November 2021

PETROLEUM WATCH

CALIFORNIA ENERGY COMMISSION

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REFINERY NEWS

- **Chevron El Segundo:** On October 12, the refinery experienced a power disruption at one of its operating units resulting in emergency flaring (Cal OES, South Coast AQMD).
- **Chevron Richmond:** On October 24, a rainstorm caused a power disruption at the refinery and shut down several processing units leading to emergency flaring (Cal OES, KQED).

CALIFORNIA GASOLINE RETAIL PRICES BY BRAND

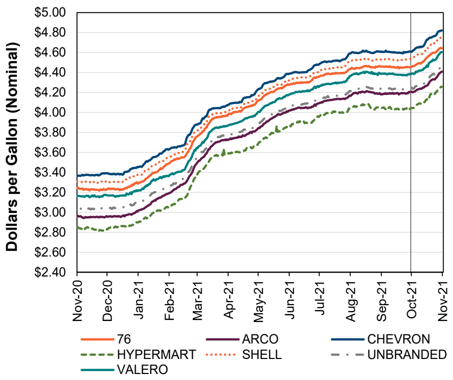
October 2021 vs. 2020

(Percentage Change)

76	40% higher
ARCO	44% higher
Chevron	39% higher
Hypermart	44% higher
Shell	40% higher
Unbranded	42% higher
Valero	40% higher

October 2021 Averages

76	$4.55
ARCO	$4.29
Chevron	$4.71
Hypermart	$4.14
Shell	$4.64
Unbranded	$4.33
Valero	$4.48



Source: California Energy Commission (CEC) analysis of Oil Price Information Service (OPIS) data

CALIFORNIA DIESEL RETAIL PRICES BY REGION

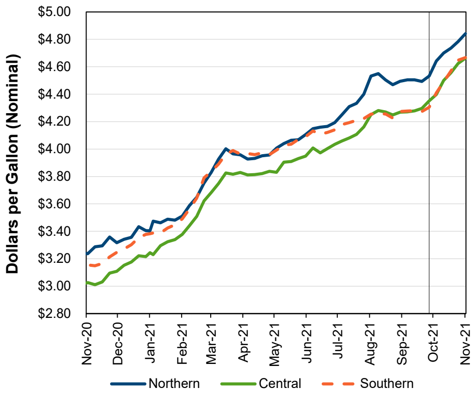
October 2021 vs. 2020

(Percentage Change)

Northern CA	44% higher
Central CA	49% higher
Southern CA	43% higher

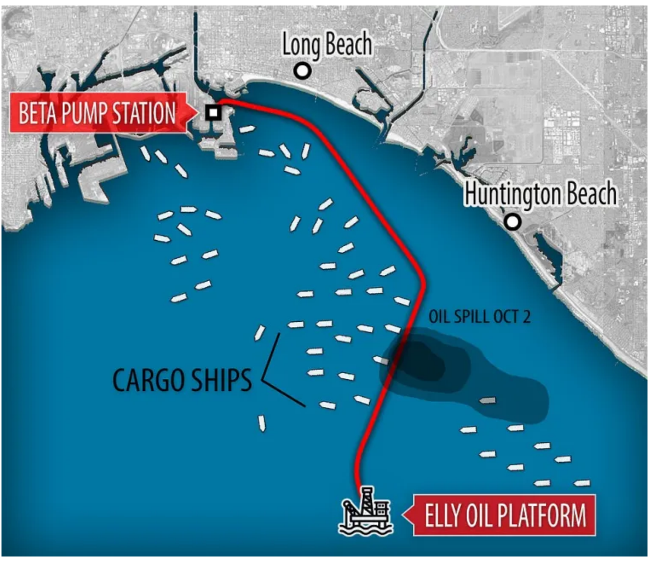
October 2021 Averages

Northern CA	$4.70
Central CA	$4.52
Southern CA	$4.52



Source: CEC analysis of OPIS data

OIL SPILL MAP



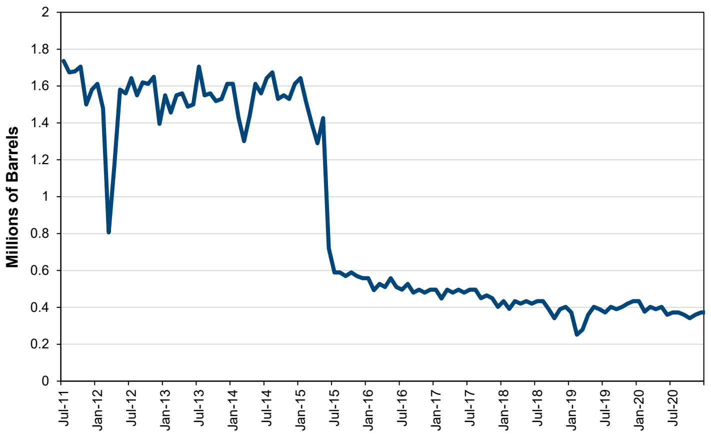
Source: HCA Barbieri

FEDERAL OCS PLATFORMS LOCATED OFFSHORE CALIFORNIA

Platform	Installed	Age	Operating Status	Water Depth (feet)	Operator
San Pedro Bay - Los Angeles and Orange County					
Eureka	1984	37	Producing	700	Beta Operating Company
Elly*	1980	41	Processing	255	Beta Operating Company
Ellen	1980	41	Producing	265	Beta Operating Company
Edith	1983	38	Producing	161	DCOR
Eastern Santa Barbara Channel - Ventura and Santa Barbara County					
Hogan	1967	54	Producing	154	Beacon West Energy Group
Houchin	1968	53	Producing	163	Beacon West Energy Group
A	1968	53	Producing	188	DCOR
B	1968	53	Producing	190	DCOR
C	1977	44	Producing	192	DCOR
Henry	1979	42	Producing	173	DCOR
Hillhouse	1969	52	Producing	190	DCOR
Gina	1980	41	Producing	95	DCOR
Gilda	1981	40	Producing	205	DCOR
Habitat	1981	40	Retiring	290	DCOR
Gail	1987	34	Retiring	739	Beacon West Energy Group
Grace	1979	42	Retiring	318	Beacon West Energy Group
Western Santa Barbara Channel - Santa Barbara County					
Hondo	1976	45	Paused	842	ExxonMobil Corporation
Harmony	1989	32	Paused	1,198	ExxonMobil Corporation
Heritage	1989	32	Paused	1,075	ExxonMobil Corporation
Santa Maria Basin - Santa Barbara County					
Harvest	1985	36	Retiring	675	Freeport-McMoRan Oil & Gas
Hermosa	1985	36	Retiring	603	Freeport-McMoRan Oil & Gas
Hidalgo	1986	35	Retiring	430	Freeport-McMoRan Oil & Gas
Irene	1985	36	Producing	242	Freeport-McMoRan Oil & Gas

Source: Bureau of Ocean Energy Management, California State Lands Commission, ExxonMobil
Notes: *Elly does not have its own wells and separates the water, natural gas, and crude oil that is received from Ellen and Eureka.

PACIFIC COAST FEDERAL OFFSHORE PRODUCTION



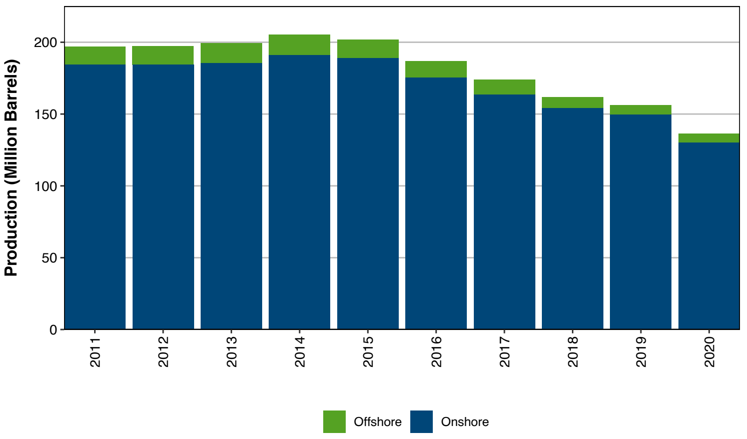
Source: CEC analysis of EIA data

STATE PLATFORMS LOCATED OFFSHORE CALIFORNIA

Platform	Installed	Age	Operating Status	Water Depth (feet)	Operator
Santa Barbara, Los Angeles, and Orange County					
Emmy	1963	58	Producing	47	SoCal Holdings
Eva	1964	57	Producing	57	DCOR
Esther	1985	36	Producing	22	DCOR
Holly	1966	55	Retiring	211	State Lands Commission
Human-Made Islands - Los Angeles County					
Chaffee	1966	55	Producing	40	THUMS Long Beach Co.
Freeman	1966	55	Producing	40	THUMS Long Beach Co.
White	1966	55	Producing	40	THUMS Long Beach Co.
Grissom	1966	55	Producing	40	THUMS Long Beach Co.
Rincon	1958	63	Retiring	44	State Lands Commission

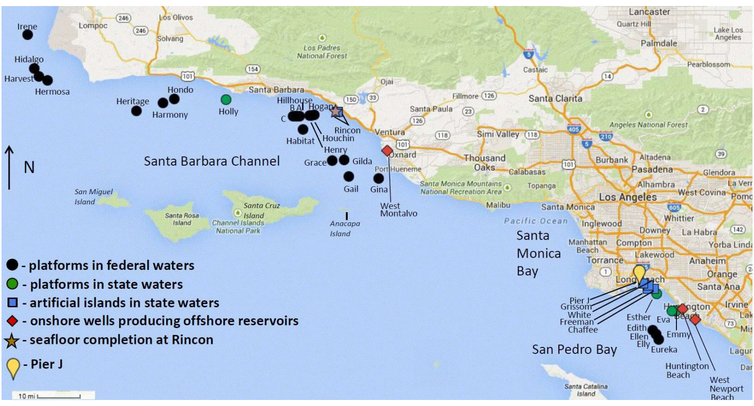
Source: California State Lands Commission, California Resources Corporation

STATE OFFSHORE AND ONSHORE PRODUCTION



Source: California Geologic Energy Management Division (CalGEM)

CALIFORNIA OFFSHORE PLATFORM MAP



Source: California State Lands Commission

FEATURED TOPIC

CALIFORNIA

OFFSHORE PLATFORM DIAGRAM

OFFSHORE CRUDE OIL PRODUCTION AND SPILLS

On October 1, 2021, a broken pipeline connected to an offshore oil platform named Elly caused an oil spill three miles off the coast of Newport Beach. The spill resulted in multiple beach closures and a coordinated cleanup effort involving multiple agencies. Collectively, this response team is referred to as the Unified Command, which is composed of representatives of the United States Coast Guard (USCG), California Department of Fish and Wildlife's Office of Spill Prevention and Response (CDFW-OSPR), Amplify Energy, County of Orange, and County of San Diego. The cities of Long Beach, Newport Beach, and Huntington Beach support the Unified Command to help improve the response time of the cleanup operation.

TIMELINE OF EVENTS

October 1, 2021: The National Response Center (NRC) received an initial report of an oil sheen from an unknown source on Friday evening.

October 2: Amplify Energy confirmed "a release of oil from the pipeline" and shut down the pipeline that morning. The Coast Guard then issued a press release announcing the formation of Unified Command to respond to the oil spill that was initially believed to be 13 miles in size and up to 126,000 gallons (3,000 barrels) of crude oil.

October 3: The maximum potential oil spilled was increased to 144,000 gallons. California Department of Fish and Wildlife declared fishery closures and public health threat in that area.

October 4: Divers confirmed a 4,000-foot section of 17.7 mile-long pipeline was displaced about 105 feet and had a 13-inch split along the side that was likely the source of the leak.

October 5: Cleanup efforts continued, and the estimated spill size increased to 15.67 miles.

October 7: Preliminary findings estimated 24,696 gallons as the minimum amount of oil released from the pipeline. The cause of the spill remained under investigation.

October 8: Operations continued with more than 1,300 personnel conducting on-water and shoreline cleanup operations.

October 14: Coast Guard announced the estimated spill amount was downgraded to 25,000 gallons (588 barrels).

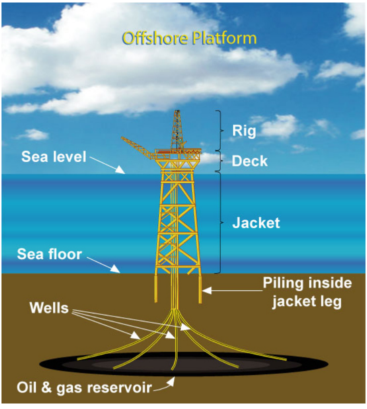
October 18: Investigators believed that back in January a cargo ship dragging its anchor during a storm caught the underwater oil pipeline and dragged it across the seafloor. The investigation is still ongoing.

COMPARISON TO OTHER OIL SPILLS

This is not the first oil spill to occur in this area; there have been two other large production-related spills recorded in this area.

The 2015 Refugio Oil Spill took place in Santa Barbara County and deposited over 100,000 gallons of crude oil onto the coastline. The spill occurred when oil from a leaking pipeline flowed from a storm drain into the ocean, requiring production to be paused at the Hondo, Harmony, and Heritage platforms.

The Santa Barbara Oil Spill occurred January 28, 1969, and was exponentially larger than both oil spills. The 1969 spill occurred at an oil well located 5.5 miles southeast of Santa Barbara, underneath Platform A, when a blowout occurred while drill bits were being changed. The well was not capped until 10 days following the blowout and oil continued to leak until December 1969. An estimated 4.2 million gallons of oil spilled, ruining miles of coastline and significantly impacting marine life. This was the largest oil spill in the United States waters at that time, and is credited with spurring the modern environmental movement.



Source: CalGEM

FEDERAL OFFSHORE PLATFORMS

The Pacific Outer Continental Shelf (OCS) is a region of water three nautical miles off the Pacific coast. This region is under United States federal government jurisdiction with the powers to regulate offshore drilling. The region has 23 active crude oil and gas producing platforms, all off the coast of Southern California. Of the 23 platforms, 20 produce crude oil and gas. Platform Elly, one of the 23 platforms in federal waters, has no wells because it serves as a processing facility for other neighboring oil platforms, Ellen and Eureka. Elly is connected to shore via a 17.7-mile-long pipeline where the oil is delivered to a local refinery. With this pipeline now shutdown, Ellen and Eureka will need to lower production until the pipeline is repaired.

There are five companies operating these platforms. Beta Operating Company, LLC and ExxonMobil operate three platforms each. Beacon West Energy Group, LLC and Freeport-McMoran Oil & Gas each operate four platforms, and DCOR, LLC operates the remaining nine platforms. More information on these platforms can be found at Federal OCS Platforms Located Offshore California.

The total production of offshore platforms in federal waters is shown on Pacific Coast Federal Offshore Production. Over the past 10 years crude oil production has declined. Offshore oil production peaked at 1.7 million barrels a month in July 2011. Since then, offshore oil production has not been more than 400 thousand barrels a month, which equates to one percent of all crude oil processed in California refineries. The most notable production drop was after the Refugio Oil Spill in May 2015. In a two-month span, offshore crude oil production went from 1.4 million barrels a month to 590 thousand barrels a month. The Refugio Oil Spill affected production in federal waters, where six of the seven offshore platforms using that pipeline are located.

STATE OFFSHORE PLATFORMS

Since the 1969 Santa Barbara Oil Spill that released over four million gallons of crude oil into the ocean, California has been concerned about future potential spills. The concern led the California State Lands Commission (SLC) to put a moratorium on new oil and gas leases within California state waters from the shoreline to three nautical miles out, the extent of its jurisdiction. State Platforms Located Offshore California shows the currently active platforms in state waters. Since no new leases have been issued since 1969, California has seen the number of active offshore oil and gas platforms decline from 60 to 9.

There are four offshore oil platforms in state waters. Holly in Santa Barbara County, Eva and Emmy in Huntington Beach, and Esther off Seal Beach. There are also four large human-made islands, used for offshore oil production, in in the Long Beach Harbor, known as the Long Beach Unit, and one small island, Rincon Island, located off Rincon Beach in Ventura County. Rincon and Holly are no longer actively producing. Holly is in the process of having its wells plugged and abandoned, while Rincon has completed plug and abandonment and is awaiting final retirement determinations and California Environmental Quality Act (CEQA) analysis.

State Offshore and Onshore Production shows the production of offshore platforms in state waters compared to onshore oil fields. Over the past 10 years, offshore production has been steady, but is a small fraction of the state's total production, averaging 6 percent of total California production over the time period. California Offshore Platform Map shows the remaining active oil and gas platforms in both federal and state waters.

ABOUT OFFSHORE ASSETS

Offshore oil platforms require state-of-the-art engineering to operate in harsh marine environments. There are many different types of oil platforms depending on the depth to the ocean floor, but platforms in California's waters are all fixed platforms. Fixed oil and gas platforms are built into the sea floor and are immobile. Normally, this would limit the amount of oil and gas wells that you can drill from, but because of horizontal drilling, the radius in which these platforms can drill from has increased. A diagram of a typical fixed oil platform is shown in Offshore Platform Diagram.

After the wells are drilled, the oil and gas are pumped from the wells through the pipelines to the shore. Offshore pipelines are built with multiple layers for increased safety to survive the harsh conditions of the ocean floor. The outside layer of an offshore pipeline is the toughest, with thick concrete coating a large stainless-steel pipe. Inside the outer layer, additional smaller stainless-steel pipes sandwich anti-corrosive material for multiple layers of protection. The center pipe, the last layer and only part that touches crude oil, transfers the crude oil from the shoreline onto land to collection tanks and refineries.

Given the recent oil spill off California's coastline, state agencies continue to look for ways to ensure safety and environmental protection. Read more at the CDFW-OSPR website.

Visit our website for more information about California's Petroleum Market.

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