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Potential Community and Labor Impacts of an Onshore Oil Phaseout in Santa Barbara County

Olivia Quinn, Haven Parker, Eleanor Thomas, Nathan Mariano, Lucas Boyd, Gabriel De Roche

Principal Investigators: Paasha Mahdavi and Carmen Rhodes

April 2026



ACKNOWLEDGEMENTS

We thank Zhai Gen Tan, Laura Elizabeth Moreno Gama, Matto Mildenberger, and Carrie Fernandes for providing research support, and Christin Palmstrom and Brooke Pollock for formatting and graphic design.

Figures 2 and 4 created by Brooke Pollock.

Suggested Citation:

The 2035 Initiative and the UCSB Community Labor Center. *Potential Community and Labor Impacts of an Onshore Oil Phaseout in Santa Barbara County*. University of California, Santa Barbara. April 2026.

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EXECUTIVE SUMMARY

Santa Barbara County is weighing ordinances to phase out onshore oil and gas development in the county. The first would prohibit new drilling and the second would phase out existing operations. A prohibition on new drilling is expected to have minimal effects on jobs because current activities are allowed to continue.

However, the Board of Supervisors has also asked for a plan to phase out existing oil and gas operations, which will affect existing jobs. This report synthesizes workforce data, a novel county-wide public opinion survey, and interviews with oil and gas workers to help decision-makers plan the next step.

Key findings:

A phaseout of existing onshore oil and gas operations in the County would result in a contraction of the local workforce. However, significant contraction is likely, even without a phaseout policy, due to structural declines in well productivity.

Oil and gas workers employed in direct extraction and support activities in Santa Barbara County are disproportionately male and Hispanic, concentrated in the Santa Maria area. Most jobs require no more than a high school diploma, yet pay well above what workers with those credentials typically earn. This reflects the high-risk nature of work in the industry, with workers reporting that these jobs are often physically demanding, hazardous, and lack job security.

When local oil and gas workers have historically left their jobs, they tend to leave Santa Barbara County, rather than transition locally. Using job flow data from 2014-2024, we estimate that 8 in 10 industry workers stayed in California when they left their jobs. Of those, roughly 1 in 5 stayed in the area, while the others went elsewhere within the state.

In semi-structured interviews, oil and gas workers expressed that they have not received adequate support. Workers expressed a desire for proactive planning rather than reactive responses to layoffs, job placement pipelines into comparable industries, wage replacement during retraining, and credentialing systems that recognize existing skills rather than requiring them to start over. Wage cuts and geographic displacement were the most prominent barriers. Union workers who had been laid-off fared better than their non-unionized counterparts.

Santa Barbara County residents broadly support a phaseout and worker protections. A novel survey of more than 2,700 residents found roughly 65% support prohibiting new oil and gas operations and 60% support a phaseout of existing operations. Support rises when policies are paired with worker provisions: respondents were roughly 5 - 15 percentage points more likely to back a package providing job training or worker support, and roughly 20 percentage points more likely to support one that included inactive well clean-up and/or repurposing.

Transitions from oil and gas into other industries are not automatic. Skills-matching analysis shows most oil and gas workers have pathways into occupations with a small skills gap and comparable wages. However, workers themselves report difficulty in applying industry experience and qualifications to other industries, which could be helped via streamlined certification pathways and dedicated hiring programs. Existing County workforce development goals of upskilling and reskilling the existing workforce are also applicable.

Clean energy growth and inactive well clean-up can create new jobs in Santa Barbara County. Buildout of solar and wind energy in the county could generate over 700 new direct jobs by 2045. Additionally, there will be employment opportunities for plugging and remediating the county's thousands of idle and inactive wells.

To mitigate harm to workers, we recommend that Santa Barbara County take the following steps in parallel to a phase out of existing onshore oil and gas operations:

1. **Conduct a full landscape analysis and worker sentiment study to better understand the needs of impacted workers.** This report should serve only as a starting point. Additional data are needed to understand the full scope of worker impacts and inform transition planning.
2. **Establish a task force that directly engages impacted workers to formulate and implement transition plans.** The task force should include industry, labor, environmental justice, conservation, non-union workers, local tribal governments, researchers, workforce development representatives, and policymakers. It should design plans that coincide with the timeline of the phaseout, tailored to workers' varied needs.
3. **Require local employers to provide adequate notice and access to transition resources for all employees and contractors.** This includes expanding WARN Act protections to require longer notice periods, lower employee thresholds, and explicit coverage of contractors.
4. **Pursue local, state, and federal funding opportunities to support worker transitions.** The county should partner with workforce development offices to secure grants for job training, career planning, and well capping programs, while actively monitoring emerging federal and state funding opportunities.
5. **Utilize county policy and influence to create more good-paying, skills-aligned jobs.** This includes prioritizing displaced workers in well remediation contracts, incentivizing clean energy projects that commit to hiring locally, and creating pathways into county public sector employment for dislocated workers.



1. INTRODUCTION

The transition away from fossil fuels is already reshaping local economies across the United States. Revenues tied to oil, gas, and coal production have declined substantially in many regions, creating fiscal and employment challenges for communities where fossil fuels have been economic anchors. As policymakers consider passing fossil fuel phaseouts in pursuit of broader climate and environmental goals, they should engage workers and impacted communities in decision-making that shapes their economic futures.

The Santa Barbara County Board of Supervisors is currently considering how to use newly granted state authority to phase out new and/or existing onshore (land-based) oil and gas operations through amendments to the Santa Barbara County Code.[1] These deliberations reflect broader state trends toward phasing out fossil fuels: jurisdictions such as Los Angeles County and City, and Monterey County, have already explored or implemented policies aimed at winding down fossil fuel production, often in response to climate and environmental health concerns.[2]

To inform the policy discussion happening in Santa Barbara County, this report integrates survey-based research measuring public opinion and support for phaseout and worker support policies in Santa Barbara County with interview-based insights from fossil fuel workers and communities – those surrounding and supporting onshore oil fields in the north county/Santa Maria area, including the Lompoc, Orcutt, Cat Canyon, Cuyama and Santa Maria Valley oil fields.[3] In addition, we estimate the employment implications of the ongoing energy transition, including potential job losses associated with oil and gas phaseout, potential job gains associated with well decommissioning and site remediation, and potential employment opportunities from wind, solar, and other alternative energy development.

1 Santa Barbara County Board of Supervisors. Meeting item 25-00921: "Consider recommendations regarding the framework, approach and budget to phase out oil & gas operations[...]" October 2025. Note: It is assumed any onshore ordinances would not apply to offshore oil and gas production, like Sable Offshore's restart of production at Platform Harmony. We adopt 2028 as the estimated start date for our modeling of the impacts of a phase out of existing oil and gas operations, consistent with Phase II of the County's proposed phaseout timeline. See Santa Barbara County Planning Commission, Staff Report for Phase I Oil and Gas Prohibition Amendments, March 2026.

2 Los Angeles City Planning. Oil and Gas Drilling Ordinance; Los Angeles County Planning. Revised Oil Well Ordinance.; Solorio, L. "Monterey County's Measure Z was approved by voters but killed by the courts. State law could change that." *Monterey County Now*. May 2024.

3 Santa Barbara County Air Pollution Control District. "Status Update on Oil and Gas Operations." March 2025.



2. SANTA BARBARA COUNTY'S ONSHORE OIL AND GAS INDUSTRY

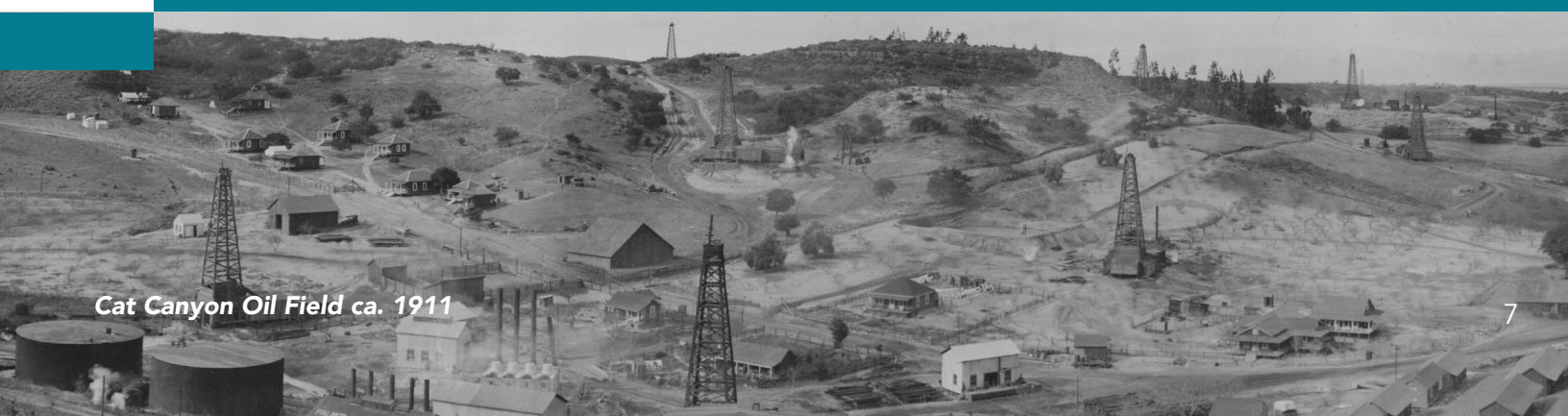
2.1 A Brief History

Oil and gas development in Santa Barbara County dates back to 1889, when surface tar seeps and natural gas venting drew prospectors to the coast, near the town of Summerland.[4] Over 400 onshore and offshore wells produced millions of barrels over the field's lifetime. The next wave of development came in the early 1900s and transformed north Santa Barbara County. In 1901, William Orcutt – Union Oil geologist and pioneer of applied geology – surveyed the Orcutt oilfield, reporting favorable conditions for exploration and development. The company leased around 70,000 acres for development and established the boomtown of Orcutt.[5] The Lompoc Oil Field was discovered in 1903, also by Union Oil. Southeast of Santa Maria, the Cat Canyon oil field was discovered shortly after, but production did not peak until the 1950s. In 2023, Cat Canyon was the highest-producing field in Santa Barbara County, accounting for nearly half of county production.[6] Further discoveries in the 1930s and 40s led to the development of the Santa Maria Valley Oil Field and South Cuyama Field. Other smaller oil fields have been discovered around the County, producing smaller quantities of oil and gas.

4 Smith, E. *Energy, the Environment, and Public Opinion*. 2002.; National Oceanic and Atmospheric Administration (NOAA). "Oil Spills, Seeps, and the Early Days of Drilling Oil Along California's Coast." July 2016.; Wilder, R.J. *Listening To The Sea: The Politics of Improving Environmental Protection*. 1988.

5 Redmon, M. "What is the history of Orcutt?" *Santa Barbara Independent*. December 2009.; Contreras, S. "Discovery of oil marked economic turning point." *Santa Maria Times*. November 2013.

6 Rincon Consultants, Inc. "Preliminary Santa Barbara County Petroleum Production Activities Greenhouse Gas Emissions Inventory and CAAP Impact Analysis." January 2025.



Cat Canyon Oil Field ca. 1911

Historically, the oil and gas produced from these fields brought economic development and jobs to the County. More recently, however, oil spills, increasing operational costs, decreasing profits, and local resistance to oil and gas activity have since challenged the industry and its workforce.

The modern era of local resistance to the oil and gas industry began with the 1969 Union Oil Platform A blowout. It was the largest-ever spill in U.S. waters, releasing an estimated 100,000 barrels into the Santa Barbara Channel and killing thousands of seabirds and marine mammals.[7] The spill galvanized the larger environmental movement in the U.S. and cemented a local culture of organized opposition to the oil and gas industry. In 2015, the Plains All American Pipeline (Line 901) ruptured near Refugio State Beach, resulting in over 3,000 barrels of crude spilling from the onshore pipeline into the ocean.[8] Local production that relied on the pipeline for transportation had to partially or fully cease operations, including ExxonMobil, Venoco, and Freeport McMoRan. Offshore platforms that depended on Line 901 to move crude to market were forced to shut down as onshore storage filled. Venoco's Platform Holly – the last platform in California state waters in the Santa Barbara Channel – never resumed production. Venoco declared bankruptcy in 2017, surrendering its assets to the California State Lands Commission, which spent years capping 30 wells and decommissioning the platform. That work was completed in September 2024, though dismantling and full removal remains to be done.[9]

The loss of nearby refining capacity, a series of high-profile spills, and sustained legal and regulatory pressures have reduced local oil production in the last decade, but some onshore production remains.

A pronounced trend over the past three decades has been large integrated oil companies divesting their Santa Barbara County assets to smaller independent operators, often with fewer financial resources for spill response or well abandonment. A key example is Greka Energy, which accumulated nearly 200 active wells in the Cat Canyon oil field by acquiring assets exited by larger companies. After decades of extraction, HVI Cat Canyon (formerly Greka Energy) was found liable for numerous oil spills, ordered to pay millions in civil penalties and clean up costs.[10] After Greka filed for bankruptcy in 2019, the state has been left responsible for cleaning up its abandoned assets.[11] To date, California has spent $36 million decommissioning 171 wells, with 38 remaining to be addressed.[12] The Santa Maria Asphalt Refinery, also owned and operated by Greka, processed crude oil sourced from local oil fields to produce asphalt. It has changed ownership several times, most recently transitioning from Greka and CAP to its current owner, Santa Maria Road Materials. The facility ceased operations in 2021 because of persistent Fire Code violations. Repairs are currently planned with an expected restart in 2026.[13]

7 NOAA. "Santa Barbara Well blowout; Santa Barbara, California." Original incident report January 1969.

8 NOAA. "Refugio Beach Oil Spill." Updated June 2025.

9 Lovely, M. "The End of Platform Holly." *Santa Barbara Independent*. September 2024; Fernandez, G. "California begins environmental review for removal of offshore Platform Holly." *KCBX*. February 2026.

10 Hodgson, M. "Greka Oil, now known as HVI Cat Canyon, found liable for $65 million for oil spills in Santa Barbara County." *Santa Maria Times*. March 2023.

11 O'Connor, T. "California's energy department begins cleaning up everything that HVI Cat Canyon left behind." *Santa Maria Sun*. April 2023.

12 California Department of Conservation. "HVI Cat Canyon State Abandonment."

13 Eggers, C. and Tucker, S. "Firm seeks to resurrect California asphalt refinery." *Argus Media*. April 2026.

These smaller, "wildcat" operators also tend to restructure, rename themselves, and create multiple entities. For instance, Hunter Resources, an oil company in Santa Barbara County, declared bankruptcy in 1991 after its Casmalia toxic waste dump faced fines and was later declared a Superfund site requiring expensive remediation and ongoing monitoring.[14] The company's previous owners then founded Vaquero Energy and PetroRock LLC, among other companies. PetroRock established substantial operations in the Cat Canyon Oilfield, eventually applying to expand steam-injection wells, but withdrew the application in 2020. PetroRock is now operating in Cat Canyon as Asphalta, LLC. Other applications to expand drilling in Cat Canyon were submitted by small oil companies Aera Energy and Terracore, but were similarly withdrawn following lengthy permitting processes and unfavorable economics.[15]

Downstream reductions in demand for crude compound these industry pressures, often with major workforce impacts. The Phillips 66 Santa Maria Refinery, located on the Nipomo Mesa in San Luis Obispo County – historically a key processing destination for Santa Barbara County crude – announced closure in August 2020. The refinery ceased operations in 2023, eliminating approximately 140 full-time positions, many of them unionized, plus an undetermined number of contractor jobs.[16] The Phillips 66 pipeline connected to its San Francisco Bay Area refinery in Contra Costa County has since been retooled to produce renewable fuels, further reducing demand for Central Coast crude.[17]

Ultimately, the loss of nearby refining capacity, a series of high-profile spills, and sustained legal and regulatory pressures have reduced local oil production in the last decade, but some onshore production remains. The following section examines how this history has shaped current production levels and the remaining workforce.

2.2 Extraction and Production

Current onshore oil and gas operations in Santa Barbara County are primarily located in the northern part of the county, with activity concentrated in the Cat Canyon, Orcutt/Orcutt Hill, Santa Maria Valley, Cuyama and Lompoc fields. The production of crude oil has decreased from 3 million barrels in 2008 to around 1.5 million barrels in 2018, increasing to just below 2.5 million barrels in 2023, with a peak of more than 4 million barrels in 2015.[18] By comparison, statewide production totalled over 120 million barrels in 2023. By field, Cat Canyon produced the highest amount of oil, 1.1 million barrels in 2023. The Orcutt field had the second highest production, 627,000 barrels in 2023.

Figure 1 shows the distribution of the active wells in Santa Barbara County as of 2026 by the operator, derived from CalGEM WellSTAR. CalGEM WellSTAR is the database of the Geologic Energy Management Division of the California Department of Conservation which tracks and reports every oil and gas-related well in California. The report compiles the characteristics of the well, its type and uses, operator and the location of the well. In creating the map, the wells are located and mapped by the longitude and latitude, and identified by the type of wells and the operator company.

14 Minsky, D. "Toxic Canyon: A quarter-century later, Casmalia is still waiting for Superfund cleanup." *Santa Maria Sun.* April 2015.

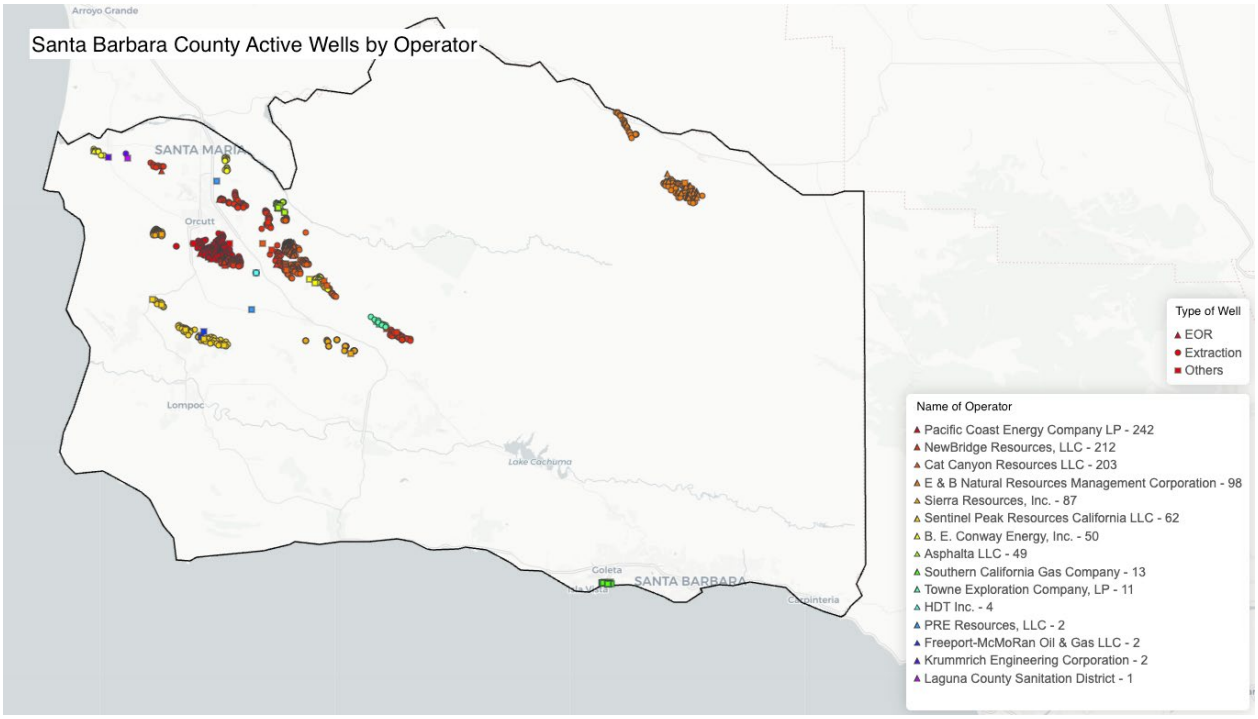
15 Yamamura, J. "Terracore Abandons New Oil Wells Project in Cat Canyon." November 2020.

16 Martin, M. "Local oil industry faces uncertainty after Phillips 66 announces refinery shutdown." *Santa Maria Sun.* August 2020.

17 Scully, J. "Phillips 66 Plans 2023 Closure of Santa Maria Refinery, Pulls Application for Pipeline Project." Noozhawk. August 2020.

18 Rincon Consultants, Inc. "Preliminary Santa Barbara County Petroleum Production Activities Greenhouse Gas Emissions Inventory and CAAP Impact Analysis." January 2025.

Figure 1. Map of Santa Barbara County Active Oil and Gas Wells by Operator



Caption: Well type, operator name, and status is derived from CalGEM WellSTAR as of 2026. Map copyrighted by OpenStreetMap contributor CARTO.

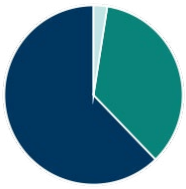
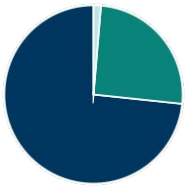
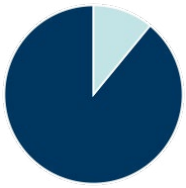
As fields age and deplete, extraction becomes increasingly energy- and carbon-intensive. At Cat Canyon, for example, continuing extraction requires tertiary recovery techniques including cyclic steam injection, gas injection, and acidizing (injecting acid to dissolve rock and open fractures).[19] Of the over 1000 active onshore wells in Santa Barbara County, 231 are considered "enhanced oil recovery" (EOR) wells, 739 wells are traditional oil and gas extraction wells, and 68 wells are for exploratory purposes, water sources, or other uses.

The primary source of oil and gas *production* emissions is the extraction process itself, including from enhanced techniques. Another significant contributor in Santa Barbara County is flaring, which is the combustion of gases, like methane, that are released during extraction.[20] This does not include downstream emissions from burning refined products, such as gasoline. Table 1 displays the major oil fields and operators in order of most productive (in barrels per day) to least productive.

19 Rincon Consultants, Inc. "Preliminary Santa Barbara County Petroleum Production Activities Greenhouse Gas Emissions Inventory and CAAP Impact Analysis." January 2025.

20 Ibid.

Table 1. Major Santa Barbara County Oil Field, Operators, and Extraction Methods

Oil Field & Well Extraction Methods		Major Operators (with active wells)
	■ = Traditional Extraction ■ = EOR □ = Other	
Cat Canyon		• Asphalta, LLC • B.E. Conway Energy • Cat Canyon Resources • Newbridge Resources
Orcutt		• Newbridge Resources • Pacific Coast Energy Company
Santa Maria Valley		• B.E. Conway Energy • Newbridge Resources
Cuyama		• E&B Natural Resources
Lompoc		• Sentinel Peak Resources, LLC
Other fields		• Sierra Resources operates wells in the Barham Ranch field and Casmalia field, over 80 wells in total • Newbridge Resources operates over 30 wells in the Zaca field • E&B Natural Resources operates over 20 wells in the Russell Ranch field

Notes: Sourced from Wellstar data year 2026 for Santa Barbara County. The full breakdown of oil fields by well type is in the Appendix.

2.3 Processing and Transport

Oil and gas processing in Santa Barbara County has decreased significantly over the past decade as key facilities have closed or gone idle. This includes processing operations; the separation of raw production into crude oil, natural gas, and natural gas liquids at or near the wellhead; and refining, which converts crude oil into finished products such as gasoline or asphalt and typically occurs at larger facilities some distance from the oilfield. Table 2 provides a summary of major onshore oil and gas operation closures and their impacts on workers.

Processing

The Santa Maria Refinery, owned most recently by Phillips 66, and the Santa Maria Asphalt Refinery, now operated by Santa Maria Road Materials, both ceased operations – the former permanently in 2023 and the latter in 2021 following ongoing fire code violations, though a restart is planned for 2026.[21] Their closures triggered a cascade of upstream shutdowns: the Lompoc Oil and Gas Plant, owned by Freeport-McMoRan and previously supplied by Platform Irene and the Point Pedernales pipelines, has been idle since 2022 after losing its export route when the Santa Maria Refinery went offline. The Venoco facility at Ellwood, which handled production from Platform Holly, has been decommissioned, and the Venoco/Chevron facility in Carpinteria, which processed output from the Pitas Point unit, is currently undergoing decommissioning.

Active onshore processing capacity in the County is now limited to a small number of facilities. E&B Natural Resources operates the New Cuyama Gas Plant, and PCEC operates the Orcutt Hill Compressor Plant, both serving local onshore fields.[22] The most significant facility currently returning to service is the Las Flores Canyon Oil and Gas Facilities – a complex including an oil plant, a stripping gas plant, an NGL/LPG loading facility, a cogen power plant, and a pipeline transportation terminal.[23]

Following Sable Offshore Corporation's acquisition of the Santa Ynez Unit and the associated Pacific Pipeline Company in 2023, and the subsequent approval of a federal Defense Production Act permit by the Trump administration, the Las Flores facility has reopened as of March 2026 to receive and process offshore production from the SYU platforms.[24] At peak pre-2015 operations, the three platforms in the unit collectively produced roughly 29,000 barrels of crude oil per day and 27 million cubic feet of gas per day.[25] The degree to which Sable restores production to those levels – or successfully defends legal challenges by the California Attorney General among other entities[26] – remains to be seen as of the time of writing.

Transport

Santa Barbara County's crude oil export infrastructure relies on two pipeline systems and, intermittently, truck transport. The Pacific Pipeline system – formerly owned and operated by Plains All American Pipeline – includes Line 901 along the Gaviota Coast and Line 903, which runs inland from Gaviota to Kern County. The system was shut down following the rupture of Line 901 in May 2015, which halted crude exports from six offshore platforms. After years out of service, Sable rebranded the system as the "Las Flores" pipeline and, following the issuance of a federal Defense Production Act permit, restarted operations.

21 Eggers, C. and Tucker, S. "Firm seeks to resurrect California asphalt refinery." *Argus Media.* April 2026.

22 Santa Barbara County Air Pollution Control District."E&B – South Cuyama"; Santa Barbara County Air Pollution Control District. "Orcutt Hill and Casmalia Oil Fields."

23 County of Santa Barbara Planning and Development. "SYU, POPCO Gas Plant & Las Flores Pipelines Permit Transfer." 2025.

24 Welsh, N. "Trump Gives Sable Go-Ahead to Restart Oil Production in Santa Barbara Channel." *Santa Barbara Independent.* March 2026.

25 Sable Offshore Corp. *Investor Presentation*. November 2024.

26 Rob Bonta Attorney General. "Attorney General Bonta Files Lawsuit Against the Trump Administration to Stop Executive Overreach Purporting to Authorize Illegal Oil Transportation in Sable Pipelines." March 2026.

The Phillips 66 pipeline consists of Line 300 and associated feeder pipelines that originate at the Lompoc Oil and Gas Plant and historically transported crude oil to the Phillips 66 Santa Maria Refinery in San Luis Obispo County. This system previously carried oil from Platform Irene, the Lompoc Field, and other onshore sources but has been idle since the refinery closed in January 2023.

Trucking has historically served as a stopgap export route when pipelines are unavailable, but it has not proven to be a durable or politically viable solution. Santa Barbara County denied an Exxon proposal to truck crude from the Las Flores Gas Plant to the Santa Maria Pump Station – or onward to Kern County – that would have allowed offshore operations to restart ahead of the pipeline's return to service.[27] Opposition centered on the risk of spills on coastal routes and broader community resistance to using public roads for oil exporting. Sentinel Peak Resources has separately proposed a trucking operation to resume crude exports from its onshore fields, and that proposal remains under county review.[28]

Table 2. Local Worker Impacts of Major Oil and Gas Facility Closures

Operation	Status	Impact on Workers
Santa Maria Refinery (in San Luis Obispo County): Built by Union Oil in 1955. Most recently owned by Phillips 66. It processed 21,000 barrels of crude oil per day for further processing at the Rodeo Refinery.[29]	Ceased operations in January 2023 following the conversion of the Rodeo Refinery into a renewable fuels facility ("Rodeo Renewed").[30] Its feeder pipeline (Line 300) subsequently shut down.[31]	In 2021, the refinery had 78 plant employees and 53 contractors.[32] In 2023, 140 full-time workers based in SLO County, mostly union with the United Steelworkers Local 534,[33] lost their jobs. Rodeo Renewed effectively eliminated the primary export route for the Lompoc oil field, idling the Lompoc Oil and Gas Plant and triggering the loss of associated field and plant jobs.
Santa Maria Asphalt Refinery: Developed for its current use in 1995 by Saba Petroleum Co and bought by Greka Energy in 1999.[34] After numerous safety incidents, ownership transferred to California Asphalt Production (CAP) and, now, Santa Maria Road Materials.[35] The refinery accepted crude oil from local oil fields, separated and refined the oil, and produced asphalt.[36] It also had a truck transportation facility.[37]	Due to ongoing Fire Code violations, the Santa Barbara County Fire Department issued a stop-work order in 2021. CAP filed for bankruptcy in 2024, and in 2025 CAP Resolution Partners (doing business as Santa Maria Road Materials) acquired the refinery. A proposed restart in 2026 remains subject to approval.[38]	Federal reporting from the late 1990s indicates the refinery employed 21 company workers and 2 contract hires, along with approximately 25 truck drivers and 5 contract mechanics.[39] More recent employment figures for operation or restoration are not publicly available.

Table continued on next page.

27 O'Connor, T. "County Supervisors' Rejection of the ExxonMobil Oil Trucking Proposal Highlights a Decades-Long Debate." *Santa Maria Sun*. March 2022.

28 County of Santa Barbara Planning & Development Department. "Sentinel Peak Truck Rack Project." 2025.

29 Middlecamp, D. "After nearly seven-decade run, Santa Maria oil refinery to cease operations by 2023." *The Tribune*. August 2020.

30 Fallas, B. "Rodeo Renewed gets green light from local county." *Phillips 66*. May 2022.

31 Contra Costa County. *Responses to Comments. Rodeo Renewed Project, Final Environmental Impact Report.* March 2022.

32 Hodgson, M. "Phillips 66's Santa Maria Refinery on Nipomo Mesa shuttered Friday." *Santa Maria Times*. January 2023.

33 National Labor Relations Board. *Phillips 66, Case No. 31-CA-085243. Board Decision*. January 2020.; Martin, M. "Local oil industry faces uncertainty after Phillips 66 announces refinery shutdown." *Santa Maria Sun*. August 2020.

34 California Energy Commission (CEC). "California Oil Refinery History." January 2026.

35 Yamamura, J. "Greka Found Operating Open Waste Pit Without Permit." Santa Barbara Independent. February 2019.; Scully, J. "Asphalt Spill Prompts Hazmat Response to Greka Plant West of Santa Maria." Noozhawk. August 2019.; Stewart, E. "Greka and County Reach Historic Settlement." Santa Barbara Independent. March 2011.

36 County of Santa Barbara Planning & Development Department. "Santa Maria Asphalt Refinery." 2026.

37 Dames & Moore. *Final California Offshore Oil and Gas Energy Resources Study.* U.S. Department of the Interior Minerals Management Service. January 2000.

38 County of Santa Barbara Planning & Development Department. "Santa Maria Asphalt Refinery." 2026.

39 Dames & Moore. *Final California Offshore Oil and Gas Energy Resources Study.* U.S. Department of the Interior Minerals Management Service. January 2000.

Table 2 cont.

Lompoc Oil and Gas Plant: Began operating in 1987. It accepted oil and gas from Platform Irene and the Point Pedernales Pipelines.[40]Owned by Freeport-McMoRan.[41]	Ceased operations in January 2023 when the export pipeline system (Line 300) and associated Santa Maria Refinery closed.[42] Facility is shut-in until an export pipeline or other transportation method is made available.[43]	Before closure, Platform Irene required about 70 workers (15 for normal operations and 55 drilling) when actively drilling.[44] Lompoc Oil and Gas Plant employed 26 workers and contractors, none unionized.[45]
Gaviota Oil Heating Facility: Accepted oil and gas from Point Arguello offshore platforms. Oil and gas was processed and then shipped to refineries through the Plains pipeline system. It is owned by Freeport-McMoRan.[46]	Facility gas plant was abandoned and dismantled by 2009.[47] Operations ceased after the 2015 Plains All American Pipeline spill, and offshore platform abandonment began in 2021. Onshore infrastructure now proposed for final abandonment.	Direct worker impacts were likely spread across a 5 year period, 2004 - 2009. Exact estimates are unknown. Decommissioning is expected to employ over 100 workers.[48]
Las Flores Canyon Oil and Gas Facilities and Pipelines: Historically accepted oil and gas from Santa Ynez Unit (SYU) offshore platforms. Processed and then shipped gas products locally and shipped crude to refineries through the (prev.) Plains pipeline system.[49]	Previously "shut-in" since the 2015 Plains pipeline spill. Sable Offshore Corporation purchased the SYU and all shares of POPCO and Pacific Pipeline Company in 2023.[50]As of March 2026, reopened to receive and process offshore production from the SYU platforms.	A reported 155 jobs were lost across the production chain after 2015 Plains pipeline Line 901 shut down.[51] A reported 100 workers and 400 contractors are employed by Sable in Santa Barbara County following the restart.[52]

40 County of Santa Barbara. *Tranquillon Ridge Oil and Gas Development Project, Final Environmental Impact Report, Section 2.0: Project Description.* June 2002.

41 County of Santa Barbara Planning & Development Department. "Point Pedernales Pipelines, Lompoc Oil and Gas Plant."

42 Santa Barbara County Air Pollution Control District. "Status Update on Oil and Gas Operations." March 2025.

43 County of Santa Barbara Planning & Development Department. "Point Pedernales Pipelines, Lompoc Oil and Gas Plant."

44 County of Santa Barbara. *Tranquillon Ridge Oil and Gas Development Project, Final Environmental Impact Report, Section 2.0: Project Description.* June 2002.

45 U.S. Securities and Exchange Commission. *Freeport-McMoRan Oil & Gas Inc. Registration Statement on Form S-1.* June 2015.

46 County of Santa Barbara Planning & Development Department. "Point Arguello Pipelines, Gaviota Oil Heating Facility."

47 Ibid.

48 Padre Associates, Inc. *Decommissioning of the Gaviota Facilities and Pipelines within Santa Barbara County, Project Description*. October 2025.

49 County of Santa Barbara Planning & Development Department. "Santa Ynez Unit, POPCO Gas Plant, Las Flores Pipeline System."

50 Ibid.

51 Pacific Coast Business Times. "Refugio oil spill pipeline might take five years to get back online." November 2015.

52 U.S. Department of Energy. "Secretary Wright Directs Sable Offshore to Restore the Santa Ynez Unit and Pipeline." March 2026.

Table 2 cont.

Venoco Onshore Processing at Ellwood processing plant: Built in 1966 by Arco, acquired by Mobil in 1993, and by Venoco in 1997.[53] Holly supplied offshore oil and gas to the Ellwood Onshore Facility for processing. Platform Holly produced about 4,100 barrels of oil per day.[54]	Operations at Ellwood ceased after the 2015 Plains pipeline spill, which eliminated the primary export pathway.[55] Financial and regulatory pressures also contributed to Venoco's 2017 bankruptcy and relinquishment of offshore leases.[56] California State Lands Commission responsible for maintenance and decommissioning.[57] As of 2026, Platform Holly's 30 wells are plugged, and considerations have transitioned to removal.[58]	Venoco's bankruptcy resulted in the loss of approximately 110 direct jobs, including at onshore processing facilities.[59] Platform Holly operations typically employed 30–40 workers.[60] Recent decommissioning activities employed rotating crews of roughly 30–40 workers.[61] The platform is now destaffed and remotely monitored.[62] It is unclear how many would be employed during the platform's removal. The Ellwood Onshore Facility is no longer connected to Platform Holly.[63] Decommissioning is a separate initiative.[64] Carpinteria Oil and Gas Facility decommissioning is expected to take 3 years and employ 10-15 workers.[65]
Venoco Onshore Processing at Carpinteria processing plant: The processing facility was constructed in 1959.[66] Venoco assumed full ownership and operation of multiple offshore leases and onshore processing infrastructure in 1998. The plant processed oil and gas from the offshore Pitas Point Unit.	Operations also stopped after Venoco's bankruptcy in 2017.[67] Ownership and decommissioning responsibility reverted to Chevron under its prior sales agreement.[68] Decommissioning began in early 2026.[69]	

53 De la Garza, A. "Shutting Down Old Oil Rigs is Harder–And More Expensive–Than it Sounds." *Time*. October 2019.

54 California State Lands Commission Mineral Resources Management. *Safety and Oil Spill Prevention Audit, Platform Holly*. December 2012.

55 De la Garza, A. "Shutting Down Old Oil Rigs is Harder–And More Expensive–Than it Sounds." *Time*. October 2019.

56 California Coastal Commission. *Coastal Management Program Draft 309 Assessment and Strategy*. December 2020.

57 De la Garza, A. "Shutting Down Old Oil Rigs is Harder–And More Expensive–Than it Sounds." *Time*. October 2019.

58 Fernandez, G. "California begins environmental review for removal of offshore Platform Holly." *KCBX*. February 2026.

59 EnerCom, Inc. "Venoco Calls it Quits - Company Files Chapter 11 Again." *Oil & Gas 360*. April 2017.

60 Shuda, A. "Platform Holly Decommission Stalled Due to Covid-19 Pandemic." *Daily Nexus*. September 2020.

61 Cummings, S. "Decommissioning Stalls at Platform Holly, Continues at Pier 421." *Santa Barbara Independent*. August 2020.

62 Fernandez, G. "California begins environmental review for removal of offshore Platform Holly." *KCBX*. February 2026.

63 California State Lands Commission. *Notice of Preparation of Draft Environmental Impact Report and Notice of Public Scoping Meeting, Platform Holly Decommissioning Project.* January 2026.

64 Ibid.

65 City of Carpinteria. "Oil Processing Facility Decommissioning & Remediation." 2026.; City of Carpinteria Community Development. *Final Environmental Impact Report, Decommissioning and Remediation of the Chevron Carpinteria Oil & Gas Processing Facility Project*. March 2025.

66 City of Carpinteria. "Carpinteria Operations." 2026.

67 Taylor, J. "Chevron Carpinteria facility fading away." *Sierra Club*. October 2022.

68 Guentz, S. "Santa Barbara County Decommissions Former Venoco Goleta-to-Gaviota Oil Pipeline." *Noozhawk*. September 2023.

69 City of Carpinteria. "Oil Processing Facility Decommissioning & Remediation." 2026.; Palminteri, J. "Aging Oil Tanks Coming Down in Carpinteria." *News Channel 3*. March 2026.

Figure 2. Onshore Oil and Gas Supply Chain - Santa Barbara County

Transport

Activities

Pipeline Lines 901 and 903 export to Kern County, with pump stations throughout. Oil tanker truck loading racks are located in or near oil fields and truck routes are cross-county and beyond. Active and inactive storage tanks located in Santa Maria, Lompoc, Gaviota, Las Flores Canyon, Carpinteria.

Major Firms

Phillips 66 Pipeline, LLC • Pacific Pipeline Company • Pacific Petroleum CA, Inc

Typical Occupations

Pump Operators • Heavy and Tractor-Trailer Truck Drivers • Tank Car, Truck, and Ship Loaders



Out of County for Refining

Extraction & Production



Activities

Activity is concentrated in the Cat Canyon, Orcutt/Orcutt Hill, Santa Maria Valley, Cuyama and Lompoc fields. Almost a quarter of active wells use enhanced oil recovery methods.

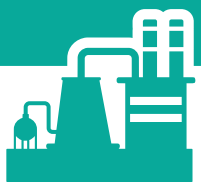
Major Firms

Pacific Coast Energy Company LP • Newbridge Resources, LLC • Cat Canyon Resources LLC • E & B Natural Resources • Sierra Resources, Inc. • Sentinel Peak Resources California LLC • B. E. Conway Energy, Inc. • Asphalta LLC • Kenai Drilling Ltd • Horizon Well Logging Inc

Typical Occupations

Roustabouts • Derrick Operators • Wellhead Pumpers • Service Unit Operators • Petroleum Engineers • Geoscientists

Local Processing



Activities

Active processing of onshore production is happening at New Cuyama and Orcutt hill processing plants, but most local refining of onshore production has shuttered in recent years.

Shuttered facilities: Phillips 66 Santa Maria Refinery, Santa Maria Asphalt Refinery (potentially re-opening), Lompoc Oil and Gas Plant, Venoco's onshore processing facilities.

Major Firms

Pacific Coast Energy Company LP • E & B Natural Resources

Typical Occupations

Petroleum Pump System Operators, Refinery Operators, and Gaugers • Industrial Machinery Mechanics

County Line



Within-County Consumption

3. PRELIMINARY LOCAL WORKFORCE ANALYSIS

3.1 Local Workforce Data Availability and Limitations

Estimates of oil and gas employment in Santa Barbara County vary widely and carry meaningful uncertainty. The Bureau of Labor Statistics Quarterly Census of Employment and Wages (QCEW) reports 690 workers under "Mining, Quarrying, and Oil and Gas Extraction" (i.e., North American Industry Classification System (NAICS) code 21) for Q3 2025. However, this figure includes an estimated 209 workers in non-oil-and-gas mining activities (NAICS 212 – principally diatomaceous earth and industrial sand mining).[70] Subtracting these yields a lower bound of 481 workers in direct Oil and Gas Extraction (OGE) roles: 114 in "oil and gas extraction" (NAICS 211) and 367 in "support activities for oil and gas operations" (NAICS 213), which in Santa Barbara County consists entirely of drilling and well-servicing firms.[71]

This estimate of 481 jobs should serve as a floor for the county as it fully investigates oil and gas employment. First, broader OGE-adjacent employment is harder to estimate from standard industrial classifications alone. For example, two additional OGE-specific sectors have so few confirmed establishments in the county that BLS censors their employment counts: at least one asphalt manufacturing facility (NAICS 324) and two crude pipeline operators (NAICS 486).[72] Beyond oil and gas specific sectors, "Professional, Scientific, and Technical Services" (NAICS 54) encompasses a diversity of firms – including engineering, environmental consulting, and geoscience firms that service the oil and gas industry and are often dependent on it. However, the majority of the workers counted here serve far more sectors than just oil and gas. Similarly, "Transportation and Warehousing" (NAICS 48) covers freight and transport activity in the county, including tank-truck drivers, but the vast majority of workers in this sector serve industries beyond oil and gas. In both cases, standard data provide no way to disaggregate OGE-serving employment from broader totals. Furthermore, official estimates from state and federal agencies often contradict one another.[73]

Second, many official estimates only count wage-and-salary workers, excluding proprietors, self-employed workers and independent contractors. If a significant share of oil and gas workers are independent contractors (a common arrangement in NAICS 213), official counts can systematically undercount the transition-affected population. For example, workforce estimates generated with the proprietary economic model "IMPLAN" are often higher than official counts in part because IMPLAN estimates the number of proprietors, self-employed, and contract workers that BLS excludes.

70 U.S. Bureau of Labor Statistics. "Quarterly Census of Employment and Wages." 2022.; State of California Employment Development Department. "Employer Search Results." 2026.

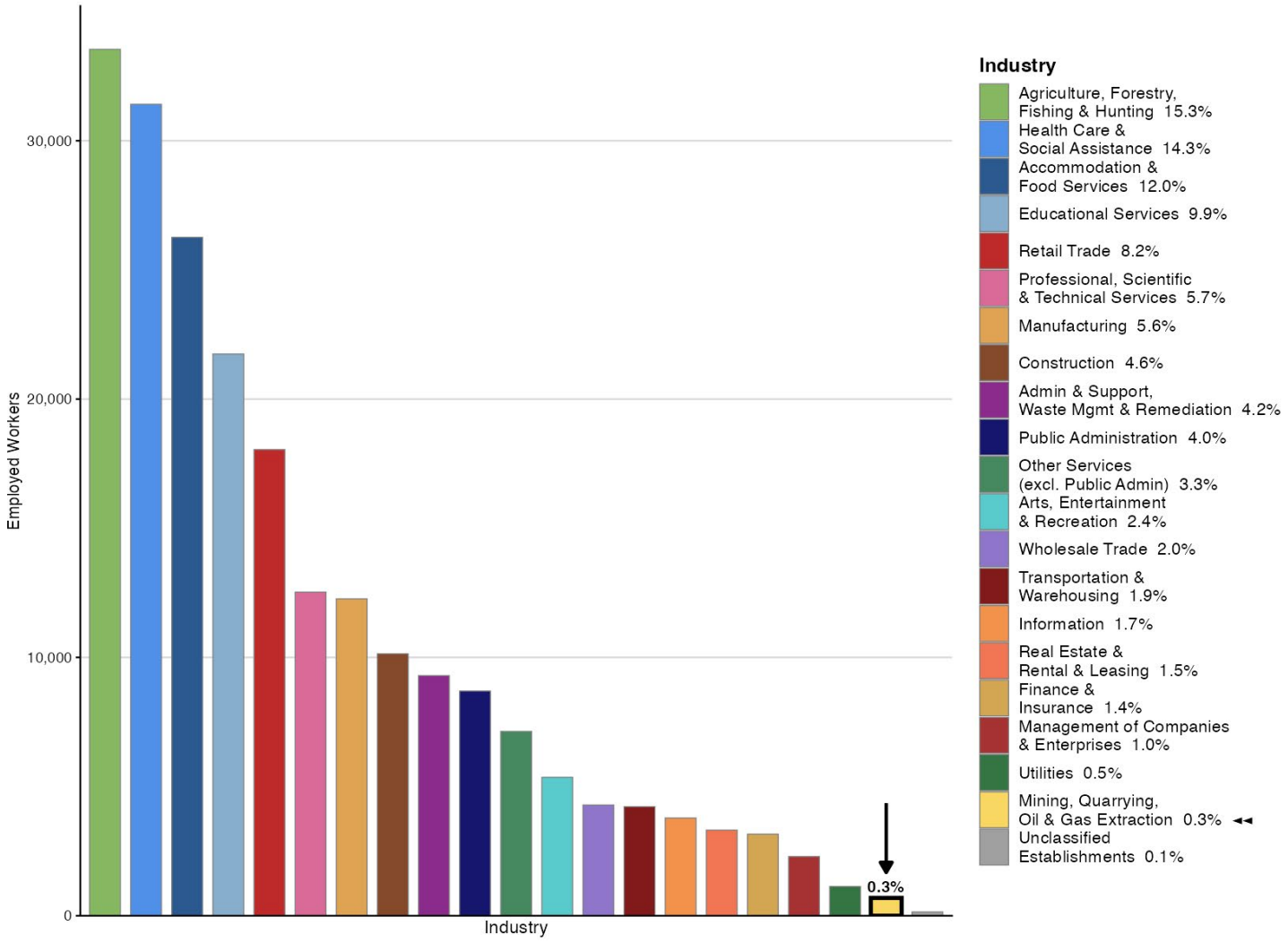
71 State of California Employment Development Department. "Employer Search Results." 2026.

72 U.S. Bureau of Labor Statistics. "Quarterly Census of Employment and Wages." 2022.

73 For example, the California Employment Development Department (EDD) reports ten Santa Barbara County employers in crude petroleum extraction (NAICS 211, data year 2026) with only 10 - 40 employees total, far fewer than BLS. EDD also reports 16 employers in support activities (NAICS 213) with a cumulative 476 - 1054 employees, far more than BLS.

These data limitations are the basis of our first recommendation, which is that the county establish an accurate list of affected workers not based on economic models or BLS data, but rather county records of employment: who they are, where (generally) they live, and how many would be affected by an onshore oil phaseout ordinance. This is a fundamental first step in engaging these workers in transition planning, via a task force or otherwise, and is discussed further in the recommendations section.

Figure 3. Santa Barbara County Employment by 2-digit NAICS Industry



Caption: Data reflect all jobs for workers employed in Santa Barbara County as reported by the Bureau of Labor Statistics Quarterly Census of Employment and Wages (QCEW, 2025). The Mining, Quarrying, Oil & Gas Extraction sector (highlighted) encompasses not only oil and gas workers, but also mining and quarrying operations, including firms like Imerys Filtration Minerals, a large industrial sand mining operation in Lompoc.

3.2 Occupations and Typical Salaries

The fossil fuel workforce in Santa Barbara County is composed of both directly employed workers and a broader network of indirectly supported workers tied to supply-chain and industry-servicing activities. Unlike many local industries where a single firm staffs a single facility, oil and gas worksites typically host workers from multiple companies simultaneously. Table 3 presents a set of onshore oil and gas occupations tailored to the kind of onshore extraction and support activity happening in Santa Barbara County, ranging from entry-level field work to senior engineering roles.[74] Average salaries are drawn from BLS data at the Santa Maria-Santa Barbara level, with California state-level wage substituted where local data are unavailable.[75]

The "direct" workforce generally refers to workers employed by firms engaged in oil and gas extraction (NAICS 211). These workers plan, manage, and oversee extraction operations, combining field-based technical staff with professional roles. Petroleum engineers, for example, earn a mean salary of $147,000 in California. Petroleum pump system operators monitor flow systems, storage tanks, and processing units, earning an average salary of $103,000.

Although operators control production at the site of extraction, they often directly employ only a fraction of the wider workforce. Specialized contractor firms carry out various activities required for production, including drilling, servicing, equipment maintenance, transportation, environmental compliance, and other technical functions. A substantial share of onsite personnel are employed by firms classified as support activities (e.g., in NAICS code 213). Jobs in this category span a wide range of skill levels and earn salaries similar to the state average of $80,000. However, these average wages are relatively high given entry-level educational requirements of a high school diploma (or less).[76] Rotary drill operators who set up or operate drill rigs earn about $89,000 per year. Derrick operators ($64,000), roustabouts ($56,000), and service unit operators ($71,000) assemble, repair, and manage oil production equipment in the field. Operators often rely on contract labor so they can scale drilling operations up or down by adjusting service contracts rather than hiring or laying off permanent employees.

Outside the core extraction occupations, industry support roles are also relatively high-paying. Heavy and tractor-trailer truck drivers earn over $57,000 locally with a high school diploma and require commercial driver's licenses (CDL). Engineers, geoscientists, and environmental consultant positions require higher entry-level educational attainment but earn higher salaries. For example, geoscientists in the region make over $110,000 per year. These workers often need specialty certifications beyond their Bachelor's degree, including a Professional Geologist license.[77]

74 This list of occupations is not meant to be a comprehensive list for Santa Barbara County, but rather should serve as a first look at typical salaries, wages, and experience.

75 U.S. Bureau of Labor Statistics. Occupational Employment and Wage Statistics. Santa Maria-Santa Barbara Estimates. California Estimates. May 2024.

76 Public Policy Institute of California. "Work Experience and Field of Study Matter for Graduates' Earnings." April 2025.

77 Harbor Compliance. "Obtaining and Maintaining a California Professional Geologist License–A Quick Guide."

Table 3: Typical Onshore Oil and Gas Occupations in Santa Maria-Santa Barbara Area – Wages, Education, and Experience (sorted by annual salary and education requirements)

Title (Standard Occupational Classification) & Description	Avg. Annual Salary	Typical Entry-Level Educ.	Typical Related Work Experience
Helpers – Extraction Workers (47-5081): Assist craft workers such as drillers and operators with extraction tasks and equipment maintenance on oil and gas sites.	$47,880	High school or less	None
Extraction Workers, All Other (47-5099): Perform all other extraction worker tasks not separately classified, including well monitoring and minor field maintenance.	$51,170	High school or less	None
Pump Operators, Except Wellhead Pumpers (53-7072): Operate pump systems to move fluids such as crude oil and produced water between storage tanks, pipelines, and processing equipment.	$55,210	High school or less	1–2 years
Roustabouts, Oil and Gas (47-5071): Perform routine manual labor in the maintenance and operation of oil and gas fields, including cleaning, digging, and equipment handling.	$56,050	High school or less	1–2 years
Heavy and Tractor-Trailer Truck Drivers (53-3032): Transport petroleum products, drilling equipment, and field supplies to and from oil and gas locations using heavy commercial vehicles.	$57,660*	High school or less	1–2 years
Tank Car, Truck, and Ship Loaders (53-7121): Load and unload petroleum products, chemicals, and equipment from tank trucks, railcars, or vessels at production sites or terminals.	$62,240	High school or less	None
Derrick Operators, Oil and Gas (47-5011): Operate derrick engines and hoists to raise and lower drill strings, tubing, and sucker rods during drilling or workover operations.	$64,170	High school or less	2–4 years
Wellhead Pumpers (53-7073): Operate and monitor oil and gas wells, adjusting pump speeds and gauges to control flow rates and production.	$67,880	High school or less	1–2 years
Service Unit Operators, Oil and Gas (47-5013): Operate equipment used to maintain, stimulate, and service oil and gas wells, including cementing, acidizing, and perforating.	$71,470	High school or less	1–2 years
Riggers (49-9096): Attach loads to rigging equipment and use cranes or hoists to lift, move, and position heavy equipment and materials on well sites.	$86,490	High school or less	None
Rotary Drill Operators, Oil and Gas (47-5012): Operate and monitor rotary drilling machinery to bore oil and gas wells to specified depths.	$89,370	High school or less	2–4 years
Petroleum Pump System Operators, Refinery Operators, and Gaugers (51-8093): Operate pumps, gauges, and pipeline systems to move and process crude oil and refined petroleum products.	$102,960	High school or less	1–2 years
Industrial Machinery Mechanics (49-9041): Repair, install, adjust, and maintain pumps, compressors, and other mechanical equipment at oil and gas production facilities.	$67,890*	Some college / AA degree	1–2 years
Electrical and Electronics Repairers, Commercial and Industrial Equipment (49-2094): Repair, test, adjust, and install electronic equipment, instruments, and control systems, including motors and instrumentation at oil and gas facilities.	$81,970*	Some college / AA degree	1–2 years
Geological Technicians, Except Hydrologic Technicians (19-4043): Assist geoscientists by collecting rock, soil, and fluid samples, running laboratory tests, and maintaining field instruments and data.	$78,300	Bachelor's degree or higher	None

Table continued on next page.

Table 3 cont.

Geoscientists, Except Hydrologists and Geographers (19-2042): Study subsurface geology to identify oil and gas reservoirs, interpret seismic data, and provide technical support for exploration decisions.	$110,130*	Bachelor's degree or higher	6 months–1 year
Mining and Geological Engineers, Including Mining Safety Engineers (17-2151): Design extraction plans for oil, gas, and mineral deposits and supervise operations to ensure safe and efficient production.	$135,060	Bachelor's degree or higher	1–2 years
Petroleum Engineers (17-2171): Design methods for extracting oil and gas from underground reservoirs and supervise drilling, production, and reservoir management.	$146,850	Bachelor's degree or higher	6–8 years

*Notes: Selected fossil fuel occupations most relevant to onshore oil and gas production in the Santa Maria–Santa Barbara area. California state-level wage substituted where local data(*) are unavailable or suppressed. The full list of benchmark fossil fuel industry jobs derived from Greenspon and Raimi (2025)78 is in the Appendix. Sources: Annual mean wage from BLS OEWS May 2024. Education and work experience sourced from O*NET "Education, Training, and Experience" database.79 Both columns report the modal (most commonly reported) category for each occupation. SOC 19-4043 and SOC 47-5099 imputed according to adjacent extraction worker codes.*

3.3 Worker Demographics

Preliminary analysis of U.S. Census data suggests that the core Santa Maria-Santa Barbara oil and gas workforce is disproportionately male and Hispanic, with lower levels of formal educational attainment than the Census average for the region (Figure 4).

All four active oil and gas and adjacent industries are heavily male-dominated, but less so in the engineering and geoscience trades. Hispanic or Latino workers are over-represented in extraction, support, and transport – above the Santa Maria-Santa Barbara metro average. The majority of the workforce is 25 - 44 years old, with about a quarter nearing or at retirement age (age 55 and up). Finally, and as reflected in Table 3 above, extraction, support, and transport workers are disproportionately workers without post-secondary degrees.

78 Greenspon, J. and Raimi, D. "Finding the Right Fit: What Jobs Offer a Good Match for Fossil Fuel Workers' Skills?" *RFF.* March 2025.

79 O*NET Resource Center. "O*NET 30.2 Database." February 2026.

Figure 4. Oil and Gas Industry Workforce Demographics – Santa Maria-Santa Barbara Metro Area



1. The regional baseline includes all workers across every industry sector employed in the Santa Maria–Santa Barbara metropolitan area, averaged across 2023 Q1 – 2025 Q2. (approximately 195,000 workers per quarter).

2. Covers workers directly employed in extracting crude petroleum and natural gas from the ground, including Wellhead Pumpers (53-7073), Roustabouts (47-5071), Petroleum Engineers (17-2171), among other roles.

3. Covers firms that provide specialized services to oil and gas operators, mostly under contract, including exploration and mapping done by technical specialists and drilling crews and well servicing done by Rotary Drill Operators (47-5012) and Derrick Operators (47-5011).

4. Covers firms operating specialized equipment —tanker trucks, flatbeds, etc.—across any industry, not exclusively oil and gas. An unknown subset haul petroleum products, equipment, or supplies for the oil sector. Jobs include Heavy and Tractor-Trailer Truck Drivers (53-3032) and Tank Car, Truck, and Ship Loaders (53-7121).

5. Covers all engineering, environmental consulting, geophysical and architectural firms operating in the area, the large majority of which serve clients across multiple sectors. Only a subset of workers are engaged in oil and gas-related work including Geoscientists (19-2042).

Source: U.S. Census Bureau, Quarterly Workforce Indicators (QWI), averaged across 2023 Q1-2025 Q2. Santa Maria-Santa Barbara MSA.
Note: Estimates for NAICS4842 and NAICS 5413 – marked with an asterisk (*) – should be interpreted as rough estimates of oil and gas worker demographics. Both codes cover industries substantially broader than oil and gas. Estimates for workers in Petroleum & Coal Products Manufacturing (NAICS 3241) and Pipeline Transportation of Crude Oil (NAICS 4861) are suppressed by the Census because there are too few workers for disclosure-safe release.

3.4 Where Do Oil and Gas Workers Go When They Leave Their Jobs?

The oil and gas workforce in Santa Barbara County is slowly shrinking: the sector has not replaced departing workers at a 1:1 rate in most years since 2009.[80] Boom and bust hiring and separations are characteristic of extraction industries dependent on commodity prices, a component of a broader phenomenon known as the "resource curse."[81] This has been particularly acute in California's oil and gas industry as production has faced a steady decline since the 1980s, mostly due to declining reservoir pressure and reserves depletion. Refinery closures in the state have had the largest impact on employment as refineries carry a much larger workforce than extraction and other operational activities.[82]

To better understand where local industry workers may go after a potential onshore oil and gas phaseout, and into what industries, we looked at where they have gone in the past.

Using data from the U.S. Census Bureau's Longitudinal Employer-Household Dynamics (LEHD) program, we traced job-to-job transitions out of Mining, Quarrying, and Oil and Gas Extraction (NAICS Sector 21) in the Santa Maria-Santa Barbara metro area between 2014 and 2024 (Figure 5).[83] Eight in ten industry workers stayed in California when they left their jobs. Of those, roughly one in five stayed in the area; the remainder dispersed to other California labor markets. Out-of-state migration is concentrated in other oil-producing states – Texas alone accounts for 6% of all exits, and the top five out-of-state destinations (TX, NV, AZ, NM, ND) are all oil, gas, or mining economies.

The dominant pattern is that the plurality of workers leaving local oil and gas jobs either cycle back into the sector at a different employer or location, or move to closely adjacent industries (e.g., construction, manufacturing, transportation). These data show that if local oil and gas employment decreases as a result of a phaseout policy, displaced workers may face a skills mismatch with the region's existing employment sectors and may instead choose to relocate to other oil-producing states.

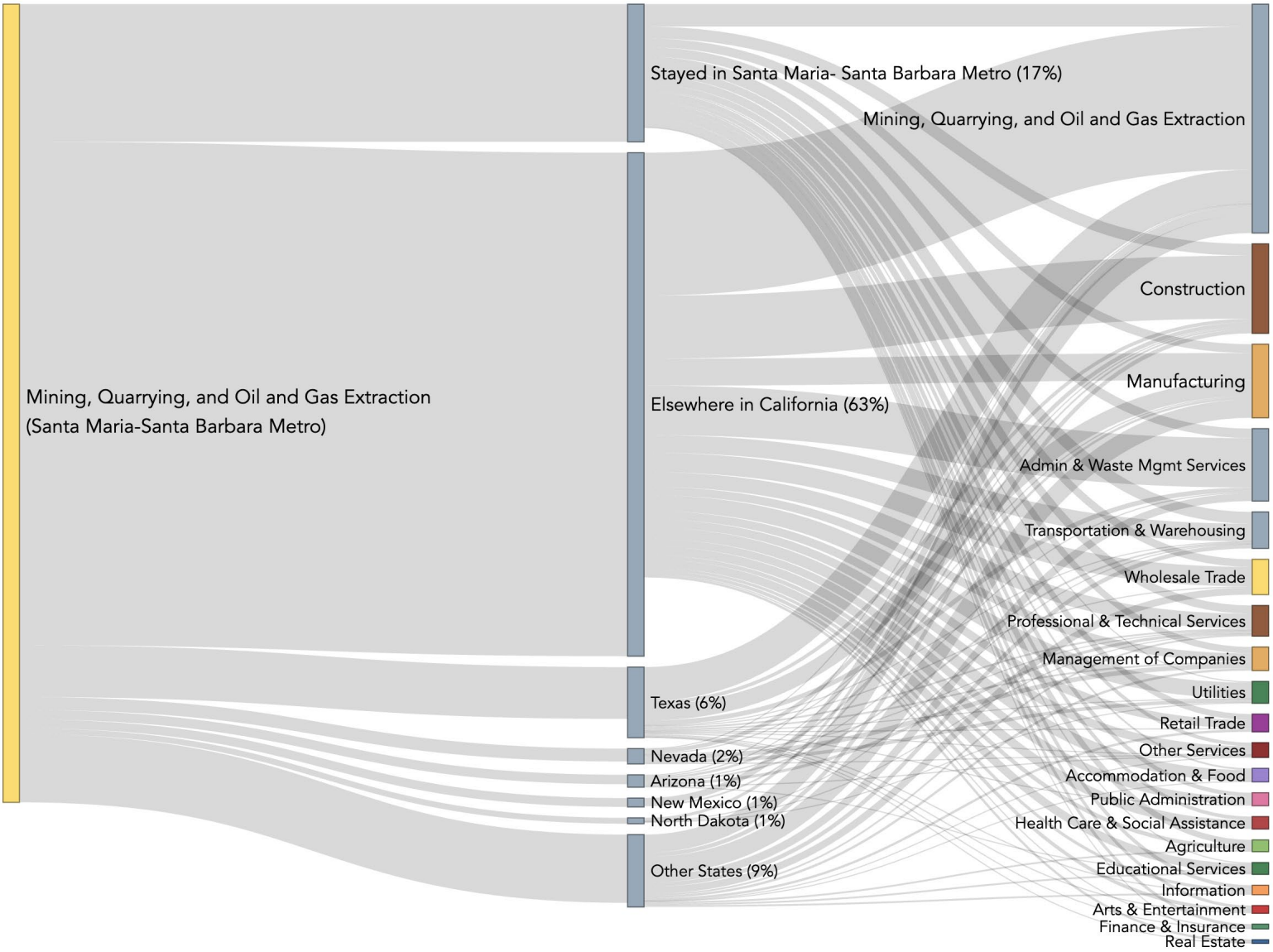
80 U.S. Census Bureau. "Longitudinal Employer-Household Dynamics (LEHD)." *USA.gov.*

81 Ross, M. "The oil curse: How petroleum wealth shapes the development of nations." *Princeton University Press.* 2012.; Abboud, A. and Betz, M. "The local economic impacts of the oil and gas industry: Boom, bust and resilience to shocks." *Energy Economics.* April 2021.

82 Mahdavi, P. "Analysis of California's oil refineries amid declining demand." EGAPE Lab. September 2025.

83 NAICS code 21 is the lowest available resolution in this dataset, so the analysis necessarily includes workers leaving the mining and quarrying industry in the County. However, the vast majority of NAICS 21 workers in the county have historically been in oil and gas extraction and support activities.

Figure 5. Where Do Santa Barbara County Oil & Gas Industry Workers Go When They Leave Their Jobs?



Caption: The figure shows worker transitions out of Mining, Quarrying, and Oil and Gas Extraction (NAICS Sector 21) in the Santa Maria-Santa Barbara MSA between 2014 and 2024. Source: U.S. Census Bureau, Longitudinal Employer-Household Dynamics (LEHD). Census applies noise infusion to all Job-to-Job estimates. Individual flow counts are approximate and should be interpreted as estimates rather than precise.

3.5 Summary of Preliminary Local Workforce Analysis

Taken together, these high-level data paint a picture of a relatively small but meaningful workforce, spanning a wide range of skill levels and compensation. Generally, most field and support roles require no more than a high school diploma and limited prior experience, yet pay well above what workers with those credentials typically earn. This premium reflects the high-risk nature of oil and gas work.[84] Preliminary analysis of census data subset to the Santa Maria-Santa Barbara metro area suggests an oil extraction workforce that is disproportionately male and hispanic in the field and support occupations, a pattern consistent with the broader demographics of oilfield labor in California. And when workers do leave the local industry, separation data suggest they tend to leave the region.

New regulatory authority granted to the county could impact this workforce greatly. Effective January 2025, the Local Environmental Choice and Safety Act (AB 3233) substantially expanded the authority of cities and counties to regulate, limit, or prohibit oil and gas operations within their borders through local ordinance. Several jurisdictions have already moved under AB 3233, including the City and County of Los Angeles and Monterey County.

As the Santa Barbara County Board of Supervisors considers taking action to prohibit new onshore oil and gas drilling and phase out existing operations, what do Santa Barbara County residents and potentially impacted workers think about these policies? Below, we present qualitative worker interviews and a public opinion survey we ran in the county that directly addresses this question.

84 Wingate, K., Ramirez-Cardenas, A., Hill, R., Ridl, S., Hagan-Haynes, K., "Fatalities in Oil and Gas Extraction Database, an Industry-Specific Worker Fatality Surveillance System — United States, 2014–2019." *CDC*. September 2023.



4. LOCAL WORKFORCE EXPERIENCES

In parallel with the wider public opinion survey, we conducted semi-structured roundtable interviews, informal discussions, and qualitative surveying of current and former oil and gas workers in Santa Barbara County.[85] In-person conversations and recorded panel interviews with current oil and gas workers were facilitated through connections with labor unions, interest groups, and personal networks. A snowball sampling approach was also used to reach workers who had experienced layoffs, voluntary exits, or early retirement. Participants were compensated for their time. In total, we engaged with 9 current oil and gas workers and 15 former workers, including operators, engineers, geologists, and managers.

We then processed interview transcripts and open-ended survey responses with the qualitative coding software Nvivo, which applies a systematic categorization of responses and identifies recurring themes through coded references.

4.1 Workforce Composition and Occupational Structure

First, we asked workers about the nature of their work in the industry and their unique skillsets. Results suggest a highly skilled workforce with diverse, specialized roles. Participants often referenced having technical expertise, particularly in mechanical systems, safety protocols, and regulatory compliance.

Workers commonly described their previous or current oil and gas jobs according to their "workforce conditions" (102 references), including physically demanding and hazardous working conditions (24 references) and significant exposure to industry volatility. They frequently cited "industry uncertainty" (50 references), particularly references to downturns or "bust" cycles (19 references). Tumultuous industry cycles, along with policy factors, can cause industry exit.

Next, we asked about how transferrable workers thought their skills were to other industries. They frequently cited mechanical, electrical, and safety-related competencies as broadly applicable across industries they could have, or did, transfer into (114 references). However, these skills were not always perceived as easily transferable in practice, particularly where licensing or industry-specific experience created barriers. A substantial number of references (17) explicitly identified a lack of transferable pathways as a barrier to new jobs in non-oil-and-gas industries.

85 The survey recruitment and survey instrument were approved by UCSB Human Subjects Committee under UCSB IRB Protocol #6-26-0166.

4.2 Experiences of Industry Change and Transition

We asked about challenges workers have had in transitioning out of the industry, or thought that they might have if they transitioned in the future. Across interviews and survey responses, workers described periods of uncertainty tied to industry decline and regulatory pressures. Qualitative analysis revealed several consistent sub-themes:

- Wage cuts (28 references)
- Relocation pressures (20 references)
- Lack of support (19 references), particularly from employers (15 references)
- Skill mismatch (7 references)
- Loss of benefits (6 references)

Wage reduction and geographic displacement were the most prominent barriers, often working in tandem. Workers described being unable to maintain their standard of living in Santa Barbara County without remaining in or returning to oil and gas employment. The survey of workers who had already experienced layoffs, voluntary exits, and/or early retirement reinforced these findings. Many reported inability to secure comparable jobs, particularly with the same wage, pensions, overtime, and healthcare benefits.

These challenges occurred across both involuntary and self-initiated transitions:

> **"I worked for the largest company in the world, and they folded up out from under me. I was just a name and a number. 'Goodbye.'"**

> **"Companies were starting to reduce their rigs... I survived a few cycles of layoffs in 2016, and I wasn't really waiting around to get fired."**



4.3 Training, Credentials, and Barriers to Mobility

We asked about training requirements in their previous or current oil and gas jobs and training or skills were needed for their new job, if they had one. **Workers emphasized the importance of trade certifications (22 references), formal education pathways (4 references), and employer-provided training (2 references)**. While workers reported holding substantial qualifications in their oil and gas occupations, these credentials were not consistently recognized outside the oil and gas sector. This contributes directly to the skills mismatch challenge. Workers described difficulty translating their expertise into new roles, particularly where licensing exams or credentialing systems were not aligned with oil and gas experience. One geologist we interviewed recounted a colleague's experience trying to transfer out of petroleum geology and into state consulting geological work, which required California-specific licensure through an exam:

> **"He's one of the best geologists I know... but he's failed [the exam] three times... the questions aren't compatible with people with oil and gas experience."**

As a result, many workers face the prospect of reentering training pipelines at lower wages in order to gain the necessary training or certifications. Transition pathways were often perceived as requiring workers to "start over," discouraging mobility:

> **"You can't be an oil and gas guy one day and an electrician the next day."**

4.4 Perceptions of Transition Pathways and Support Systems

Worker experiences with transition pathways were uneven and highly dependent on institutional support. Worker references to Union Support (16 references) suggest that union affiliation can significantly improve transition outcomes, including access to retraining, job placement, and benefit continuity.

Union-affiliated participants emphasized the importance of formal mechanisms – such as project labor agreements, collective bargaining agreements, and structured training pipelines – in facilitating mobility. Non-union workers, who comprise a substantial portion of the upstream workforce, frequently described navigating transitions basically alone.

References to Government Support (2 references) were comparatively limited, and often reflected uncertainty or lack of awareness regarding available programs. **Across interviews and survey responses, workers repeatedly emphasized the absence of a clear, coordinated transition strategy.**

4.5 Policy Perceptions and Broader Industry Context

When we asked oil and gas workers about the impact of existing or potential regulatory policies on their jobs in particular, workers view them as key drivers of industry change. They often mention "community impacts" (23 references), suggesting that workers anticipate broader social implications from oil and gas policy. Workers also emphasized practical considerations for transition policy. Under "Practical Worker-Informed Solutions" (13 references), workers highlighted the importance of addressing demand for a skilled workforce in new industries *alongside* phaseout policies (5 references) and emphasized the need for collaboration (9 references) between government, labor, and industry stakeholders.

On a phaseout of oil and gas operations broadly, one worker remarked:

> **"Find something that's going to replace it and then we can phase it out. You know that's, that's realistic. But I don't know. Well I don't know if that exists at the moment."**

4.6 Worker-Reported Transition Needs

Across all data sources, a consistent set of unmet needs emerged. Based on their experience, workers emphasized that effective transition support would include:
• *Clear and proactive planning* rather than reactive responses to layoffs
• *Job placement or hiring pipelines* into comparable industries
• *Wage replacement or income support* during transition
• *Streamlined certification pathways* that recognize existing skills
• *Retention of benefits*, particularly pensions and healthcare

5. LOCAL PUBLIC OPINION ON ONSHORE OIL AND GAS OPERATIONS AND POLICY

We conducted a county-wide public opinion survey that measured attitudes in residents across the County. Building directly from the options discussed in Santa Barbara County Board of Supervisors ordinance hearings, we asked residents to provide their thoughts on two proposed ordinances: *prohibiting new* onshore oil and gas development (a "prohibition") and *phasing out existing* oil and gas operations (a "phaseout"). Further, we asked about potential policies to support oil and gas workers who will be impacted by these policies, and more. This work builds on our team's research on public opinion in oil and gas communities around the United States,[86] and broader work on public opinion on energy issues.[87]

Participation was requested via postcard mailers sent to a random sample of residential addresses, which included a link to an online survey.[88] Respondents were offered a $5 gift card for completing the survey and a chance to enter in a prize drawing for a $250 gift card. Residents could choose to take the survey in English or in Spanish. In total, we sent an invitation to participate to more than 25% of Santa Barbara County households, stratifying by district to ensure relative geographic balance between north and south county. The survey yielded a response rate of 7%, relatively high for survey research of this kind.[89]

A demographic breakdown of the survey is shown in Figure 6. Sample demographics align closely with the Santa Barbara County population on categories such as age, gender, and income. About half the registered voters in Santa Barbara County are Democrats and a quarter Republicans.[90] Our sample reflects this partisan imbalance, slightly undersampling Republicans and oversampling independents and those with other party affiliations. We do observe a difference in terms of the racial composition of our sample, which has a higher proportion of white respondents and a lower proportion of Hispanic or Latino respondents than the county population. Figure A1 in the appendix summarizes how the survey sample demographics compare to Santa Barbara County.

86 Mahdavi, P., Mildenberger, M., Tingley, D., Deshmukh, R., and Martinez Alvarez, C."Public Opinion on Economic Transitions in Oil- and Gas-Producing Communities." *Resilient Energy Economies.* March 2026.

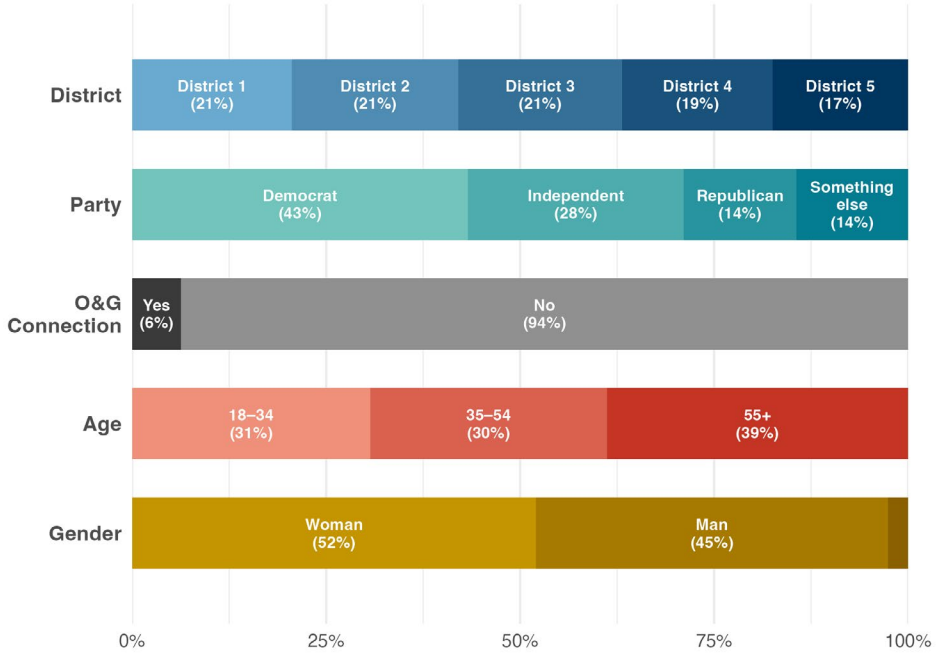
87 The 2035 Initiative. "Climate and Energy Public Opinion Data." *UCSB.*

88 The survey recruitment and survey instrument were approved by UCSB Human Subjects Committee under UCSB IRB Protocol #5-26-0167.

89 Yan, A., Kalla, J. and Broockman, D. "Increasing response rates and representativeness of online panels recruited by mail: evidence from experiments in 12 original surveys." *Stanford University Graduate School of Business.* March 2018.

90 "Report of Registration as of February 10, 2025, Registration By County."

Figure 6: Demographic breakdown of Santa Barbara County survey respondents, post-weighting.



Caption: 39,989 survey mailers were sent to Santa Barbara County residents, resulting in 2,714 survey responses. We oversampled North County areas to ensure representation across supervisor districts. Responses were then weighted to account for the oversampling as well as for observable imbalance on age. "O&G Connection" includes respondents who indicated having worked in the oil & gas industry or having a family member that did so. Party, O&G, and Gender questions were optional, so the figure reflects proportions among those who chose to respond.

5.1 Attitudes Towards Prohibiting New Onshore Oil and Gas Operations

First, we saw robust support for a policy that would prohibit new onshore oil and gas operations across the county (Figure 7)**.** Almost two out of every three county residents (64.9%) support the policy. A majority support an ordinance to ban new drilling in four of the five districts of the Santa Barbara County Board of Supervisors. In Districts 1 and 2, over half of respondents indicated that they "strongly support" prohibiting new oil and gas operations, which approaches 75% if we include respondents who "somewhat support" a prohibition. In Districts 3 and 5, between 60-65% of respondents indicated support for a prohibition policy. In District 4, a majority of respondents oppose a prohibition policy.

Figure 7. "How much would you support or oppose the local government enacting a policy to *prohibit any new* onshore oil and gas operations in Santa Barbara County?", by district

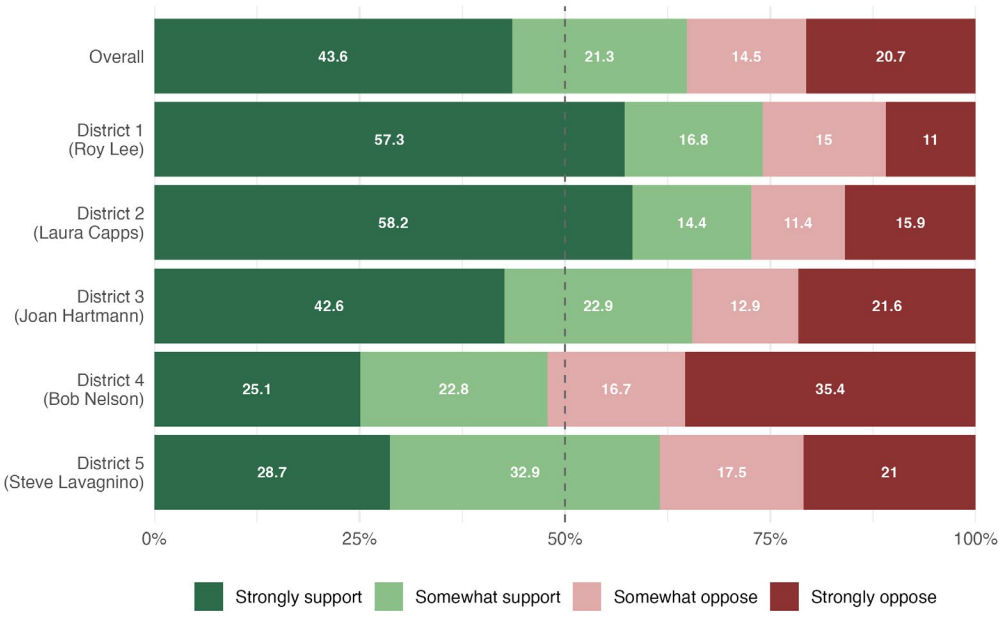
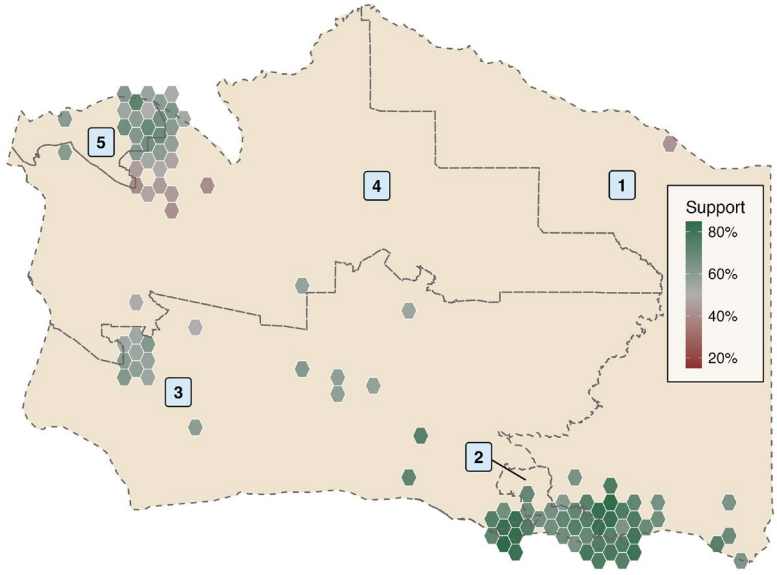


Figure 8 shows the geographic distribution of support based on census-tract-level model-based averages, mapped approximately to locations in the county. The results further illustrate the geographic variation in attitudes towards the proposed ban on new drilling. Majority support can be seen in northern parts of Santa Maria and Guadalupe, to Lompoc and the Santa Ynez Valley, to Goleta, Santa Barbara, Montecito, Summerland, and Carpinteria. Majority opposition can be seen in the figure from respondents in southern portions of Santa Maria, Orcutt, and Cuyama.

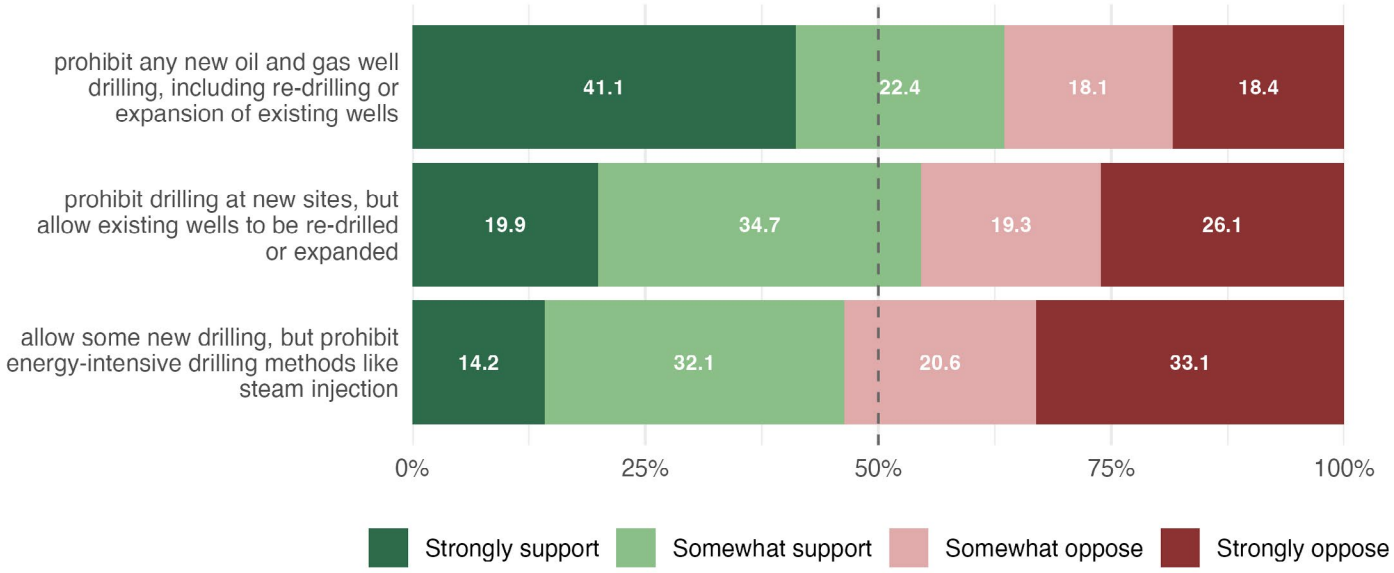
Figure 8. "How much would you support or oppose the local government enacting a policy to *prohibit any new* onshore oil and gas operations in Santa Barbara County?", by census tract



Caption: Estimated share of residents who "Support" or "Strongly Support" a prohibition on new oil and gas operations. Each hexagon represents one 2020 Census tract. Estimates reflect multilevel regression and poststratification (MRP) estimates derived from survey responses and Census demographics. Mapping is approximate.

We find much higher support for a policy that supports a prohibition on all new drilling, compared to those that allow some drilling to continue. For the prohibition on new oil and gas operations, we randomly showed respondents one of three options on the *scope of drilling* that may be prohibited under the policy. One option specified that all new drilling would be prohibited, while the other two exempted certain types of drilling from the prohibition. The "prohibit any new oil and gas well drilling, including re-drilling or expansion of existing wells" option received the highest support from respondents (Figure 9).

Figure 9: "With this policy in mind, how much would you support or oppose the local government enacting a policy to..."



5.2 Attitudes Towards Phasing Out Existing Onshore Oil and Gas Operations

We find strong support for a phaseout of existing operations as well, though slightly lower than the support for a prohibition on new. Overall, approximately 60% of respondents indicated that they "somewhat support" or "strongly support" a phaseout (Figure 10). In Districts 1 and 2, this figure was around ~70%, while in Districts 3 and 5, support held constant at about 60-65%. In District 4, a majority of respondents replied that they would oppose a phaseout policy.

Figure 10. "How much would you support or oppose the local government enacting a policy to *phase out existing* onshore oil and gas operations in Santa Barbara County?", by district

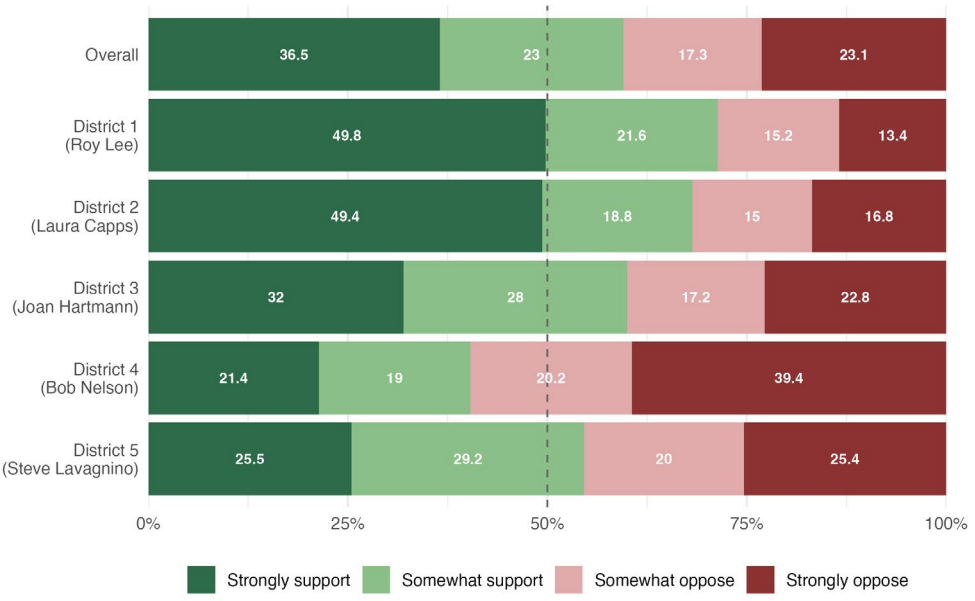
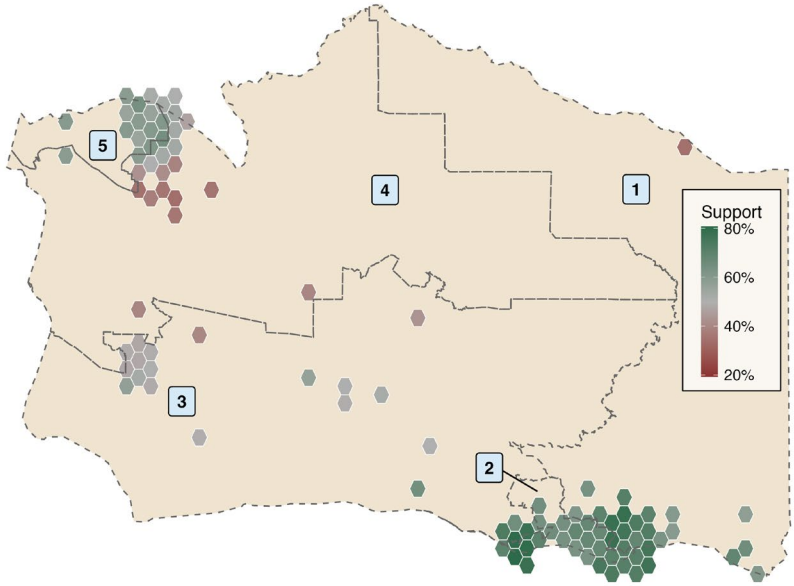


Figure 11 shows the geographic distribution of support for a proposed phaseout of existing oil and gas operations, again based on census tract level model-based averages. Majority support can be seen in northern parts of Santa Maria and Guadalupe, and in Goleta, Santa Barbara, Montecito, Summerland, and Carpinteria. Lower support, while still above majority levels, can be seen in Lompoc and the Santa Ynez Valley. Majority opposition can be seen in southern portions of Santa Maria, Orcutt, and Cuyama.

Figure 11. "How much would you support or oppose the local government enacting a policy to *phase out existing* onshore oil and gas operations in Santa Barbara County?", by census tract



Caption: Estimated share of residents who "Support" or "Strongly Support" a phaseout of existing oil and gas operations. Each hexagon represents one 2020 Census tract. Estimates reflect multilevel regression and poststratification (MRP) estimates derived from survey responses and Census demographics. Mapping is approximate.

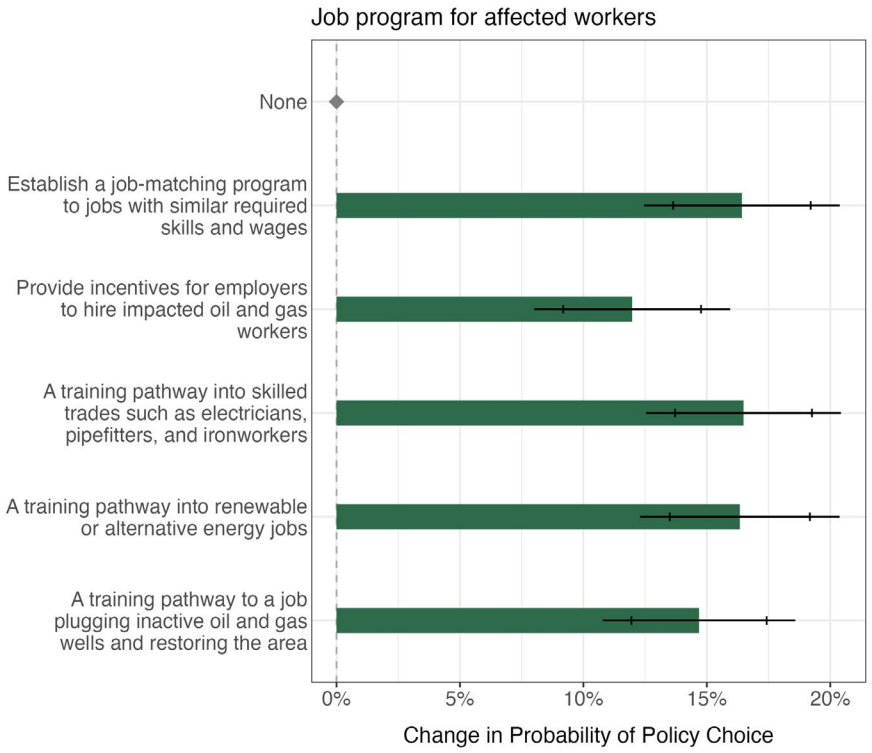
5.3 Attitudes Toward Worker Support Policies in a Phaseout

We then presented survey respondents with two hypothetical phaseout policy packages, asking them to choose which they were more likely to support. Each policy package randomized the following attributes, allowing us to measure support for each attribute individually: the scope of the phaseout policy, a job program for affected workers, direct financial assistance to workers, site clean-up for inactive wells, and a funding source.

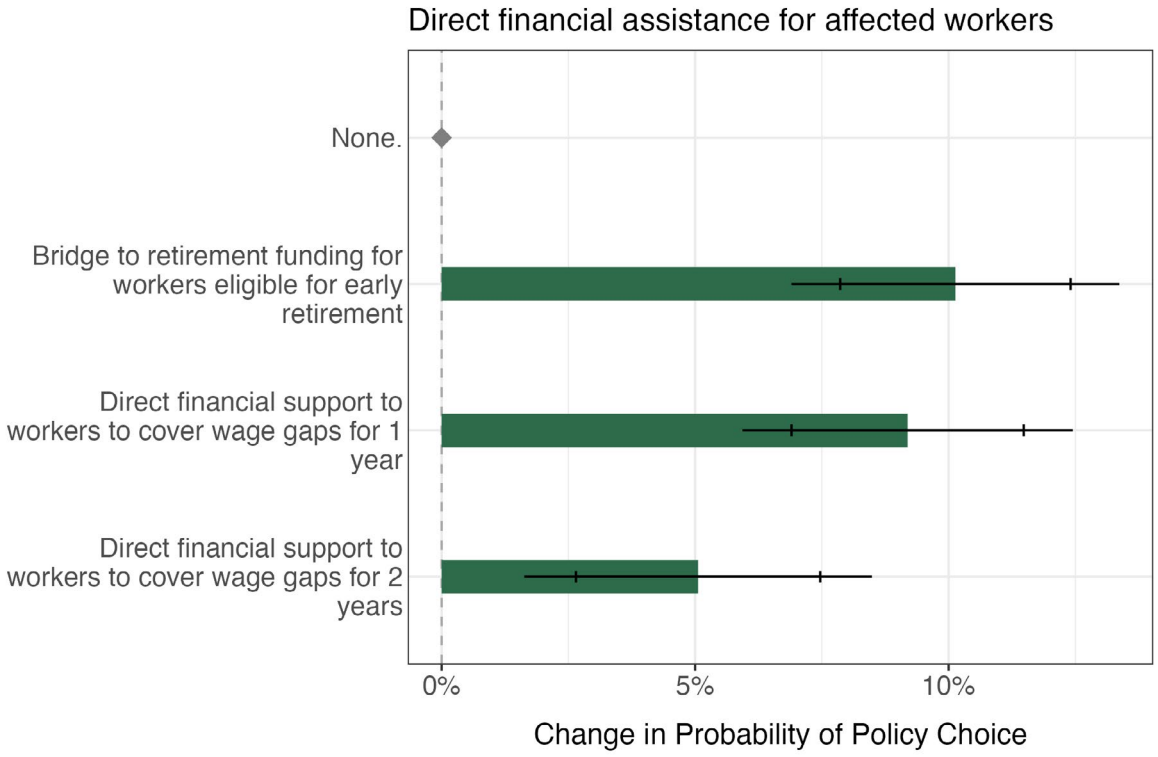
One clear finding is that county residents prefer a phaseout policy that includes support for affected workers. The green bars in Figure 12 indicate how much *more* likely respondents were to support a policy that contains that given program. Respondents were up to ~15 percentage points more likely to support a policy that contains some form of job program for workers, compared to one that does not (Figure 12a). People also preferred a policy that provides some form of direct financial assistance to workers, as they were 5 to 10 percentage points more likely to select a package that provides assistance compared to one that does not (Figure 12b). The policies that had the greatest effect on support for a phaseout related to clean-up for inactive wells (Figure 12c). Compared to a policy with no well cleanup required, respondents were nearly 20 percentage points more likely to select a policy that requires companies to plug wells that have not been producing, and over 20 percentage points more likely to select a policy that makes county investments to repurpose well sites for geothermal energy and energy storage.

Figure 12: Effect of programs on support for a phaseout of existing onshore oil and gas operations

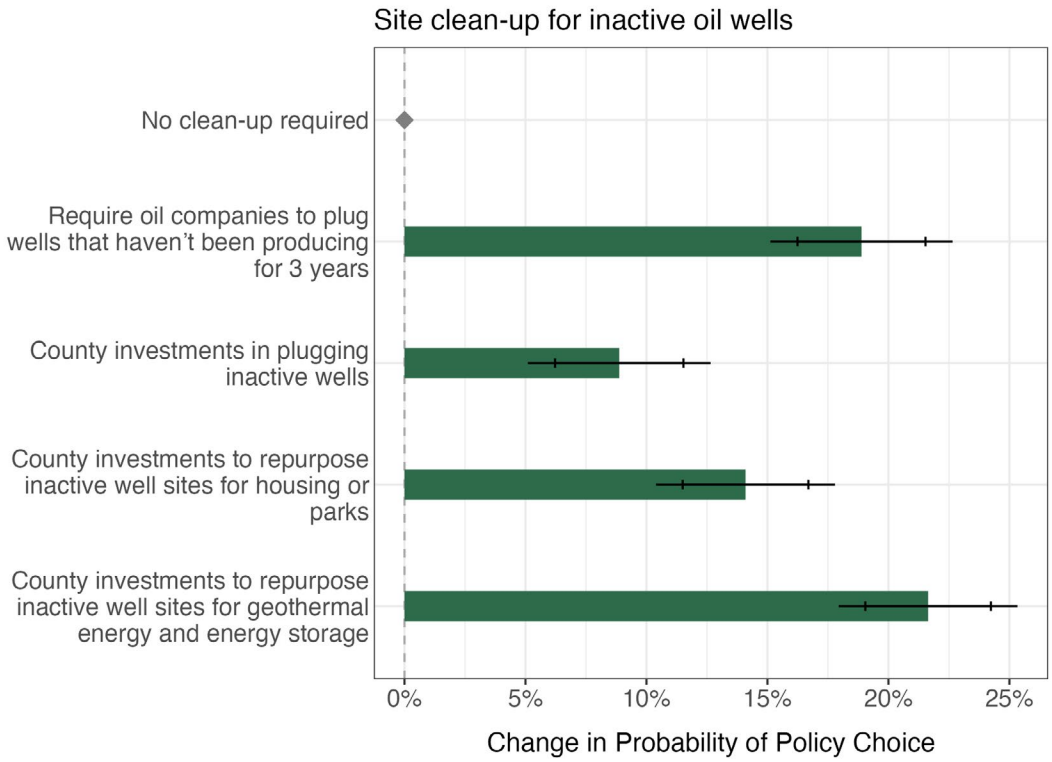
12a)



12b)



12c)



Caption: Effect of a) job program for affected oil and gas workers, b) direct assistance for affected oil and gas workers and c) oil site clean-up program on support for a phaseout of existing onshore oil and gas operations Survey respondents were shown two policy packages to select from. Plot shows the effect of each job program policy on the probability that respondents selected the policy package, compared to an otherwise identical package where the job program is "None". A value of 10% means that respondents were 10 percentage points more likely to select that policy than the "None" policy (e.g., 50% vs. 40%).

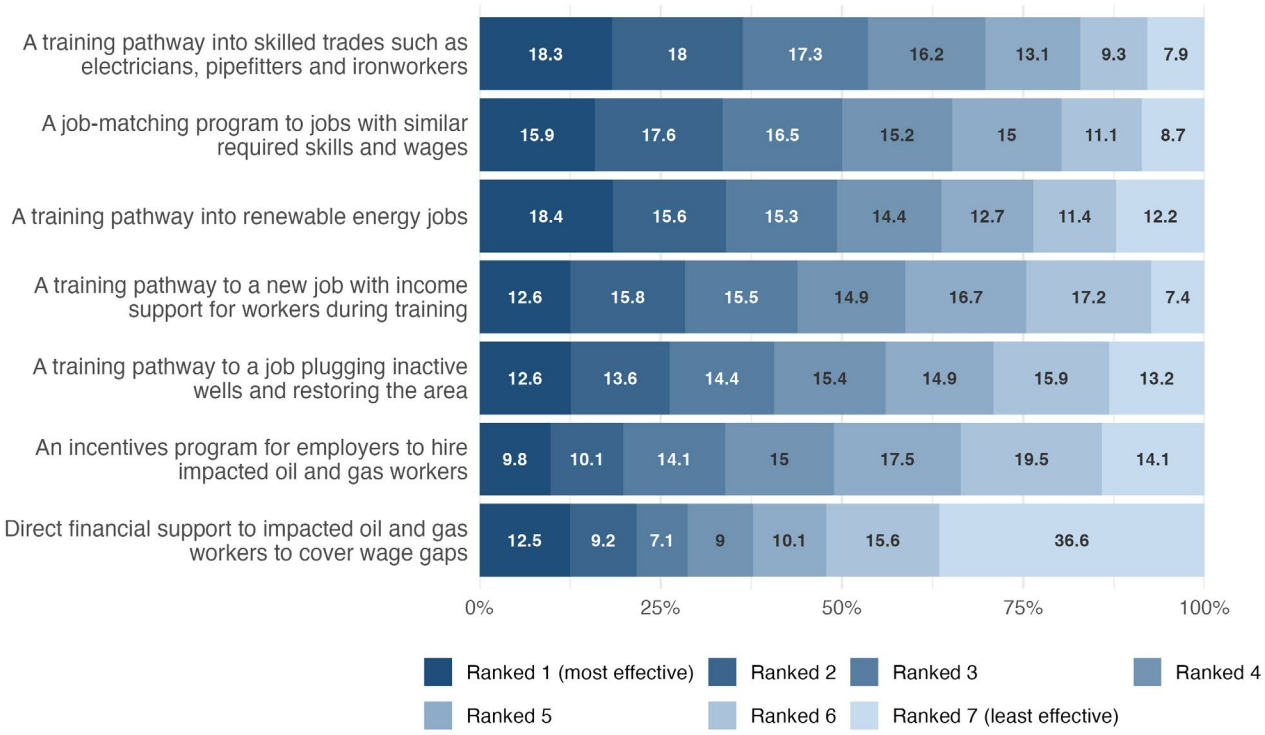
We asked people to rank different job programs in terms of how effective they would be at supporting impacted oil and gas workers and creating high-quality, well-paying job opportunities. Below, we show these results for all respondents and for respondents who indicated that they have worked or have a family member who has worked in the oil and gas industry.

Figure 13a shows the full distribution of how survey respondents assessed worker support programs. **Across the board, people ranked "A training pathway into skilled trades such as electricians, pipefitters, and ironworkers" as one of the most favored policies.** A job-matching program to jobs with similar required skills and wages" and "A training pathway into renewable energy jobs" were also rated favorably.

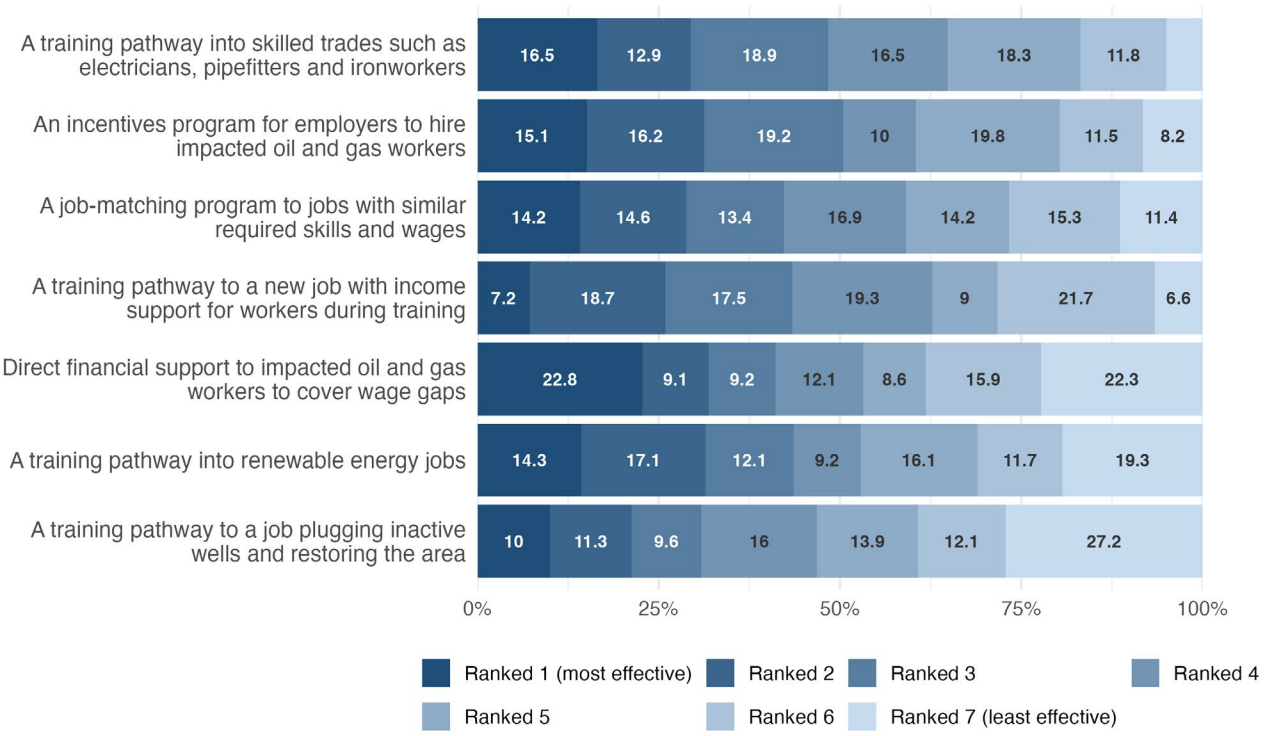
We looked at responses among people with a connection to the oil and gas industry, which includes respondents who specified that they had either worked in the oil and gas industry or have a family member who had done so (Figure 13b). This group also expressed a strong affinity for "A training pathway into skilled trades [...]", ranking it first 16.5% of the time and last just 5% of the time. "Direct financial support to impacted oil and gas workers" was ranked first most frequently (22.8% of the time). This is a striking difference from the overall population, who ranked this option last most frequently.

Figure 13: Ranked preferences across different types of worker support program

13a)



13b)



Caption: Survey asked to rank the programs from most to least effective at "supporting impacted oil and gas workers and creating high-quality, well-paying job opportunities." Plot shows the percent of the time that each option was ranked in each position by respondents. The first plot shows results for a) all respondents, while the second plot shows results for b) oil-and-gas-connected respondents only.

5.4 Summary of Local Public Opinion on Onshore Oil and Gas Operations Policies

A survey of nearly 3,000 residents across all census tracts and supervisor districts in Santa Barbara County shows broad support for a proposed ordinance to ban new oil and gas drilling in the county. A majority also expressed support for a proposed ordinance to phase out existing oil and gas operations in the county. Across all parts of the county, residents expressed that these ordinances should be paired with policies that ensure impacted workers have a clear path forward. One of the most favored policies is a training pathway into skilled trades such as electricians, pipefitters, and ironworkers. We view these findings as suggestive, not only for policies that support training programs, but also jobs creation strategies that can create demand for such workers.



6. SCALE OF LOCAL WORKFORCE DISPLACEMENT AND POTENTIAL OPPORTUNITIES

In this section we map out the potential labor impacts of a phaseout alongside potential growth in alternative energy development. We downscale existing statewide modeling to Santa Barbara County, which projects job-year losses under various phaseout policy scenarios and finds that significant employment decline is likely even without a phaseout policy, due to structural declines in well productivity. We also scale statewide clean energy deployment targets to the county to estimate the clean and alternative energy jobs that could be created locally. Whether or not these jobs materialize is partly in the County's jurisdiction to address, including by enabling local deployment of clean energy infrastructure. Finally, we present hypothetical skill-transition pathways for local oil and gas occupations, aligned to the county's economic development goals.

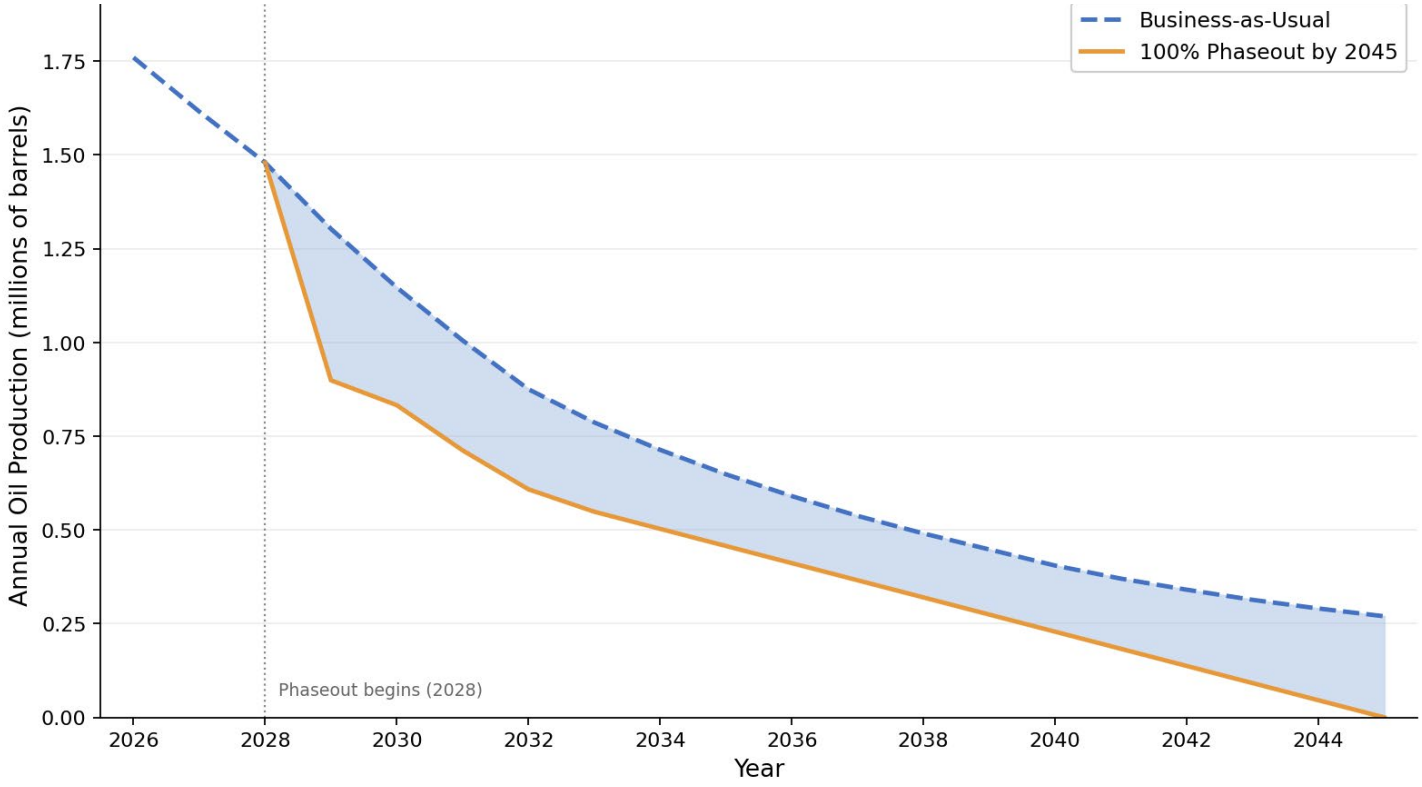
6.1 Projected Job Losses from Onshore Oil and Gas Phaseout

Understanding when and how many jobs would be lost under a phaseout is essential for planning workforce transition pathways and minimizing harm to workers and the broader economy. One way to measure labor impacts is through "job-years", a unit equivalent to one person working full-time for one year. For example, 20 job-years could mean one person employed for 20 years, or 20 people employed for one year. This unit is useful for tracking annual workforce changes and the cumulative burden of job displacement over time.

Researchers at UCSB developed a model estimating the number of FTE job-years lost annually under oil phaseout policy compared to business-as-usual (BAU) conditions.[91] Importantly, the model projects significant oil production declines even under BAU due to declining well productivity and economic forces, shown in Figure 14. This means that job losses are likely to occur in the sector regardless of any phaseout policy.

91 The model estimates oil revenue by combining production projections with crude oil market prices, then applies IMPLAN Industry Contribution Analysis multipliers to convert revenue into employment. The model covers onshore oil extraction only and does not include oil and gas support activities (NAICS 213). Deshmukh, R. et al. "Equitable low-carbon transition pathways for California's oil extraction." *Nature Energy*. May 2023.." Nature Energy. May 2023.

Figure 14. Modeled Oil Production Trajectories in Santa Barbara County (2019-2045)

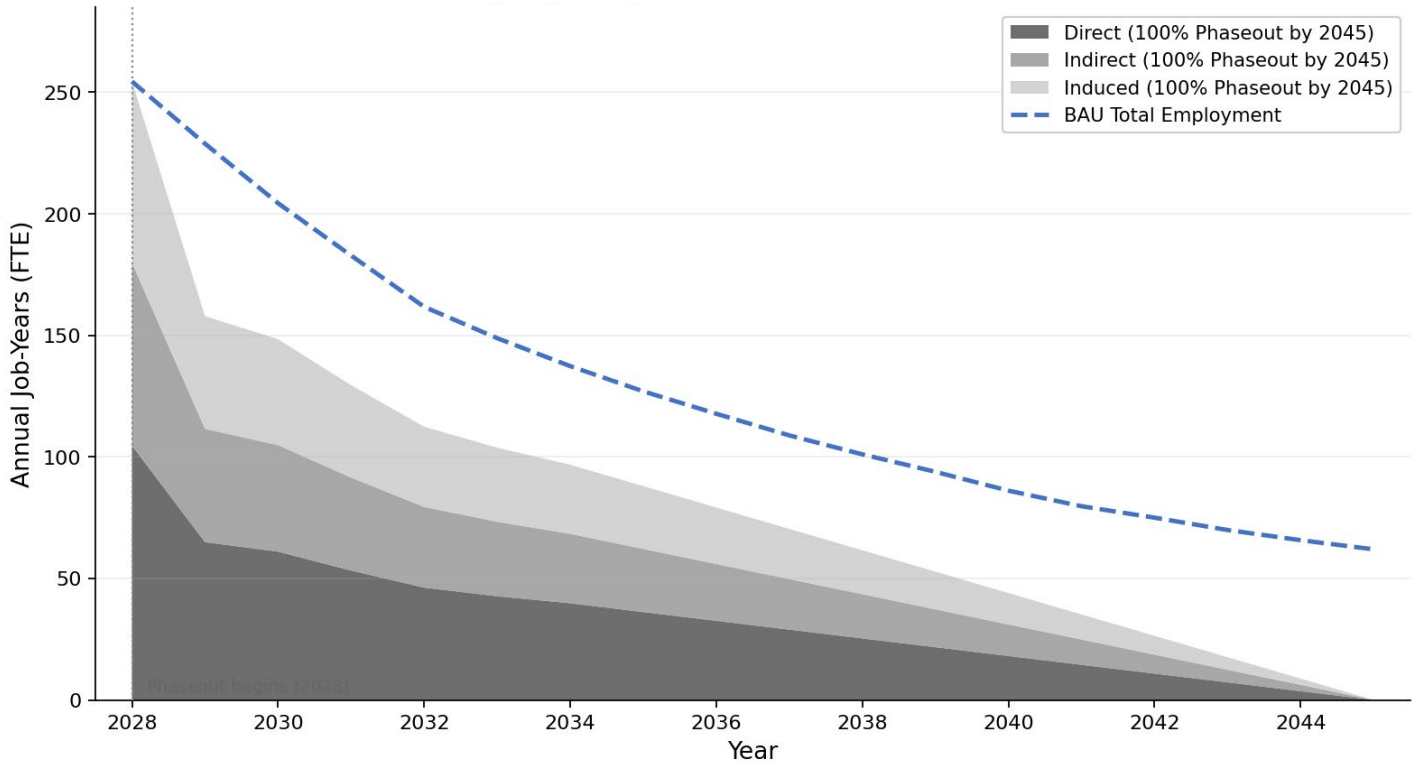


Caption: Annual oil production projections for Santa Barbara County based on historical well-level production data and supply-side economic modeling (Deshmukh et al. 2023), under a business-as-usual trajectory and a stringent phaseout scenario.

For this report, we use the most stringent model-based phaseout scenario, adjusted to a phaseout beginning in 2028 and achieving 100% oil and gas extraction phaseout by 2045.[92] Figure 15 shows the year-by-year trajectory of employment losses relative to BAU from phaseout year 1 through year 25.

92 The policy scenario combines a one-mile setback ordinance applied to both new and existing wells, a 90% excise tax on oil revenues, and a binding 90% GHG reduction target, together achieving approximately 90% reductions. To reach 100% production phaseout, we adjusted the production output to reach 0 by 2045. We also shifted the phaseout timeline from beginning in 2019 to 2028, scaling the phaseout model results to the 2028 BAU employment model.

Figure 15. Santa Barbara County: Oil & Gas Employment Trajectories
(annual job-years, total direct + indirect + induced)



Caption: Annual direct, indirect, and induced oil and gas FTE job-years in Santa Barbara County under an oil phaseout (shaded grey) and BAU conditions (dotted blue line). Source: Deshmukh et al. 2023.

Under the modeled phaseout scenario, oil and gas extraction employment drops steeply in the first few years after the ordinance takes effect (estimated 2028). The model captures extraction-driven employment only and does not include downstream sectors, so this trajectory can be used as an approximation for phaseout-related labor impacts. Notably, under BAU conditions employment is projected to decline substantially, underscoring the need for proactive workforce development programming regardless of a policy phaseout.

6.2 Potential Job Opportunities from Clean Energy Deployment

As clean energy is deployed across the county, new job opportunities will emerge in the energy sector. A UCSB research team estimated jobs created from rooftop solar, utility-scale solar, and offshore wind installations.[93] These estimates are based on statewide clean energy deployment targets scaled to Santa Barbara County (see Table 4). The research team also developed an interactive dashboard where users can adjust deployment targets to generate updated labor impact estimates.[94]

93 Labor impacts of clean energy deployment were estimated using NLR's Jobs and Economic Development Impact (JEDI) models and IMPLAN county-level multipliers.

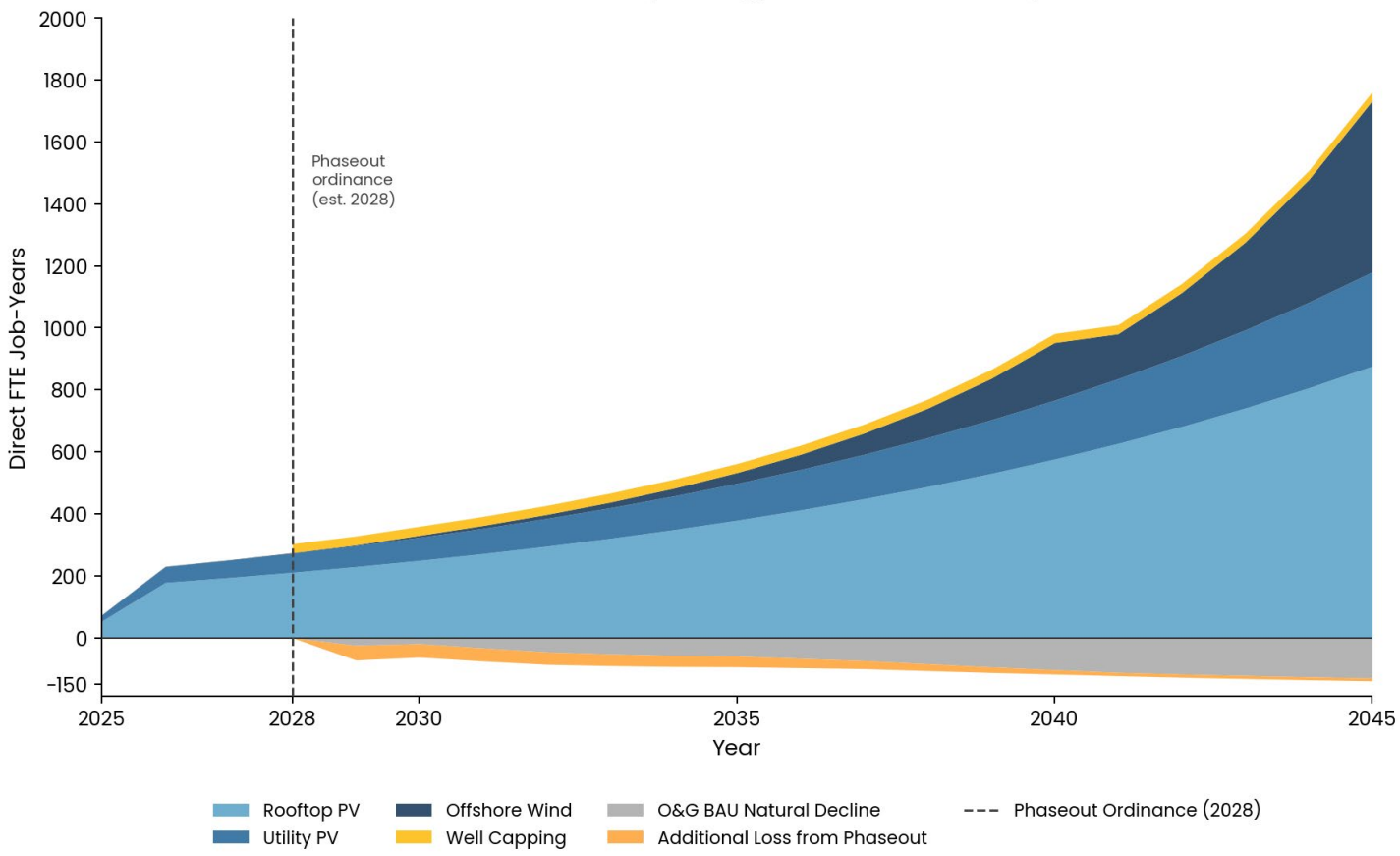
94 The 2035 Initiative and Community Labor Project. "Central Coast Energy Workforce Dashboard." *UCSB.*

Table 4. Statewide and Santa Barbara County Scaled Clean Energy Deployment Targets[95,96]

	California State 2045 Target (MW)	Scaled SB County Target (MW)
Utility PV	71,650	722
Rooftop PV	29,208	1,294
Offshore Wind	2,500	1,220

If Santa Barbara County deployment stays on track with state targets, clean energy buildout is projected to create approximately 712 direct jobs and 2,000 total jobs (including indirect and induced effects) in Santa Barbara County by 2045.[97] Figure 16 illustrates the labor impacts of this development in Santa Barbara County.

Figure 16. Santa Barbara County: Energy Transition Labor Impacts



Caption: Annual FTE job-years gained due to rooftop and utility solar, offshore wind, and well capping, and jobs lost due to an oil phaseout taking effect in 2028. Clean energy deployment model assumes Santa Barbara County keeps pace with the State's carbon neutrality targets and permitting restrictions in the county are removed.

95 Statewide solar targets from CARB's 2022 Scoping Plan for Achieving Carbon Neutrality. Scaled to Santa Barbara County from existing installed utility and rooftop solar capacity in 2023 and multiplying by the statewide percentage increase targets.

96 Offshore wind targets reflect the CEC's AB 525 Offshore Renewable Energy Report which identifies 12.2 GW of OSW potential in the South Central Coast. Note that resulting job figures were divided in three to reflect that OSW jobs would be potentially spread across the tri-county area.

97 Jobs were calculated by dividing cumulative clean energy job-years (14,232 direct and 39,654 total) by 20 years to get the average number of new jobs across the time period from 2026 to 2045.

Clean energy jobs are assumed to grow annually as deployment increases across the county. Rooftop solar represents the largest share of new jobs due to the higher county-scaled target for Santa Barbara and because it is more labor-intensive than utility solar. An oil phaseout ordinance is assumed to take effect in 2028, simultaneously causing lost jobs from declining oil production and creating new jobs to cap idle and abandoned wells.

The existing cleantech sector in Santa Barbara County provides a foundation for this growth. The Regional Economic Action Coalition (REACH) estimates that Santa Barbara County accounts for roughly 3,800 of the region's 9,300 clean technology jobs, with electricians, plumbers and pipefitters, power line installers, and HVAC mechanics making up the largest share of the workforce.[98] Each cleantech job supports roughly 0.75 additional regional jobs through supply chain and household spending effects (employment multiplier of 1.75).

Distributed rooftop solar represents a particularly significant and locally-grounded source of this employment. Installation and maintenance of residential and commercial solar systems are among the most labor-intensive activities in the clean energy sector, and these jobs are inherently local. The REACH Clean Tech Report identifies electricians as the single largest occupation in the Central Coast's clean technology sector, comprising roughly 10% of all regional clean tech jobs, and construction and extraction occupations as a whole account for 39% of the sector workforce.[99]

There is a growing portfolio of utility-scale clean energy projects in the County, generating both construction and long-term operations and maintenance employment. The Strauss Wind Energy Project near Vandenberg is the county's largest renewable facility at 98 MW. The Cuyama Solar facility, the county's first utility-scale solar project, has been operational since 2016. These projects represent the kind of sustained operations and maintenance (O&M) workforce that solar and wind installations support over decades-long operating lifetimes. More recent projects illustrate the breadth of clean energy job types: the GridStor battery storage facility in Goleta, completed in December 2023, required 35,000 hours of skilled construction labor alone, while the SEPV Solar and Battery Storage project in Cuyama Valley has added technical operations roles tied to an innovative second-life battery system.[100] TotalEnergies is currently developing a solar and storage facility at the Imerys mining operation in Lompoc under a 25-year agreement, a model that ties long-term O&M employment directly to local industrial sites.[101]

98 REACH. "Economic Impact of the Central Coast Clean Tech and Renewable Energy Sector" December 2023.

99 Ibid.

100 B2U Storage Solutions, Inc. "B2U Storage Solutions Commences Operations on Second Grid-Connected Hybrid Storage Facility Using Second Life Batteries in Santa Barbara County, CA." November 2023.

101 Imerys. "Imerys Enters Long-Term Partnership with TotalEnergies for Renewable Power at its Santa Barbara County Facility." PR Newswire. May 2023.



Offshore wind development along the Central Coast presents another significant long-term employment opportunity for the region. California set a target of 12.2 gigawatts of offshore wind by 2045 in the Morro Bay Wind Energy Area.[102] The workforce requirements span a range of occupations, including welders, crane operators, vessel mechanics, electricity, and turbine technicians. The proximity of the potential Morro Bay development to Santa Barbara County positions local workers to access these emerging opportunities.

However, these jobs may never be realized if clean energy is not deployed in Santa Barbara County. There are state and county level barriers to building clean energy in the County. For example, the county ordinance that utility solar can only be developed in Cuyama greatly diminishes the potential for meeting solar installation targets.[103] The county should strive to support clean energy deployment within the county to ensure our energy needs are met by a local energy workforce. To ensure these are good jobs, the county can require Project Labor Agreements (PLAs) on publicly-supported clean energy projects. PLAs are pre-hire collective bargaining agreements that set prevailing wages, local hiring preferences, and union labor standards, helping ensure that clean energy jobs offer the family-sustaining wages and benefits historically associated with the oil and gas sector. Supporting partnerships with local building trades unions can further connect workers to the job placement and training pipelines that feed into clean energy construction and operations. Community Benefit Agreements (CBAs) and partnerships with regional workforce programs offer additional tools for connecting displaced oil and gas workers to these pathways.

6.3 Asset Decommissioning, Well Plugging, Remediation, and Repurposing

We examine potential job creation opportunities tied to Santa Barbara County's inventory of idle and orphaned oil wells. Wells that are no longer producing but have not been properly closed can leak methane and other contaminants into soil and groundwater, creating both environmental and public health risks.[104] Plugging these wells, a process involving cementing and sealing the wellbore, is a regulated requirement and a growing priority under California state policy.

Drawing on Raimi et al. (2020), we assume that plugging 10 wells requires approximately 2.4 job-years of labor.[105] This is a national average derived from a sample of roughly 500,000 wells; California-specific figures may differ depending on well depth and geology. Figure 16 includes well capping jobs based on the oil well phaseout model.

Surface remediation, which involves restoring the land above a plugged well for alternative uses such as agriculture, habitat, or renewable energy siting, requires additional labor. However, comparable job-year estimates for surface remediation are not yet well-established in the literature. The scale of remediation employment will depend significantly on the desired end land use and regulatory standards applied.

There are also emerging opportunities to repurpose idle oil wells as assets in the clean energy transition rather than simply closing them. Renewell Energy, a California-based startup, is currently piloting a gravity energy storage technology that uses the depth and infrastructure of idle oil wells to store and dispatch electricity, a

102 California Energy Commission (CEC). AB 525 Reports: Offshore Renewable Energy. Updated 2026.

103 Santa Barbara County Land Use and Development Code. Chapter 35.59 - Utility-Scale Photovoltaic Facilities.

104 Rincon Consultants, Inc. "Preliminary Santa Barbara County Petroleum Production Activities Greenhouse Gas Emissions Inventory and CAAP Impact Analysis." January 2025.

105 Raimi, D., Nerurkar, N., and Bordoff, J. "Green Stimulus for Oil and Gas Workers: Considering a Major Federal Effort to Plug Orphaned and Abandoned Wells." *Resources for the Future and the Center on Global Energy Policy at Columbia University.* July 2020.

technology analogous to a pumped hydro system operating underground. The California Energy Commission awarded Renewell a $5 million EPIC grant (EPC-25-009)[106] in August 2025 to demonstrate the technology across five wells in Kern County, with field installation work drawing on wireline, well service, and electrical skills directly transferable from the oil and gas sector. If the technology proves viable at scale, Santa Barbara County's inventory of idle wells could represent a future siting opportunity.

Finally, the decommissioning of the Gaviota Onshore Facility and Point Arguello pipelines is a significant near-term employment opportunity for displaced oil and gas workers in Santa Barbara County.[107] Freeport-McMoRan is currently seeking permits to dismantle the 56-acre Gaviota processing facility along with approximately 17 miles of onshore pipeline and 3.9 miles of offshore pipeline in State Waters. The project is targeted to begin in 2027 and take approximately two years to complete. At its peak, the project will require an estimated 15–20 workers for onshore equipment removal and soil remediation activities, 15–20 for pipeline crossing removal, 8 to support onshore pipeline abandonment activities, 30 for pipeline landfall grouting, and 50 for offshore pipeline removal, totaling over 100 workers across both projects.[108] The county should ensure that local workers are prioritized for these positions, as the proposed project timeline – 2027 through approximately 2029 – overlaps directly with the period of greatest expected displacement from any phaseout ordinance.

6.4 Oil and Gas Workforce Skills Transferability

We examine the skills gap between typical oil and gas occupations and a broad range of non-oil-and-gas jobs. Using the skills-distance methodology developed by Greenspon & Raimi (2025), we subset the full list of "good match" destination jobs for fossil fuel workers that they identify to the oil and gas jobs most relevant to the onshore production happening in Santa Barbara County (see this list in Table 3 above). Spanning entry-level extraction work through senior engineering roles, each has at least three viable good-match destinations in non-OGE sectors, defined by a relatively narrow skills gap, comparable wages, and growing national demand (Figure 17).[109]

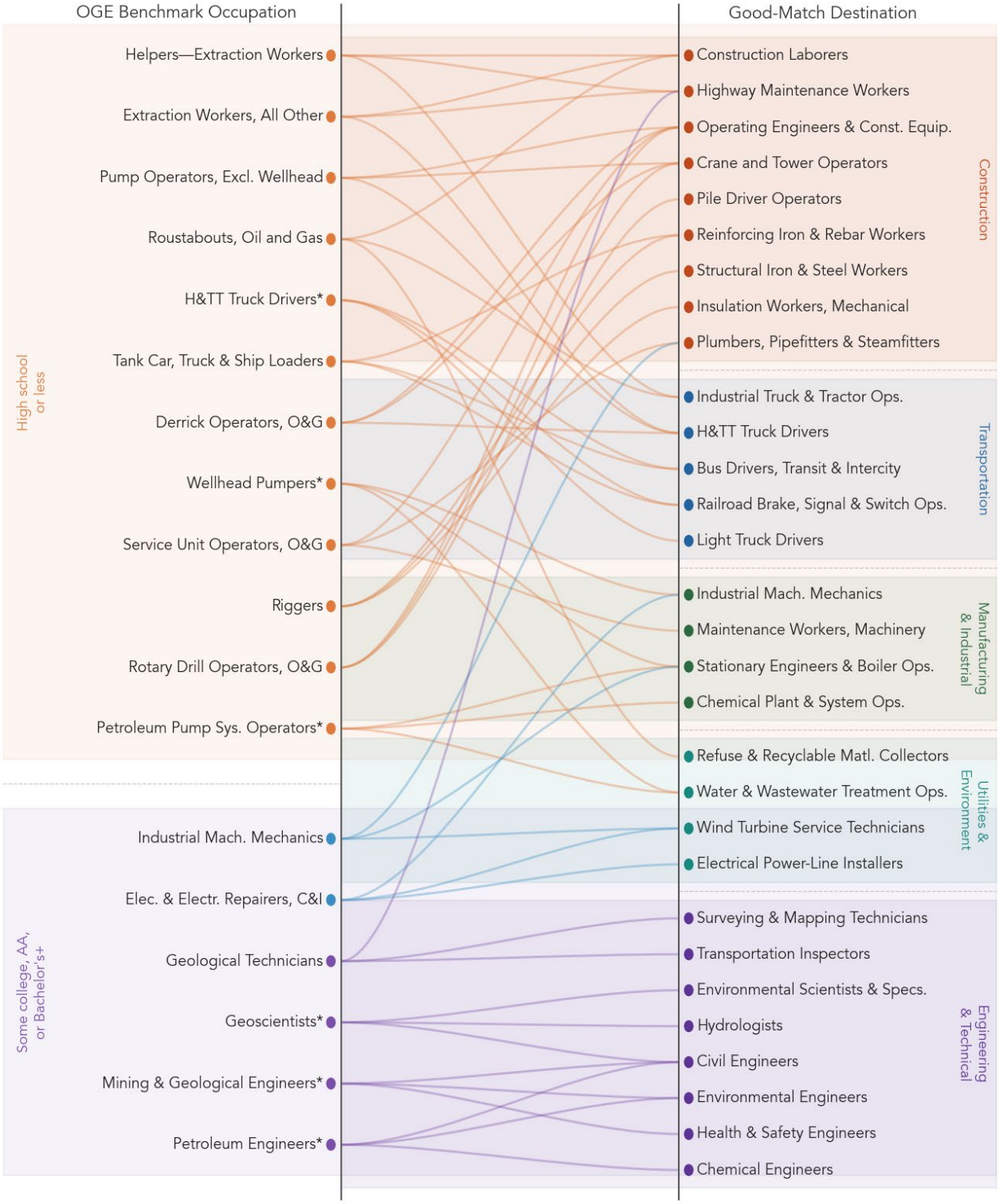
106 California Energy Commission (CEC). "August 13, 2025 Business Meeting, Backup Materials for Renewell Energy Inc." August 2025.

107 County of Santa Barbara Planning & Development Department. "Point Arguello Decommissioning Project."

108 Freeport-McMoRan Oil and Gas and Chevron U.S.A. Inc. "Revised Project Description, Decommissioning of the Gaviota Facilities and Pipelines within Santa Barbara County." October 2025.

109 Those with asterisks were not sourced from Greenspon & Raimi (2025) and were instead sourced from the O*NET Career Changers Matrix which helps workers find new jobs that match their skills and experience; Greenspon, J. and Raimi, D. "Finding the Right Fit: What Jobs Offer a Good Match for Fossil Fuel Workers' Skills?" *RFF.* March 2025.

Figure 17. Potential Skills Transition Pathways for Santa Barbara County Oil & Gas Workers



*Caption: "Good match" destination jobs for onshore oil and gas workers in Santa Barbara County. Matches with asterisks were sourced from O*NET. Figure sources: Greenspon and Raimi (2025) "Finding the Right Fit: What Jobs Offer a Good Match for Fossil Fuel Workers' Skills?" RFF; O*NET Career Changers Matrix; U.S. Census Bureau, LEHD Job-to-Job Flows for Santa Maria-Santa Barbara MSA 2014-2024.*

For workers at the high school or less education tier, transitions into the construction trades, transportation, and manufacturing and industrial sectors are particularly well-supported. Workers with some college experience, an Associate's degree, or a Bachelor's or higher degree in technical or scientific fields have clear pathways into utilities, environmental science, hydrology, environmental, and civil engineering fields. These sectors are predicted to grow as California builds more clean energy infrastructure and begins the long-term work of remediating abandoned and idle oil wells across the state.

The November 2023 Comprehensive Economic Development Strategy (CEDS) for San Luis Obispo and Santa Barbara Counties identifies target industries for growth and lays out necessary investments in workforce development, training, and talent retention and attraction necessary to staff them.[110] These industries – aerospace, defense, and precision manufacturing; agtech; clean tech and renewable energy; and technology – are likely inaccessible to the high-school-level oil and gas workforce without substantial upskilling. The skills matching in Figure 17 shows that the more realistic near-term opportunities for the majority of oil workers are in construction, transportation, and manufacturing/industrial jobs.

Oil and gas workers are nonetheless a natural constituency for the CEDS workforce development strategy, which calls for efforts to "upskill and reskill the existing workforce, including through incumbent worker and on-the-job training (OJT) programs, to support upward mobility" (p. 38).

First, the CEDS finds that construction trades represent only 0.1% of the local 'talent pipeline' and that the Central Coast is essentially a 'net importer' of construction workers. Our analysis of the past decade of local oil and gas worker outflows shows that construction is the most common cross-sector transition, especially to construction positions elsewhere in California. Strategic workforce development programming could formalize this bridge between the existing oil and gas workforce and the construction trades shortage that the CEDS identifies.

Second, the CEDS lists the Morro Bay Wind Energy Area as a landmark development and lists clean tech/renewable energy as one of four target industries for growth. Wind Turbine Service Technicians appears in the skills matching as a destination for Industrial Machinery Mechanics and Electrical and Electronics Repairers (Commercial and Industrial Equipment), two local oil and gas occupations.

As currently scoped, the CEDS initiative is demand-driven, oriented toward the sectors of the economy and industries that the county wants to grow. A complementary approach would consider the supply side: who are the workers most at risk of displacement, and how do their existing skills map onto the target sectors and beyond? The recommendations below are targeted toward this question, aiming to ensure that the phaseout of onshore oil and gas operations does not mean the permanent exit of experienced workers from the regional economy.

110 REACH. Resilience Roadmap: A Comprehensive Economic Development Strategy for the Counties of San Luis Obispo and Santa Barbara. November 2023.

7. POLICY RECOMMENDATIONS TO PLAN FOR WORKER TRANSITIONS

Santa Barbara County must engage in transition planning for oil and gas workers at the same time it considers a phaseout of onshore oil and gas operations. Mitigating harm to workers will take time and careful planning. The plan must include engagement with directly impacted workers as well as a strategy for creating more skills aligned jobs. The county's oil and gas workforce is a web of independent contractors and a low level of unionization in extraction jobs. Directly engaging these workers will require buy in from any trade unions who represent them and engagement of current employers.

The following recommendations are informed by several examinations of worker transition processes (e.g., at Diablo Canyon), conversations with members of the Los Angeles County Just Transition Task Force, public opinion polling, and direct feedback from nearly two dozen current and former oil and gas workers. To carry out these recommendations, the county should hire dedicated staff to contact, interview, and recruit non-union workers to participate in the task force and transition planning.

Recommendation 1: Conduct a full landscape analysis and worker sentiment study to better understand the needs of impacted workers.

The statistics presented in this report represent only a fraction of the data collection effort required. Our preliminary analysis of workforce demographics revealed two key issues: first, the workers most exposed to job loss from an oil phaseout face the steepest barriers to retraining. Second, any economic disruption from a phaseout would fall disproportionately on Hispanic workers.

The county's study should: 1) determine how many workers are primary income earners for their families, have dependents, and own their homes, 2) determine what stage of their career workers are in, and preferred employment trajectory, and 3) collect information on the specialized education and training workers have, and their industry of choice for reemployment and training preferences.

Recommendation 2: Establish a task force that directly engages impacted workers to formulate and implement transition plans.

The task force would help design and oversee a workforce transition and jobs creation plan that coincides with the timeline of the phaseout. It should meaningfully engage with industry, labor, environmental justice, conservation, non-union workers, local tribal governments, researchers, workforce development representatives, and policymakers. These stakeholders can utilize the amortization study and a worker landscape analysis

to help the county plan for and then oversee the phaseout.[111] This task force could be co-chaired by representatives selected by both North County and South County supervisors so that task force leadership reflects the sentiments and ideas of people from the whole county.

The task force should then work with county staff, economic development and workforce development entities to: 1) identify and promote good-paying jobs to replace oil and gas jobs and 2) identify and promote good-paying jobs for laid-off indirect workforce. The task force should also engage Santa Barbara educational institutions and representatives from the nonprofit sector to better understand potential impacts on funding and educational programming.

Recommendation 3: Require local employers to provide adequate notice and meaningful access to transition resources for all employees and contractors.

The Worker Adjustment and Retraining Notification (WARN) act helps ensure that workers are notified in the case of mass layoffs or plant closures. Where authorized, the county should require WARN notices to be provided more than 60 days in advance, the state's current requirement. Additionally, WARN standards should be applied to a broader array of companies by lowering the number of employees threshold and/or aggregating employees and contractors. Contractors should be included in WARN notices.[112] In particular, the county should explicitly make contractors in the county eligible for county-led transition planning efforts. Finally, the county should explore the possibility of severance pay for all impacted workers.

Recommendation 4: Pursue local, state, and federal funding opportunities to support worker transitions.

The county should partner with local workforce development offices to identify potential resources that could be used for worker transition planning. Grant funding could be used for career planning, job search assistance, training opportunities, and more.[113] As part of this, the county could work with state lawmakers to support the extension of the state Displaced Oil and Gas Worker Fund (DOGWF).[114] The county should also explore expanding the state's Oil and Gas Well Capping Pilot Initiative to include a Santa Barbara program.[115] Importantly, the county should monitor opportunities for expansion of federal programs that can support community transitions and help create high-quality jobs.

111 The LA Just Transition Task Force reflected that the results of the amortization study were highly relevant inputs to workforce transition planning given the age of workers at certain sites and their timelines to retirement varied greatly. These policies could include: 1) training pathways with income support for workers during training, 2) wage gap supplements for a period of time during the transition; and 3) bridge funding for workers nearing retirement.

112 Richer WARN-type protections are not prohibited by the federal WARN Act; see 29 US Code §2105: Procedures in addition to other rights of employees.

113 Miller, R. "$3.4M grant will support displaced Solano workers." The Reporter. March 2026.

114 Employment Development Department (EDD). Displaced Oil and Gas Worker Fund (DOGWF).

115 California Workforce Development Board (CWDB). Oil and Gas Well Capping Pilot Initiative.

Recommendation 5: Utilize county policy to create more good-paying, skills-aligned jobs.

The county can utilize policy and influence to grow the clean energy economy and bring new industries and work opportunities to the county. Specifically, the county should:

- **Create a plan for well capping and site remediation that prioritizes the skills and knowledge of existing oil and gas workers.** This could be modeled off the state's Oil and Gas Well Capping Pilot Initiative.[116] As part of this, the county should monitor new technologies that repurpose oil and gas infrastructure to identify emerging fields that workers could transition into.
- **Incentivize and remove barriers to new clean energy projects**. As part of this, the county should consider: 1) amending the land use, zoning and permitting code to allow for more utility scale solar and energy storage, 2) deploying clean energy on county assets (e.g., county-owned land and buildings), 3) identifying intersections with other goals of the 2030 Santa Barbara County Climate Action Plan, and 4) incentivizing clean energy projects that have a commitment to using Project Labor Agreements and hiring displaced workers.
- **Identify skills-aligned projects where the county could use its influence to create more local jobs**. For example, the decommissioning of Platform Holly and other assets would be a significant job-creator.
- **Build pathways into county jobs with a high level of skill alignment**. This could be modeled off Los Angeles County's High Road Training Partnerships program.[117]
- **Expand use of labor standards to create more high-wage job opportunities**. These standards could help reemploy dislocated oil workers at the county and on county-funded and supported contracts, in sectors identified with high skills-alignment but not pay parity.

116 Ibid.

117 Los Angeles County Department of Economic Opportunity. High Road Training Partnerships (HRTPs).

APPENDIX

Table A1. Oil Fields by Well Type

Field	WellType	Count	Percent
Cat Canyon	Extraction	207	63.5
	EOR	92	28.2
	Other	27	8.3
Cuyama	Extraction	55	73.3
	EOR	19	25.3
	Other	1	1.3
Lompoc	Extraction	57	89.1
	EOR	0	0
	Other	7	10.9
Orcutt	Extraction	201	62.2
	EOR	114	35.3
	Other	8	2.5
Santa Maria Valley	Extraction	65	90.3
	EOR	4	5.6
	Other	3	4.2
Other Fields	Extraction	154	86.5
	EOR	2	1.1
	Other	22	12.4

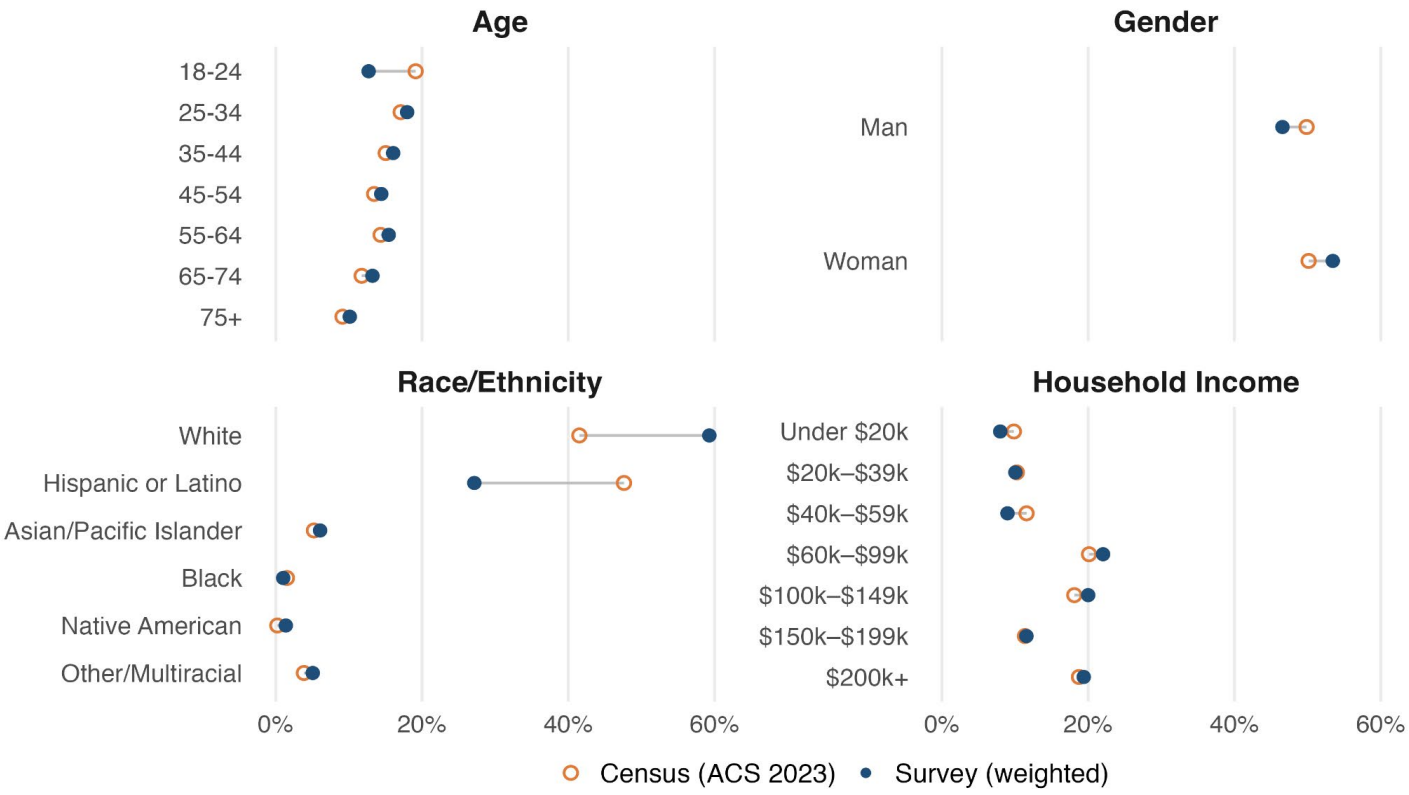
Table A2. Benchmark fossil fuel occupations ordered by share of national employment in fossil fuel industries (FFC %).

FFC Rank	SOC Code	Occupation Title (RFF)	FFC (%)
1	53-7073	Wellhead Pumpers	96.8
2	47-5011	Derrick Operators, Oil and Gas	95.6
3	47-5013	Service Unit Operators, Oil and Gas	92.9
4	47-5012	Rotary Drill Operators, Oil and Gas	92.6
5	51-8093	Petroleum Pump System Operators, Refinery Operators, and Gaugers	89.4
6	47-5071	Roustabouts, Oil and Gas	86.4
7	17-2171	Petroleum Engineers	63.6
8	47-5044	Loading and Moving Machine Operators, Underground Mining	57.8
9	47-5081	Helpers – Extraction Workers	54.6
10	53-7072	Pump Operators, Except Wellhead Pumpers	41.6
11	51-8013	Power Plant Operators	40.9
12	47-5099	Extraction Workers, All Other	40.6
13	49-9012	Control and Valve Installers and Repairers, Except Mechanical Door	37.0
14	47-5049	Underground Mining Machine Operators, All Other	26.6
15	47-5041	Continuous Mining Machine Operators	25.0
16	19-4043	Geological Technicians, Except Hydrologic Technicians	21.6
17	17-2151	Mining and Geological Engineers, Including Mining Safety Engineers	16.3
18	51-8012	Power Distributors and Dispatchers	15.8
19	49-2095	Electrical and Electronics Repairers, Powerhouse, Substation, and Relay	15.4
20	47-5022	Excavating and Loading Machine and Dragline Operators, Surface Mining	12.9
21	19-2042	Geoscientists, Except Hydrologists and Geographers	12.5
22	51-8099	Plant and System Operators, All Other	11.9
23	47-5023	Earth Drillers, Except Oil and Gas	11.8
24	17-3028	Calibration Technologists and Technicians	7.9
25	49-9096	Riggers	7.8
26	49-2094	Electrical and Electronics Repairers, Commercial and Industrial Equipment	7.3
27	17-2041	Chemical Engineers	6.5
28	49-9041	Industrial Machinery Mechanics	6.2
29	53-7121	Tank Car, Truck, and Ship Loaders	5.9
30	51-9023	Mixing and Blending Machine Setters, Operators, and Tenders	5.8
31	53-7011	Conveyor Operators and Tenders	5.3
Added	53-3032	Heavy and Tractor-Trailer Truck Drivers	--

Note: *Occupations 1–31 are the benchmark fossil fuel jobs identified in Greenspon and Raimi (2025).*[118] *Heavy and Tractor-Trailer Truck Drivers are included for local context and are not part of the benchmark list. FFC (%) = share of national employment in fossil fuel industries.*

118 Greenspon, J. and Raimi, D. "Finding the Right Fit: What Jobs Offer a Good Match for Fossil Fuel Workers' Skills?" *RFF.* March 2025.

Figure A1. Demographic Comparison of Survey Respondents vs. Santa Barbara County



Caption: Census benchmarks from ACS 5-Year Estimates (2023), Santa Barbara County. Gender comparison excludes non-binary/other respondents (no census benchmark). Race: multi-select responses collapsed using Hispanic priority rule.