

Crude Policy

Subsidies to the Oil Industry by California Taxpayers

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CALPIRG Charitable Trust

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Executive Summary

Subsidies, at their best, are a government tool to encourage business activity that is in the best interests of the public at large. California's treatment of the oil industry involves subsidies at their worst – unnecessary for the success of the industry, damaging to the environment and public health, and wasteful of taxpayer dollars. This report documents these subsidies and explores related aspects of state energy policy.

- California's vast reserves of crude oil are important to the oil industry. Fifteen percent of U.S. oil production takes place on California land or in water off its shores, making California the third largest oil producer of any state in the country.
- Most of California's oil production is conducted by large corporations and major investors who have reaped the benefits of an immensely profitable business for decades. The top ten California oil producers for which earnings information is available gained worldwide net profits in 1996 totaling nearly \$20 billion.
- The risks of investing in exploration and development are small relative to potential profits. Further, these risks are more than balanced by the diversification of the companies, most of which receive income from each of the various stages of the production and sale of oil products.
- The oil industry generates severely hazardous levels of pollution in the production and processing of crude oil. In the pumping and refining stages, emissions of major toxic gases are greater than from all industrial manufacturing sources combined.
- California taxpayers will give direct subsidies to oil and gas companies totaling \$129 million in 1997.
- Because oil companies frequently evade responsibility for the pollution they create, California taxpayers further subsidize their activities indirectly by cleaning up after them.
- Rather than providing incentives for business activity in a sector which is not meeting its potential, these subsidies amount to nothing more than handouts to an already thriving industry.
- Eliminating California taxpayers' direct subsidies to the oil industry would have a negligible impact on oil industry investment in developing the state's resources. The money saved could be passed on as savings to taxpayers or used for productive investment. Forcing the oil industry to pay the full costs of cleaning up its pollution would greatly add to these savings and serve as a disincentive for further pollution.

California Oil Production

California, pioneer of alternative energy, a world leader in the development of zero- emission vehicles and wind farms, is also a leader in the production of fossil fuels. Over a trillion gallons of oil have been pumped here since production began in 1876, with 14 billion gallons still flowing out of wells here each year.¹ California is now the country's third largest oil-producing state behind

Texas and Alaska, providing 15% of the national total. 29 California counties have productive oil fields.

24% of California's oil is pumped from offshore platforms off the coast of Santa Barbara and Long Beach. Ten of these platforms are in state waters, within three miles of the coast, and 23 are in federal waters beyond that limit.

In addition to crude oil, large amounts of natural gas are harvested in the state. Natural gas production in 1996 was 289 billion cubic feet, with 19% coming from offshore. Most of this gas is pumped and processed by the same companies involved in crude oil production.²

Oil Producers

Over half of California's annual oil output is pumped by five companies, which together accounted for nearly 8 billion gallons of crude oil pumped in 1996. In that same year, these five companies posted worldwide profits totaling over \$11 billion.

Table 1: Top 5 California Oil Producers

Company	Crude Oil Pumped in CA in 1996 (millions of barrels)	Percentage of total CA Oil Production	1996 Worldwide Net Profit (millions)
Shell*	50.4	15%	\$2,021
Texaco	39.2	11%	\$2,018
Mobil	36.6	11%	\$2,964
ARCO ^o	31.9	9%	\$1,663
Chevron	30.2	9%	\$2,607
Total	188.3	54%	\$11,273

* Through its CalResources unit.

^o Includes production from Thums Long Beach Company, a wholly owned subsidiary.

Of the top fifteen California oil producers (accounting for ² of the state's oil production), ten make their earnings public. These ten corporations gained \$19.5 billion in net profits for their shareholders in 1996 alone, with none of them recording a loss.³

Smaller producers – each pumping less than 100,000 barrels per year – are responsible for twenty percent of California's oil production. These companies are mostly set up by large investors and holding companies which pay royalties to the owners of oil reserves for the right to pump their oil. Any developer willing to invest a couple of million dollars can get into the business and make a huge profit on oil. With 130 billion gallons of proven reserves and countless more yet to be found, a lot of money stands to be made in the continuing California oil rush.

Environmental Effects

Pollution is created at each stage of oil production and use. At the wellsite, toxic contaminants are released into the air. Spills occur in transportation. Refineries bellow poisonous smoke as they process crude oil. Deteriorated underground tanks seep petroleum into the soil during storage. And finally, burning the product creates deadly emissions and leads to global warming.

Air Pollution

The California Air Resources Board tallies emissions of four health-damaging pollutants: reactive organic gases (ROG), nitrogen oxides (NOx), sulfur oxides (SOx), and particulate matter (PM). ROG and NOx combine in sunlight to create ozone, the most harmful ingredient in what we call smog (not to be confused with ozone in the upper atmosphere, which protects us from solar

radiation). Breathing each of these four substances has been proven to cause serious damage to human health.⁴

Emissions of these gases by oil and gas producers at the wellsite and the refinery rival the air pollution created by all forms of industrial manufacturing combined. 81% as much NOx, 67% more PM, five times as much Sox, and over 25 times as much ROG are created in oil production as in manufacturing in California.

Table 2: Toxic Emissions from CA Oil Production & Processing (tons per day)⁵

Source	Reactive Organic Gases (ROG)	Nitrogen Oxides (NOx)	Sulphur Oxides (Sox)	Particulate Matter (PM)
Oil & Gas Production (combustion)	6	70	3	3
Petroleum Refining (combustion)	2	47	11	6
Petroleum Production & Marketing	210	21	60	6
Oil & Gas Total	218	138	74	15
Manufacturing & Industrial Total	8	170	14	9

A recent U.S. EPA audit of fugitive emissions showed gases being released from locations at refineries where monitoring tests are not normally performed. The report concluded that emissions could be underreported by as much as a factor of ten.

Emissions of dioxin, the most toxic synthetic compound known, are not tracked by the EPA or the California Air Resources Board. Dioxin has been linked to cancer, diabetes, immune system breakdown, and infertility.⁶ Dioxin is not broken down by the human body, but builds up over time. Very small amounts have been shown to be extremely dangerous.

Dioxin is created in the process of refining petroleum.⁷ Studies in California have shown the creation of dioxin at Texaco's Bakersfield refinery and Chevron's Richmond refinery. "One in ten children suffer from slow learning as a result of dioxin exposure," according to Greg Karras, senior scientist at Communities for a Better Environment. "Yet major known dioxin polluters, including oil refiners, still cover up the amounts of their ongoing dioxin release."

Water Pollution

Every major oil company has a list of environmental catastrophes for which it is responsible; some are well-known while others receive scant attention. Although tanker accidents such as the Exxon Valdez have become our standard picture of the hazards involved in oil production, major disasters regularly occur in our own backyard. Among the incidents of oil pollution within California borders caused by the state's leading oil producers are the following.

- Shell, Unocal, and Exxon have discharged poisonous levels of selenium into San Francisco Bay for years, causing the EPA to label the Bay a "toxic hot spot" and issue an advisory against eating fish from the Bay.
- Texaco spilled 370,000 gallons of oil into the Ventura River in 1993.
- Mobil's refinery in Torrance leaked 2.4 million gallons of gasoline into shallow groundwater pockets and a regional aquifer throughout the 1980s.
- ARCO spilled 170,000 gallons of oil into the Santa Clara River in 1994.
- Chevron's El Segundo refinery has leaked hundreds of millions of gallons of crude oil and petroleum since the 1960s. In 1988, 252 million gallons were estimated to be floating on

the groundwater there, enough to convince the company to set up oil wells to harvest its own mess.⁸

Subsidizing the Oil Industry

Government subsidies can effectively encourage businesses to invest in productive activity which they would not otherwise undertake. When high levels of investment won't provide corresponding returns for a long period of time, without added incentives companies are often unwilling to make the initial investments. If the activity is in the best interests of the general public, it is worth our while to subsidize such industries.

For the oil industry, however, subsidies have a negligible effect on business activity, and only serve to further line the pockets of successful investors. Due to a tremendous profit motive, the small amount of financial risk relative to those profits, and the nature of the businesses making the exploratory investments, the oil industry need not and should not be subsidized by California taxpayers.

Oil is an immensely profitable business. The entire economy is dependent on the product. Oil-exporting countries are so certain of continuing markets that they created a cartel to limit the sale of their product and artificially drive up the price. Every drop which is pulled out of the ground in California is certain to be sold at prices reflecting the effects of that cartel.

Technological advances have minimized the risks of investing in oil exploration and development. With modern seismic techniques, geologists know well where reserves are. A developer may have to take more than one stab at tapping the reserves, but it is never impossible to pull the oil out of the ground.

Large corporations and major investors with great financial resources undertake most of the research and exploration for oil in California. They are sufficiently diversified to absorb individual risks through the many successful and highly profitable projects of their overall operations. Major oil developers have oil flowing through already profitable wells elsewhere, are refining petroleum with oil shipped in from abroad, and are selling gasoline at the street corner. The income from these activities is more than sufficient to protect the companies against the relatively small risks involved in oil exploration in California.

There is no shortage of companies standing ready to capitalize on the state's oil resources. Occidental Petroleum's recent \$3.65 billion purchase of the Elk Hills reserve, the highest price paid in the sale of a government asset in history, demonstrates the abundance of investment money for California's oil.

Still, California taxpayers subsidize the industry. Companies would be investing in oil production in California with or without the subsidies, but the state hands the industry taxpayer money nonetheless. Oil and gas companies will receive \$129 million in state subsidies in 1997.⁹

How the Subsidies Work

There are two types of subsidies governments give to business: outlays and tax breaks. Outlays are direct payments from the treasury to companies involved in a particular type of business activity. Tax subsidies are "any special provisions [in the tax code] which deviate from the "basic tax structure" and result in a revenue loss" to the government. Further, they are "narrowly focused deductions or exclusions that are only available to a select group of taxpayers."¹⁰ The amount of a tax subsidy is the amount of revenue lost to the government due to the special provision (as compared to the projected revenue without the existence of that provision).

In either case, taxpayers pick up the tab. The major California subsidies to the oil industry are all tax subsidies.

Table 3: Subsidies to Oil & Gas Companies by California Taxpayers in 1997

State Subsidies	Amount (millions)
Expensing of Exploration	\$10

Percentage Depletion	36
Manufacturers' Investment Credit	75
Research & Development Credit	6
Enhanced Oil Recovery Credit	2
TOTAL	\$129

Subsidy 1 - Expensing of Exploration Costs

Oil companies enjoy a unique accounting privilege which greatly benefits them: the "expensing" of most of the "intangible drilling costs" associated with the exploration and development of oil fields. "Expensing" is a method for recouping costs which provides more immediate benefits than "depreciation"

The concept of depreciation – the standard accounting procedure – is familiar. A manufacturing company, for example, buys a new machine to make a consumer product. Because this machine will be useful for a number of years, the company deducts its cost as it depreciates. In year two, the company still has an asset which is worth, say, 80% of the development price, so the full price is not yet an actual expense. When the machine is no longer churning out products or is obsolete, the company will have made its money on the goods produced by the machine, and will have deducted the full cost of the machine as a business expense against those profits.

If you are digging for oil, in contrast, you can take full deductions on your investments immediately, thanks to this subsidy. The geologists you hire to determine how much oil there is and how good it is, the offices and people who coordinate the effort, the preparation of the land – all these costs can be cut from your taxable income as you incur them. You get the full deduction as well as the benefits of your investment right from the start. So you pay less tax this year and have that much more money to use next year. Keep exploring and you can defer your taxes forever.

This subsidy to oil & gas companies will cost California taxpayers \$10 million in 1997.¹¹

Subsidy 2 - Percentage Depletion

As an added incentive to make drilling for oil more profitable and thus encourage more development, the state allows oil companies to make tax deductions which are far in excess of actual expenses!

General development costs which are not "expensed" can be recovered over time. Under the standard accounting procedure – cost depletion – the amount of money put into developing a natural resource reserve is recovered over the active life of the reserve. The company calculates how much was spent on developing a site and deducts a percentage of that cost each year based on the percentage of the resource which was depleted in that year. When the reserve is still half full of oil, the development of the site is still a valuable asset which could be sold. As the reserve is depleted this asset becomes less valuable, and its depreciation becomes a deductible business expense. When the reserve is empty, the company will have recovered the exact amount which they spent in developing the reserve. Integrated oil companies – those that are producers, refiners, and distributors of oil products – must use cost depletion.

In place of cost depletion, independent oil & gas producers and most mining firms are allowed to use percentage depletion. Percentage depletion makes a generous estimate of the average amount of money that goes into a site compared to the product that comes out of it. In this creative accounting scheme, companies do not add up actual costs and make corresponding deductions. Rather, they deduct a flat 15% of what they sell their oil for, as if this is what it actually cost them in general development expenses. Each year, they deduct 15% of gross revenues from their taxable income, even after their original expenses have been recovered. As long as the site keeps producing, they can continue to act as if their original costs are being

claimed. For oil companies, this deduction can be as high as 100% of net income, effectively eliminating their corporate income tax.

Though limits have been placed on percentage depletion, the industry continues to battle to preserve it. In 1975, integrated oil companies were excluded from eligibility for this deduction. The percentage allowed for the deduction was later reduced from 22% to 15%. Nonetheless, the subsidy remains.

In 1997, this provision will cost California taxpayers \$36 million for oil & gas companies.¹²

Subsidy 3 - Manufacturers' Investment Credit

The manufacturers' investment credit was created to encourage new investment in product manufacturing in California. Companies developing new products or improving old ones can subtract 6% of associated infrastructure costs from their taxes. New production machinery, testing equipment, buildings, and other tangible property can all qualify for the credit.

While the standard definition of product manufacturers does not normally include oil companies or other energy generators, the oil industry was able to squeeze "refining" and "processing" into the definition of "manufacturing" for purposes of claiming this credit.

In 1997, this provision is estimated to cost taxpayers \$75 million in credits to oil & gas companies.

Subsidy 4 - Research and Development Credit

Also to stimulate new product development, the research and development credit covers expenditures for intangible items which do not qualify for the manufacturers' investment credit as durable property. 8-12% of a company's costs for research personnel, general research grants to universities, renting supercomputers and other facilities, and prototype construction are reimbursed by the state. Originally passed in 1987 for a four-year period, this subsidy was made permanent in 1991.

In 1997, oil companies claimed \$6 million of this subsidy.

Subsidy 5 - Enhanced Oil Recovery Credit

In primary recovery of oil, no pump is needed to get the crude oil flowing into a pipeline; the pressure in the reserve is sufficient to lift it out. Secondary recovery requires a pump. After the pump stops producing, there is still some amount of oil left in the well. To extract the rest, wells are most commonly injected with water or steam. Gas and chemical flooding are also sometimes used to dilute the crude sludge. 15% of the costs associated with these "enhanced recovery" projects is subtracted from corporate income tax.

This provision costs California taxpayers \$2 million dollars each year.

Tax-Exempt Bonds

Another avenue through which public money passes into the hands of the oil industry is the California Debt Limit Allocation Committee (CDLAC). This committee, set up in 1986, includes just three people - the governor, the treasurer, and the controller. Its stated purpose is to provide funding, through tax-exempt bonds, to private entities working on projects with substantial benefits to the public.

Low-income housing agencies are intended to be the primary recipient of this money. As these agencies are unable to issue their own bonds or secure loans at affordable rates, the state government stands behind them to arrange for funding. Bonds backed by the government carry very little interest. The money can then be made available as low- interest loans to first-time home buyers who would not otherwise be able to obtain a mortgage. Federal law allows states to issue these bonds each year up to a total amount of \$50 per state resident - \$1.6 billion for California.

In 1994, oil companies discovered that they could get a piece of this funding through a provision in the law providing for the eligibility of "pollution-control programs." Through the end of 1996, \$3.3 billion was allocated for pollution control. The oil industry has secured at least \$293 million of this money: \$225 million to Shell, \$40 million to ARCO, and \$28 million to Chevron.¹³

Major corporations like these often issue their own bonds to raise money for large projects, at rates only slightly higher than those of government bonds. But they still apply for tax-free CDLAC funds with the slightly lower rates. These oil companies are so concerned about their short-term profits that they fight for funds which would be enormously beneficial to low-income individuals and which are only marginally beneficial to the companies themselves.

Costs of Oil Pollution

Further subsidization of the oil industry lies in the state's role in handling the pollution created by the oil companies. The state maintains the Office of Oil Spill Prevention and Response, the Leaking Underground Storage Tank Program, and the Office of Emergency Services. The Department of Conservation's Division of Oil, Gas, & Geothermal Resources, the California Environmental Protection Agency, and the State Fire Marshal also use considerable resources to monitor and clean up after the oil industry.

By law, programs to clean up oil spills from tankers and pipelines and petroleum leakage from underground tanks are paid for by fines and special taxes on the industry. In reality, court challenges often tie up or deny the reimbursement of the state's cleanup costs. The cleanup efforts themselves are often delayed by legal proceedings to establish culpability.

The Department of Fish and Game's Oil Spill Prevention and Response Office operates with a severe lack of funds. When cleanup operations are needed and funds from past reimbursements are insufficient, taxpayer money is used to cover their expenses. OSPR regularly receives handouts from other state agencies and the federal government.

The Underground Storage Tank Cleanup Program of the Water Resources Control Board has been called on to take corrective action in 31,700 cases since its creation in 1990, half of which are still pending. Any individual or business with a leaky petroleum tank can apply to the program to have the state take financial responsibility for needed repairs. A special fee is assessed to all owners of underground tanks to fund this program. In 1997, however, state budget estimates predict that \$88 million more will be spent on tank cleanup programs than is raised through fees and cost recoveries. While this allows them to catch up on needed work, the long range outlook for the program is uncertain.

Even with successful cleanup operations, the state seeks no compensation for health and agricultural damage. And beyond the accidents, pollution from normal production and use of petroleum products results in high environmental and health costs. Farmers and consumers suffer financial damage from reduced crop yields. Individuals, government, and health insurers bear the costs of health damage caused by pollution. The oil industry gives nothing to compensate for these losses.

In California, no studies have been done to calculate the total unreimbursed costs of pollution statewide. The annual costs due to health damage from ozone and particulate matter in the Los Angeles area alone are estimated at nearly \$10 billion.¹⁴ Nationally, estimates of the annual costs to society of air, water, and soil pollution caused by oil production and use range as high as \$240 billion.¹⁵ In addition, global warming will do an enormous amount of damage to the economy. Current annual national costs associated with climate change have been estimated at \$22 billion.¹⁶

Subsidized Politicians

Another investment which oil companies are not hesitating to make is in the office holders who vote for continuing the subsidies. In the 1994 elections, oil and gas interests spent \$2.9 million on contributions to California state politicians. In the 1996 cycle, they gave \$3.4 million. In 1995-96, ARCO was the fourth largest corporate contributor to California candidates at \$646,000. Chevron's \$476,000 put them at number eight on the list. Also topping six figures were UNOCAL,

with \$206,000, and Texaco, giving \$112,000.¹⁷ In all, the industry "donated" \$6 million over four years and secured annual subsidies of \$129 million ö a 2,000% return on investment.

Conclusion

Subsidies are effective public policy to stimulate productive activity which would not otherwise take place. With oil and gas production and processing, the incentive for profit is so great that there is no need for the state government to enact special provisions to encourage new investment. We recommend that these subsidies be eliminated and that the oil industry be forced to pay the full costs of cleaning up its pollution. The savings generated could be used to fund a tax cut to Californians or be allocated toward productive projects to benefit California taxpayers and the environment.

Appendix: Methodology for Subsidy Calculation

The California Department of Finance publishes an annual report listing all tax subsidies of \$10 million dollars or more. The report totals the revenue loss for each subsidy, from all industries combined, through a variety of modeling techniques. Their composite figures, for all industries, for 1997 are as follows.

Subsidy	Amount (millions)
Expensing of Exploration	\$ 100
Percentage Depletion	\$ 40
Manufacturers' Investment Credit	\$ 345
Research & Development Credit	\$ 252

Statutes concerning expensing of exploration, percentage depletion, and the research & development credit are nearly identical in U.S. and California law. For the federal subsidies, the Joint Committee on Taxation and the IRS Office of Tax Analysis (OTA) calculate the portion given to different industries. To calculate the subsidy amount for the oil industry alone in California, this report uses the federal breakdown by industry, adjusted for differences in federal and state business activity.

For the research & development credit, federal government figures are not specific enough to determine the portion of the subsidies given to the oil industry alone. The calculation of this item used in this report was made by economics professor and tax specialist Jenny Wahl, author of the Institute for Local Self-Reliance's Oil Slickers report. As the percentage granted for this credit in California is half the federal credit, the subsidy amount was then halved.

Applying these percentages to the overall California subsidy amounts produced figures which assume proportionate industry activity on the federal and state levels. For the percentage depletion subsidy, which is only available to oil and mining companies, adjustments were then made for differences in oil and mineral production in California and nationwide.

Mining production in California, relative to oil production, is 51% of the nationwide ratio. Thus, this factor was applied to the initial calculation of the mining subsidy amount. Subtracting this amount given to California mining companies from the total amount of the percentage depletion subsidy leaves us with the amount given to oil & gas companies.

For the manufacturers' investment credit, the California Franchise Tax Board estimated that between \$50 million and \$75 million of the \$240 million total from 1995 was for oil & gas companies. Translating these amounts to the \$345 million total for this subsidy in 1997, the estimated range is \$72 million to \$108 million. \$75 million is used as a conservative figure.

The enhanced oil recovery credit was passed in 1996 as part of that year's principal omnibus tax bill, SB 38. The Franchise Tax Board produced an analysis of the bill at that time, in which they projected that this provision would result in a revenue loss of \$2 million per year for each fiscal year through 1998-99.

Footnotes

- ¹ Includes offshore production from federal waters along the California coast.
- ² All oil and gas production statistics in this section are taken from the California Department of Conservation, 1996 Annual Report of the State Oil & Gas Supervisor, and the U.S. Department of Energy, Petroleum Supply Annual, vol. 1, 1996.
- ³ From company annual reports and SEC 10-Ks.
- ⁴ American Lung Association, Air Pollution and Your Health, 1995.
- ⁵ California Air Resources Board, Draft Emission Inventory 1995, October 1997.
- ⁶ Lois Marie Gibbs, Dying from Dioxin, South End Press, 1995.
- ⁷ Thompson et al., "HPLC Cleanup Procedures for the Determination of 2378TCDD in Fish Tissue." Chemosphere, 1989.
- ⁸ This ongoing disaster was documented by Friends of the Earth as the nation's single largest oil plume in history. Crude Awakening: The Oil Mess in America, 1994.
- ⁹ This figure comes on top of an estimated \$3 billion annually in direct federal subsidies to the oil industry.
- ¹⁰ California Department of Finance, 1995-96 Tax Expenditure Report. As these provisions cost the government money, they are often labeled "expenditures" The terms "tax expenditure" and "tax subsidy" are interchangeable.
- ¹¹ Mining interests also take advantage of this subsidy, costing taxpayers an additional \$2 million.
- ¹² Additionally, mining companies receive \$4 million from this subsidy.
- ¹³ San Francisco Bay Guardian, Siphoning Subsidies, August 28, 1996, and Shell Games, October 23, 1996.
- ¹⁴ Jane V. Hall, et al, "Valuing the Health Benefits of Clean Air." Science, vol. 255, February 14, 1992.
- ¹⁵ Institute for Local Self-Reliance, Oil Slickers: How Petroleum Benefits at the Taxpayer's Expense, August 1996.
- ¹⁶ Union of Concerned Scientists, Money Down the Pipeline: Uncovering the Hidden Subsidies to the Oil Industry, September 1995. As these costs are not currently being covered, they will need to be made up for later.
- ¹⁷ All contributions data compiled from records filed with the Secretary of State. These figures do not include contributions to the political parties or additional contributions made by executives and other employees of the corporations.