

California gasoline prices spiked to record highs in autumn 2022 even as crude oil prices fell.<sup>1</sup> See Chart 1. State and federal analysts identified abnormally low gasoline inventories as a causal factor.<sup>1,2</sup> The State Energy Commission asked refiners why they failed to keep normal levels of inventory in stock despite the foreseeable cycle of summer driving followed by refinery maintenance in the Fall.<sup>1</sup> After all, oil companies make more gasoline in California than Californians need or use.<sup>3-7</sup>

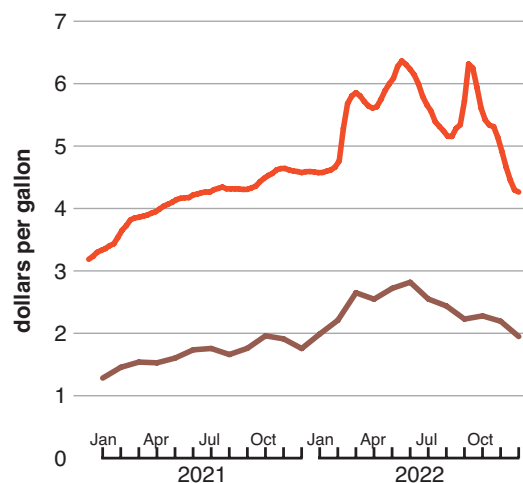
One clear answer to this question has emerged. Refiners exported critical gasoline inventory that otherwise could have helped to cushion a severe price spike. If only half of their foreign exports during January through April had been stored here until December, California gasoline stocks (thick black and blue lines in Chart 2) would not have dipped below their historic range (tan shading) during 2021 and 2022.

The autumn 2022 spike boosted gas prices nearly a dollar despite falling crude prices and caused “real economic hardship” to millions of Californians, the Energy Commission said.<sup>1</sup>

### A Solution: Mind the Store

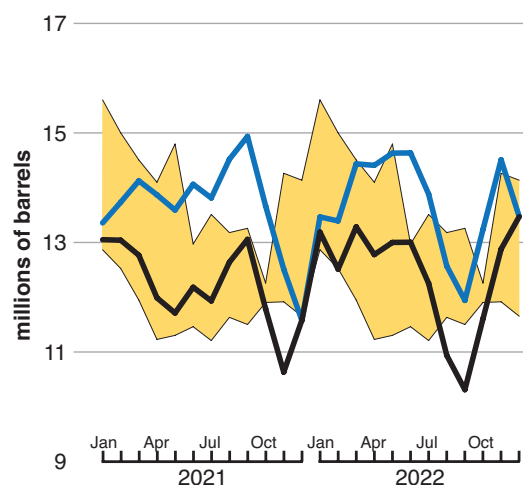
We store fuel to ensure ample supplies later. So in autumn 2022, when statewide gasoline and gasoline blending component stocks bottomed out approximately 1.49 million barrels below the historic five-year low for the second week of September during pre-Covid years 2015–2019,<sup>7</sup> it set off a supply risk alarm that affected prices.

Refiners exported far more than that 1.49 million barrels. On top of even larger annual exports to other states,<sup>3-7</sup> they sent  $\approx 3.26$  million barrels of gasoline to 25 other nations between January and April 2022 alone.<sup>6</sup> Plenty of gasoline could have been stored until after the autumn 2022 supply crunch—had the state been minding the store.



1. Gasoline and crude oil prices

— California gasoline<sup>a</sup>  
— Crude for West Coast refineries<sup>b</sup>



2. California gasoline inventory<sup>c, d</sup>

■ Historic range for month during 2015–2019  
— Actual during 2021–2022  
— Potential if half of foreign exports from state are delayed from January–April to December

a. Average statewide retail price for all grades and formulations of gasoline from federal data: [http://www.eia.gov/dnav/pet/pet\\_pri\\_gnd\\_dcus\\_sca\\_w.htm](http://www.eia.gov/dnav/pet/pet_pri_gnd_dcus_sca_w.htm)  
b. West Coast (PADD 5) refiner acquisition cost of crude oil from federal data: [http://www.eia.gov/dnav/pet/pet\\_pri\\_rac2\\_dcu\\_r50\\_m.htm](http://www.eia.gov/dnav/pet/pet_pri_rac2_dcu_r50_m.htm)  
c. Month-end stocks of gasoline and gasoline blending components from <https://www.energy.ca.gov/data-reports/reports/weekly-fuels-watch>  
d. Potential stocks (blue curve) assuming half of gasoline exported from California to other nations during January–April was instead kept as inventory until December. Federal export data for Harmonized commodities 2710121510, 2710121514 and 2710121519; <https://usatrade.census.gov/data/perspective60>

*continued*

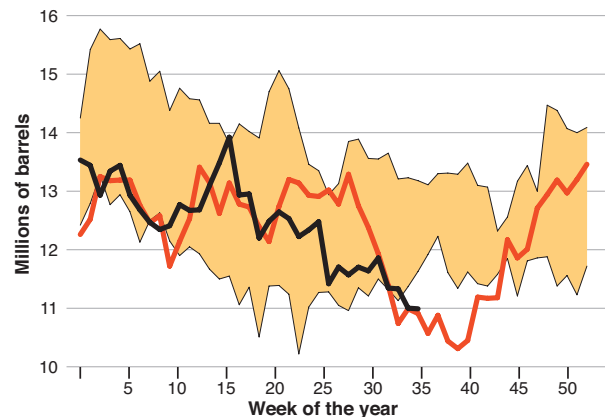
## Refiners exported inventory in run up to record gas price spike—*continued*

Winter and spring exports<sup>6</sup> depressed gasoline inventory in 2022. Then stores of it dwindled further (Chart 3, red, weeks 28–39) as statewide gasoline production fell far below 2015–2019 summer lows.<sup>7</sup> Among other outages, in mid-summer, Chevron shut down crude processing at its Richmond refinery to do repairs it had originally planned for spring 2022, state officials report.<sup>8</sup> At the same time, relatively low gasoline deliveries to Arizona from the Gulf Coast via pipeline in June–September 2022<sup>9</sup> likely boosted exports from California inventory to cover that landlocked state’s needs.

But inventory fell despite falling demand. West Coast gasoline demand was lower in 2022 than in any pre-Covid year since 1999.<sup>10</sup> We burned less gas. Then they refined more for export, and *that* contributed to a record gas price spike.

### Action Now

Statewide gasoline stocks rose by 1.58 million barrels (mb) in Feb–April to spike at an historic high for week 16 of this year (Chart 3, black).<sup>7</sup> Foreign exports fell by 2.58 mb in those three months from the three months before.<sup>6</sup> In effect, the partial export pause kept 2.58 mb of gasoline



3. Tracking gasoline inventory at California refineries.

Total gasoline including blending components; from State Fuel Watch.<sup>7</sup>

— 2023 (weekly data reported to date)

— 2022 (year of record-high Autumn gasoline price spike)

■ Pre-Covid historic (2015–2019) Range

in stock during that spring spike. But now another autumn supply crunch threatens. Gasoline stocks fell in summer (black, weeks 25–35).<sup>7</sup> And yet, had foreign exports from January–June 2023 (3.67 mb)<sup>6</sup> been paused, stocks could be topping historic highs.

In contrast to global crude oil prices, in-state refined fuel inventories are controllable by actions we can take in the state to protect Californians at the pump.

### Links

(1) 30 September 2022 letter from David Hochschild, Chair, California Energy Commission, to refinery executives; <https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=22-IEPR-05> (TN# 246295).

(2) *This Week in Petroleum*; release date: 26 Oct 2022; U.S. Energy Information Administration. [https://www.eia.gov/petroleum/weekly/archive/2022/221026/includes/analysis\\_print.php](https://www.eia.gov/petroleum/weekly/archive/2022/221026/includes/analysis_print.php)

(3) *Decommissioning California Refineries: Climate and health paths in an oil state*; A report for Communities for a Better Environment (CBE) by Greg Karras. Available at <https://www.energy-re-source.com/publications>

(4) *Climate Pathways in and Oil State–2022*; A California Environmental Justice Alliance (CEJA) Report. Prepared by Greg Karras, Community Energy reSource. Available at <https://www.energy-re-source.com/publications>

(5) CARB, 2022. *2000–2020 GHG Inventory (2022 Edition)*; Full Inventory, Fuel Combustion and Heat Content; California Air Resources Board; accessed Nov. 2022 from <https://ww2.arb.ca.gov/ghg-inventory-data>

(6) U.S. Census Bureau Trade Data Reports; gasoline exports from California to other nations by District and ten-digit “Harmonized Commodity Code” for codes 2710121510, 2710121514, and 2710121519; accessed various dates from <https://usatrade.census.gov>

(7) CEC, 2023. *Fuel Watch*; Refinery Inputs and Production; and Refinery Stocks; California Energy Commission; accessed various dates from <https://www.energy.ca.gov/data-reports/reports/weekly-fuels-watch>

(8) CEC, 2022. *August 2022 Petroleum Watch*; California Energy Commission: Sacramento, CA. Accessed Mar. 2023 from <https://www.energy.ca.gov/data-reports/reports/petroleum-watch>

(9) *Movements by Pipeline between PAD Districts*; Motor gasoline blending components; U.S. EIA. [https://www.eia.gov/dnav/pet/pet\\_move\\_pipe\\_dc\\_R50-R30\\_mbbbl\\_m.htm](https://www.eia.gov/dnav/pet/pet_move_pipe_dc_R50-R30_mbbbl_m.htm)

(10) *Product Supplied*; West Coast (PADD 5). U.S. Energy Information Administration. [https://www.eia.gov/dnav/pet/pet\\_cons\\_psup\\_dc\\_r50\\_mbbbl\\_a.htm](https://www.eia.gov/dnav/pet/pet_cons_psup_dc_r50_mbbbl_a.htm)