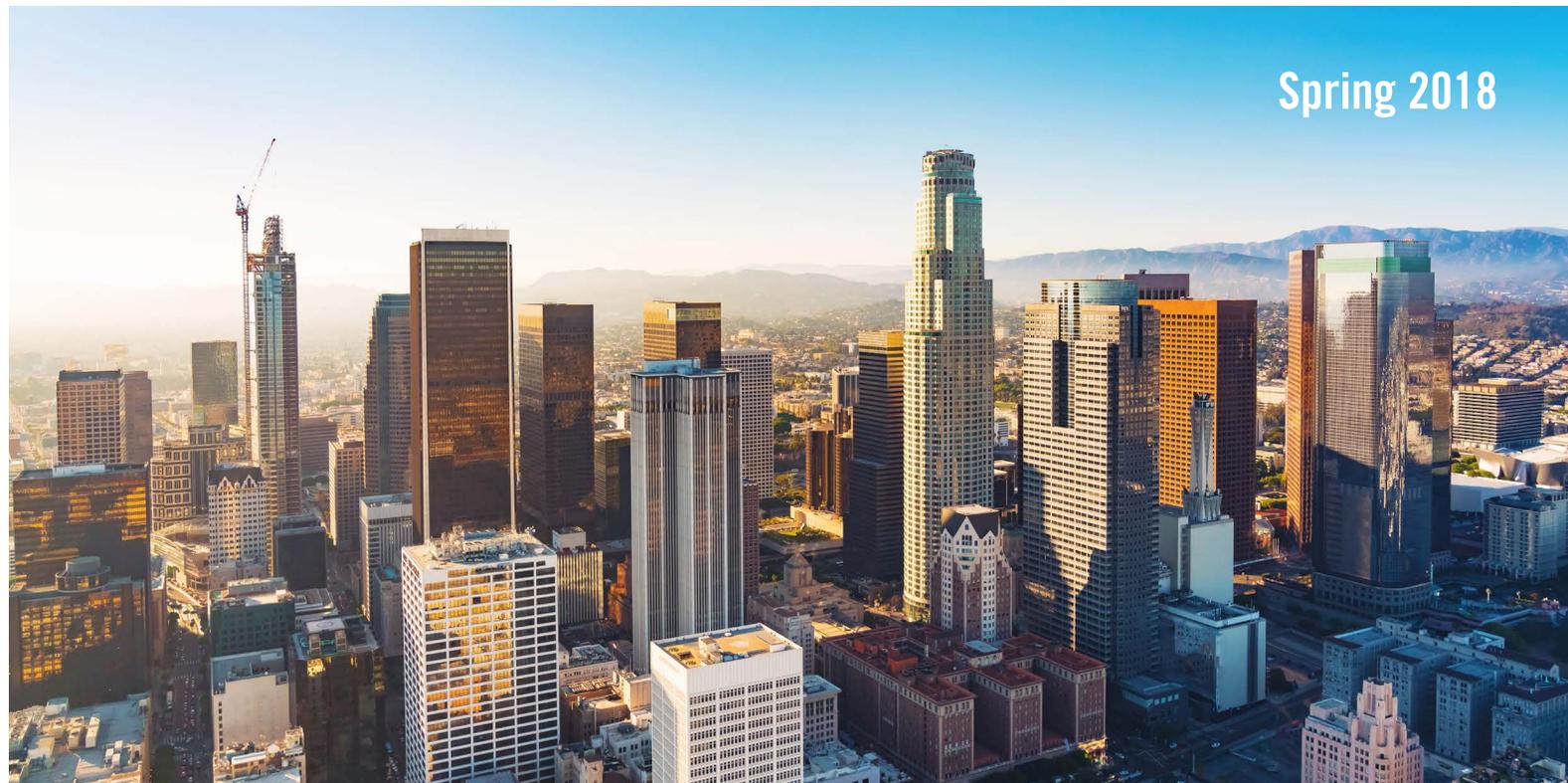


Spring 2018



# TRANSITIONING TO A GREENER LOS ANGELES

The Potential for Repurposing Oil and Gas Drilling Sites



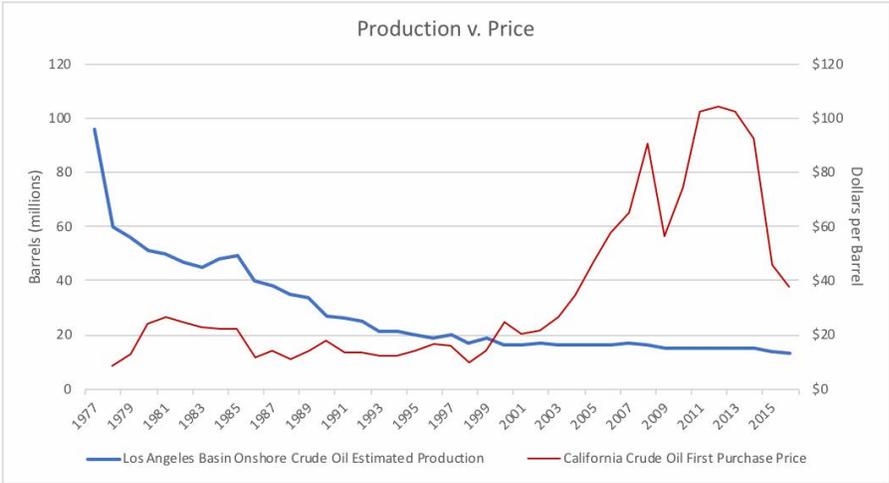
# OVERVIEW

The City of Los Angeles is considering a zoning ordinance that would place a protective health and human safety buffer zone between oil and gas drilling sites and sensitive uses such as homes and schools. The production of oil has been in decline in Los Angeles for decades, just as land for much needed housing, commercial and community development, and renewable energy projects has grown scarce. By freeing up the land oil and gas wells now occupy for other uses, such an ordinance would lead not only to healthier communities, but also to economic benefits and increased job creation. Programs to ensure a just transition for displaced workers are needed to minimize negative impacts and assure a job pathway to new and growing industries.

# REIMAGINING LA'S OIL EXTRACTION INDUSTRY

The oil extraction industry in Los Angeles has been in decline for decades. Between 2006 and 2016 alone, production in the L.A. Basin fell by 18.8 percent.<sup>1</sup> The economic output currently generated by oil and gas in L.A. – roughly \$182 million in

2015 – equates to only about 0.1 percent of the city's gross product.<sup>2</sup> The oil produced from L.A. wells is virtually all processed locally and amounts to only 0.08 percent of all inputs for Southern California refineries.<sup>3</sup> Given the small scale of



this production, the 2500 foot health and safety buffer ordinance proposed by a broad coalition will not adversely impact the city's economy, gas prices, the refinery industry, or even most individual oil companies, the majority of whose assets lie elsewhere in the state.<sup>4</sup>

Current regulatory, legislative and market forces are likely to hasten this trend. In recent years,

Source: U.S. Energy Information Administration<sup>32</sup>



The oil drilling site on 4th Avenue in Arlington Heights is undergoing clean-up and may be used for affordable housing.

California has passed legislation that, among other things, mandates and incentivizes the sale of zero emission vehicles, increases renewable energy requirements, and lowers greenhouse gas emissions limits. With its Sustainability City pLAN, the City of Los Angeles has pledged to reduce greenhouse gas emissions even further, as well as increase solar photovoltaic power generation and create 72,500 green jobs by 2025. The City has also requested that the L.A. Department of Water and Power (LADWP) develop a path to 100 percent renewable energy, with an interim goal of 65% renewables by 2036. Market forces such as rising property values, efficiencies in the renewable sector and community resistance to urban wells all have an impact as well on the economic viability of drilling in L.A.

## REPURPOSING THE LAND FOR BETTER USE

The oil extraction industry is facing increasing pressure to re-purpose its land. One notable example is the Fourth Avenue Drill Site. Located next to a school, this 1.1 acre site contains a dozen idle wells that have been subject to numerous violations over the years.<sup>5</sup> In the face of community

resistance to renewed drilling on the site, as well as shifting regulatory priorities on the part of the city, the owner of the wells, Sentinel Peak Resources, has agreed to work with Council President Herb Wesson to develop the site into much-needed affordable housing.<sup>6</sup>

Sentinel Peak is pursuing a housing development on a former drill site in Montebello as well,<sup>7</sup> and has expressed a willingness to consider “other beneficial uses” alongside its drilling operations in Culver City.<sup>8</sup> An analysis of these and other of Sentinel Peak’s recent initiatives suggests that economic and community pressure is already

driving the drilling industry to consider a broader range of uses for this land.

A clean environment and healthy communities are compatible with a thriving economy. Since 2006, when California passed its landmark Global Warming Solutions Act (AB 32), the state’s per-capita emissions have dropped by 12 percent while its per-capita GDP has grown by nearly double the national average, according to the climate advocacy organization Next 10.<sup>9</sup> Job growth in the state since 2006 has been stronger than job growth throughout the prior period, and has outpaced U.S. job growth by 27 percent.

In considering a buffer zone around drilling sites, Los Angeles has an opportunity to support re-development options on former drill sites that benefit the community in economic as well as environmental terms. The Los Angeles-Long Beach-Anaheim metro area is the most densely populated urbanized area in the country, with nearly 7,000 people per square mile.<sup>10</sup> Many neighborhoods, including some that sit on or near an oil field, are several times denser still.<sup>11</sup> Communities currently impacted by oil drilling are in need of land for a variety of purposes for their large and growing populations.

For example, Los Angeles is facing a severe housing crisis – especially affordable housing – and many neighborhoods lack basic retail services like grocery stores. In addition to its environmental mandates, L.A.’s Sustainable City pLAN calls for 150,000 new housing units by 2025.<sup>12</sup> It has also pledged to ensure that all low-income Angelenos live within half a mile of fresh food by 2035. The availability of former drill site land could facilitate projects that address these needs.



## ALTERNATIVE PROJECTS ON FORMER DRILLING SITES IN SOUTHERN CALIFORNIA

**Residential** The Pilipino Workers’ Center (PWC) and the Little Tokyo Service Center (LTSC) Community Development Corporation collaborated to develop the Larry Itliong Village at 153 Glendale Boulevard, which opened in December 2013.<sup>13</sup> EPA Brownfields funding was used to clean up the former oil field in order to provide 44 units of affordable housing – 22 for families and 22 for homeless individuals, including nine for transitional age youth – close to public transportation. The Village also houses the PWC’s headquarters, community rooms, offices, conference halls and a space for commercial ventures like a grocery store. The redevelopment of this site now provides multiple services to the community including recreational activities, affordable healthcare access assistance, immigration case management services and job skills workshops.<sup>14</sup>

The Village at Heritage Springs in Santa Fe Springs is another example of a successful residential project built over a former oil field. After a two-year remediation process, the 54 acre, 384-unit community was certified by both Energy Star and

Build it Green’s GreenPoint rating standards.<sup>15</sup> The City of Santa Fe Springs subsequently reported: “The Villages at Heritage Springs project is proving to be a wise economic development investment.”<sup>16</sup>

**Retail** The Grove shopping center is the most dramatic example of a successful retail development on top of former oil wells. In 2000, just before the 42 oil wells on the site were shut down to make room for the Grove, they were producing 61,000 barrels of oil,<sup>17</sup> which would have been worth \$2.3 million in 2016.<sup>18</sup> That year, the Grove had average annual sales of \$1.2 billion, generating \$2 million in property taxes and \$111 million in sales taxes. The Grove is currently the second most successful mall in the nation, with more visitors per year than Disneyland. Since 2002, when the wells were plugged, the total assessed value for the entire Grove complex has swelled by 70.3 percent.<sup>19</sup> The success of the Grove serves as an illustration of just how much more economic activity can be generated on sites previously limited to oil drilling. That said, every drill site has its own neighborhood context and each neighborhood should engage in its own unique visioning process to best serve its own needs.

**Renewable Energy – Brownfields to Brightfields**  
There are numerous advantages to utilizing

contaminated lands for renewable energy generation, according to the EPA, and the pace of such developments throughout the country has been increasing.<sup>20</sup> Such projects can utilize existing infrastructure, for instance, reducing development costs and minimizing resource conflicts. Solar is the most popular of the renewables for these types of projects. The American Planning Association has argued that solar installations are particularly well suited to smaller, community-adjacent brownfield sites such as those available in Los Angeles.<sup>21</sup> LADWP staff has confirmed this, stating that it is “particularly helpful to have smaller solar projects spread through the urban core,” due to the proximity to load centers.<sup>22</sup> Depending on site specifics and regulations, rooftop solar can also be combined with community development.

Of the projects listed on the EPA's list of brownfields to brightfields, the vast majority are small, most covering only a couple of acres, and many are in cities or urban areas. In California, for instance, the West County Wastewater District site is a 1.0 megawatt capacity solar installation on a 10-acre sludge-drying pond in Richmond. A former U.S. Army Depot in Sacramento has a 3.0 megawatt capacity solar installation on 15 acres.<sup>23</sup>



**“We believe the world needs a wide range of clean energy technologies, each serving different needs. This project ... presented an opportunity to take an old gas and oil field and turn it into a clean energy producing solar site.”**

— Nick Coons, *Google Renewable Energy Principal, regarding a Kern County project (Power Engineering, September 10, 2014)*

## **JOBS AND THE IMPORTANCE OF A JUST TRANSITION**

As the city moves to protect health and human safety with a buffer zone, it must develop a plan to provide support and retraining for impacted workers. The booming renewable sector is in need of workers, and a handful of successful models around the country suggest that transitioning from oil and gas to renewables is a viable pathway.

In 2015, the oil and gas extraction sector in Los Angeles employed an estimated 345 workers – around 0.02 percent of the city's roughly two million workers.<sup>24</sup> By comparison, the utility sector employed an estimated 2,833 workers (0.2 percent of the total workforce), the construction sector 59,208 (3.5 percent), and manufacturing 94,481 (5.5 percent).

The renewable workforce is considerably larger than that of oil and gas now, and rapidly growing. In California, there are 8.5 jobs in renewables for every one in fossil fuels.<sup>25</sup> In L.A. County, which has more clean energy jobs than any other county in the state,<sup>26</sup> jobs in the solar industry outnumber jobs in oil and gas drilling and refining combined.<sup>27</sup> Between 2012 and 2015, employment in solar electric power grew by 64.5 percent in California, employment in wind electric power generation by 21.1 percent.<sup>28</sup> In Los Angeles, 21,000 new green jobs were created between 2015, when the Sustainability City pLAN was published, and January 2017, with 51,500 more mandated by 2025.<sup>29</sup>

Oil and gas workers are particularly good candidates for those jobs, as the International Brotherhood of Electrical Workers (IBEW) Local 428 has found in the San Joaquin Valley, where it's recruited around 200 displaced oil workers over the last few years



**“It’s clear that we’re going the solar route. So why not learn what you can now to get ahead of the game and not be one of these guys that are chasing the bus, trying to jump on?”**

— Jonathan Sanchez, *Oil field worker-turned-union solar industry worker*

to work on the region’s booming solar projects.<sup>30</sup> As one such worker, Jonathan Sanchez, put it in an article in the *Washington Post*: “It’s clear that we’re going the solar route. So why not learn what you can

development, this initiative would set aside funding from a carbon fee for a worker-support program for those who are affected by the transition to a clean energy economy.<sup>31</sup>

now to get ahead of the game and not be one of these guys that are chasing the bus, trying to jump on?”

One possible model for a Just Transition program is the Protect Washington Act, a proposed ballot initiative currently being advanced by the Alliance for Jobs and Clean Energy in Washington State with strong support from labor unions and environmental groups. In addition to supporting clean energy projects like wind and solar

## CONCLUSION

It is well documented that oil and gas drilling in Los Angeles exposes some of the city’s most vulnerable residents to chemicals and air toxins that are known health hazards. Improved health outcomes – and their related huge cost savings – will be one of the most significant impacts of this ordinance. But the ordinance also presents an opportunity to begin to solve the city’s land use and community development needs. Given the various factors contributing to the decline in in oil and gas production in Los Angeles, the prioritization of clean energy policy on both the city and state level, and L.A.’s ever increasing need for housing, retail and other community-responsive development, it is time to act. This is an extraordinarily promising opportunity for the City of Los Angeles.

Acknowledgments: *The Liberty Hill Foundation would like to acknowledge the research assistance of Lumina Research LLC in the preparation of this report and Alex Hammarstedt for graphic design.*

## ENDNOTES

- 1 U.S. Energy Information Administration, “California – Los Angeles Basin Onshore Crude Oil Estimated Production from Reserves,” [https://www.eia.gov/dnav/pet/hist/LeafHandler.ashx?n=PET&s=RCRR10RCAL\\_1&f=A](https://www.eia.gov/dnav/pet/hist/LeafHandler.ashx?n=PET&s=RCRR10RCAL_1&f=A).
- 2 David Rigby and Michael Shin, “The Oil and Gas Production Sector in the City of Los Angeles,” Geografio LLC, October 2017, p. 1.
- 3 Total oil produced by L.A. City wells according to the report in the preceding footnote was 2.7 million barrels in 2016. Total Southern California refinery inputs obtained from Weekly Refinery Production and Stocks Levels by Region - Northern and Southern California, 2012-2017. Data supplied by Ryan Eggers, a staffer at the California Energy Commission, on October 12, 2017. In this classification, Southern California refineries include: Chevron U.S.A. Inc., El Segundo Refinery; Tesoro Refining & Marketing Company, Carson Refinery; PBF Energy, Torrance Refinery; Phillips 66, Wilmington Refinery; Tesoro Refining & Marketing Company, Wilmington Refinery; Valero Energy, Wilmington Refinery; Paramount Petroleum Corporation, Paramount Refinery; Greka Energy, Santa Maria Refinery; Lunday Thagard, South Gate Refinery; and Valero Wilmington Asphalt Refinery. For the calculation, it was assumed that all of L.A. City’s extracted oil is refined in Southern California.
- 4 Cumulatively, the 432 active wells operated by the top five oil producers in Los Angeles in 2016 constituted 7.4 percent of those companies’ total wells in the state, and 12.8 percent of their total output. California Department of Conservation Division of Oil, Gas and Geothermal Resources Well Search, <https://secure.conservation.ca.gov/WellSearch/>.
- 5 Emily Alpert Reyes, “Oil and gas firm reactivates long-idle wells near L.A. school after residents seek to plug them,” *Los Angeles Times*, March 8, 2016.
- 6 Emily Alpert Reyes, “L.A. oil drilling site could be turned into affordable housing,” *Los Angeles Times*, April 9, 2017.
- 7 Mike Sprague, “Montebello housing project still on, despite sale,” *Whittier Daily News*, January 10, 2017.
- 8 Letter from George Paspalof, Executive Vice President-L.A. Basin Operations, Sentinel Peak Resources, to Culver City Mayor Jim B. Clarke, dated April 6, 2017. Available here: <https://culver-city.legistar.com/View.ashx?M=F&ID=5102115&GUID=4F826C0A-1690-4162-9533-308E23B5D476>.
- 9 The per-capita GDP has grown by roughly \$5,000 per person. *2017 California Green Innovation Index*, Next 10, August 2017. <http://next10.org/sites/next10.org/files/2017-CA-Green-Innovation-Index-2.pdf>.
- 10 “Growth in Urban Population Outpaces Rest of Nation, Census Bureau Reports” (press release), U.S. Census Bureau, March 26, 2012. [https://www.census.gov/newsroom/releases/archives/2010\\_census/cb12-50.html](https://www.census.gov/newsroom/releases/archives/2010_census/cb12-50.html).
- 11 “Mapping L.A.: Population Density,” *Los Angeles Times*, no date. <http://maps.latimes.com/neighborhoods/population/density/neighborhood/list/>.
- 12 *Sustainable City pLAn*, City of Los Angeles, 2015. <http://plan.lamayor.org/wp-content/uploads/2017/03/the-plan.pdf>
- 13 EPA, “Investing in Open Space and Affordable Housing – Los Angeles”, September 2017, [https://www.lacitysan.org/cs/groups/sg\\_solids/documents/digitalmedia/y250/mdiwl~edisp/cnt020365.pdf](https://www.lacitysan.org/cs/groups/sg_solids/documents/digitalmedia/y250/mdiwl~edisp/cnt020365.pdf).

- 14 Mico Letargo, "Larry Itliong Village finally opens in Historic Filipinotown," *Asian Journal*, December 14, 2013.
- 15 "New Homes at Solar Powered Development Receive Energy Star and Build it Green Labels" (press release), *PR Web*, July 15, 2010.
- 16 City of Santa Fe Springs Comprehensive Annual Financial Report 2010-2011. <http://www.govwiki.info/pdfs/General%20Purpose/CA%20Santa%20Fe%20Springs%202011.pdf>.
- 17 California Department of Conservation Division of Oil, Gas & Geothermal Resources (DOGGR) Well Search, <https://secure.conservation.ca.gov/WellSearch/>.
- 18 The average price of crude oil in California was \$37.96 in 2016. U.S. Energy Information Administration, "California Crude Oil First Purchase Price," [https://www.eia.gov/dnav/pet/hist/LeafHandler.ashx?n=PET&s=F005006\\_3&f=A](https://www.eia.gov/dnav/pet/hist/LeafHandler.ashx?n=PET&s=F005006_3&f=A).
- 19 L.A. County Assessor Portal Basic Search, <https://portal.assessor.lacounty.gov/>.
- 20 U.S. Environmental Protection Agency, RE-Powering America's Land: Potential Advantages of Reusing Potentially Contaminated Land for Renewable Energy. [https://www.epa.gov/sites/production/files/2015-04/documents/contaminated\\_land\\_resuse\\_factsheet.pdf](https://www.epa.gov/sites/production/files/2015-04/documents/contaminated_land_resuse_factsheet.pdf).
- 21 "Planning for Solar Energy Briefing Papers," American Planning Association, 2013. See Paper 6, p. 57: "Recycling Land for Solar Energy Development." [https://planning-org-uploaded-media.s3.amazonaws.com/legacy\\_resources/research/solar/briefingpapers/pdf/solarpaperscompendium.pdf](https://planning-org-uploaded-media.s3.amazonaws.com/legacy_resources/research/solar/briefingpapers/pdf/solarpaperscompendium.pdf).
- 22 Conversation with LADWP Feed In Tariff staff member on March 21, 2018.
- 23 U.S. Environmental Protection Agency, RE-Powering America's Land Initiative: Project Tracking Matrix, October 2017. [https://www.epa.gov/sites/production/files/2017-11/documents/repowering\\_tracking\\_matrix\\_110617\\_508.pdf](https://www.epa.gov/sites/production/files/2017-11/documents/repowering_tracking_matrix_110617_508.pdf).
- 24 This total is drawn from the Bureau of Labor Statistics' Quarterly Census of Employment and Wages and California Employment Development Department data, as well as the U.S. Census Bureau's non-employer statistics (NES) program. It includes independent contractors as well as employees. David Rigby and Michael Shin, "The Oil and Gas Production Sector in the city of Los Angeles," Geografio LLC, October 2017, p. 1.
- 25 There are 2.5 clean energy jobs for every one fossil fuel job in the U.S. as a whole. *2017 California Green Innovation Index*, Next 10, August 2017. <http://next10.org/sites/next10.org/files/2017-CA-Green-Innovation-Index-2.pdf>.
- 26 *Clean Energy Jobs in California*, E2, June 2017. <https://www.e2.org/cleanjobscalifornia/>.
- 27 *Sustainable City pLAN: 2nd Annual Report 2016-2017*, City of Los Angeles, p. 22. [http://plan.lamayor.org/wp-content/uploads/2017/03/sustainability\\_pLAN\\_year\\_two.pdf](http://plan.lamayor.org/wp-content/uploads/2017/03/sustainability_pLAN_year_two.pdf).
- 28 Solar electric power generation employment as represented by NAICS 221114; wind by NAICS 22115. U.S. Census Bureau, County Business Patterns, 2014-2015. <https://www.census.gov/programs-surveys/cbp.html>.
- 29 *Sustainable City pLAN: 2nd Annual Report 2016-2017*, City of Los Angeles. [http://plan.lamayor.org/wp-content/uploads/2017/03/sustainability\\_pLAN\\_year\\_two.pdf](http://plan.lamayor.org/wp-content/uploads/2017/03/sustainability_pLAN_year_two.pdf).
- 30 Bridget Huber, "California Proves Trump Wrong," *Washington Post*, January 10, 2018.
- 31 Alliance for Jobs and Clean Energy, "Our Policy Proposal," <https://jobs-clean-energy-wa.com/our-policy-proposal/>.
- 32 For production data, see: "California - Los Angeles Basin Crude Oil Estimated Production from Reserves," [https://www.eia.gov/dnav/pet/hist/LeafHandler.ashx?n=PET&s=RCRR10RCAL\\_1&f=A](https://www.eia.gov/dnav/pet/hist/LeafHandler.ashx?n=PET&s=RCRR10RCAL_1&f=A). For price data, see: "California Crude Oil First Purchase Price," [https://www.eia.gov/dnav/pet/hist/LeafHandler.ashx?n=PET&s=F005006\\_3&f=A](https://www.eia.gov/dnav/pet/hist/LeafHandler.ashx?n=PET&s=F005006_3&f=A).