



Policy Brief

The Environment, the Economy, and Energy: Redirecting Windfalls for a Renewable Energy Future and a Sustainable Transportation Policy

By John R. Burbank

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Executive Summary

As a nation, we are consuming our nation's resources and the world's resources at an unsustainable rate. Our reliance on and promotion of a petroleum-based economy threatens our environment and our way of life. Our dependence on foreign oil has almost tripled in volume in the past 35 years, with imports growing from one-third of total consumption to almost three-quarters of total consumption. Simultaneously, global warming is taking its toll on agriculture and water resources, increasing both flood and drought.

Some organizations in our society benefit from our dependence on the petroleum-based economy, the increasing global and national demand for oil, and the stagnation of production. Those are the major multinational oil companies. While Washington citizens and businesses are paying historically high prices for gasoline, these major oil companies are reaping windfall profits. Hundreds of millions of dollars are being taken from the budgets of families and businesses and exported out of our state every week.¹

There is a better way. We can steer our economy to become more dependent upon renewable energy. We can develop a transportation system that emphasizes convenience and efficiency. We have the resources at hand to do so, by redirecting windfalls from the oil industry into investments for research and development and commercialization of the renewable energy industry, and building a rational transportation system that will get us from home to work quickly and efficiently.

A state level windfall profits tax could generate over \$600 million annually. Proceeds could be invested to incubate the production and use of renewable energy, retrofit schools for greater energy efficiency, shift student bus transportation to biodiesel fuel, and reduce business and occupation (B&O) taxes across the board in recognition of the increasing cost for fuel borne by business. A portion of the money could also be used to mitigate the toll that increases in energy prices are taking on public services.

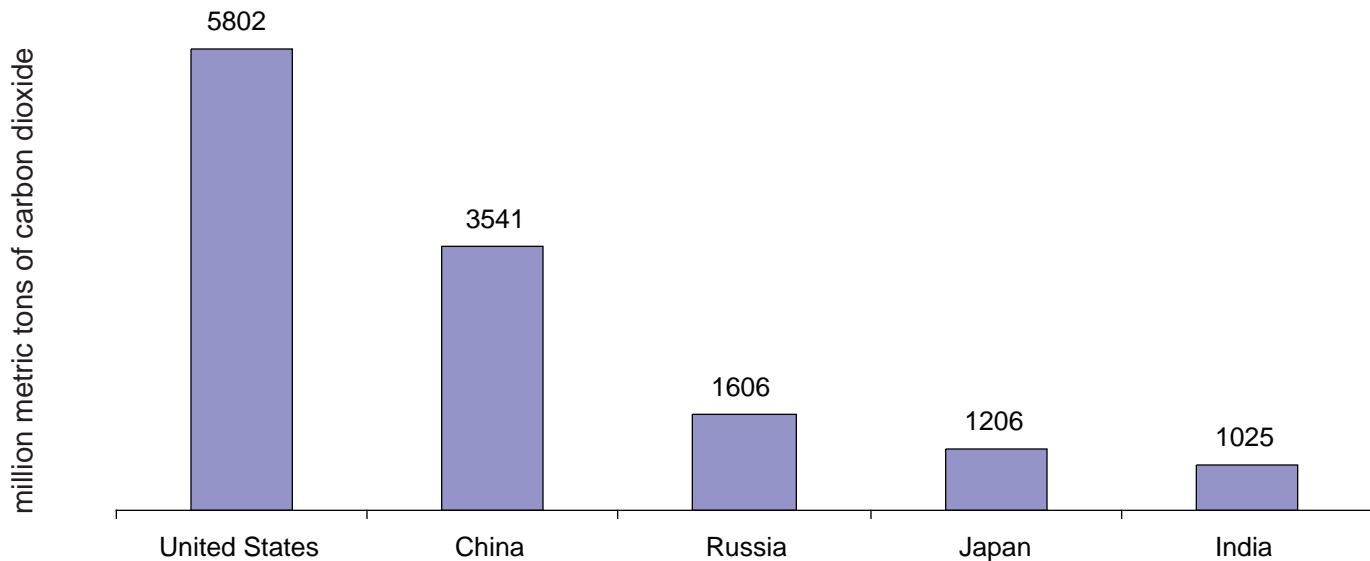
Washington state has the responsibility to develop and catalyze a rational energy policy that promotes long-term economic vitality. Lawmakers also have the authority to create policy to capture some of the windfall profits of oil companies, and invest these profits for the benefit of all state residents and businesses. This policy brief discusses the energy-economic-environmental quandary confronting us individually and as a society, and explores policy options for rational and democratic energy and transportation policies in our state.

¹ Sightline Institute, http://www.sightline.org/daily_score/archive/2006/05/02/giant-sucking-sound

1. The American Dependence on Oil: A Threat to our Way of Life

We are consuming our nation's resources and the world's resources at an unsustainable rate. Our reliance on and promotion of a petroleum-based economy is creating an environment that threatens our air, water, forests, and coasts. The interconnected and rapid rise in carbon dioxide levels in the air and global warming will, if unabated, result in the choking off of economic security and opportunity. We are confronted with a marked decrease in the quality of our environment and our lives. This is a worldwide problem in which the United States plays a very big role.

Countries with Most Carbon Dioxide Emissions from Energy Consumption: 2003



Source: Author's calculations from Energy Information Administration, Annual Energy Review 2004, Table 11.19 World Carbon Dioxide Emissions from Energy Consumption, 1994-2003.

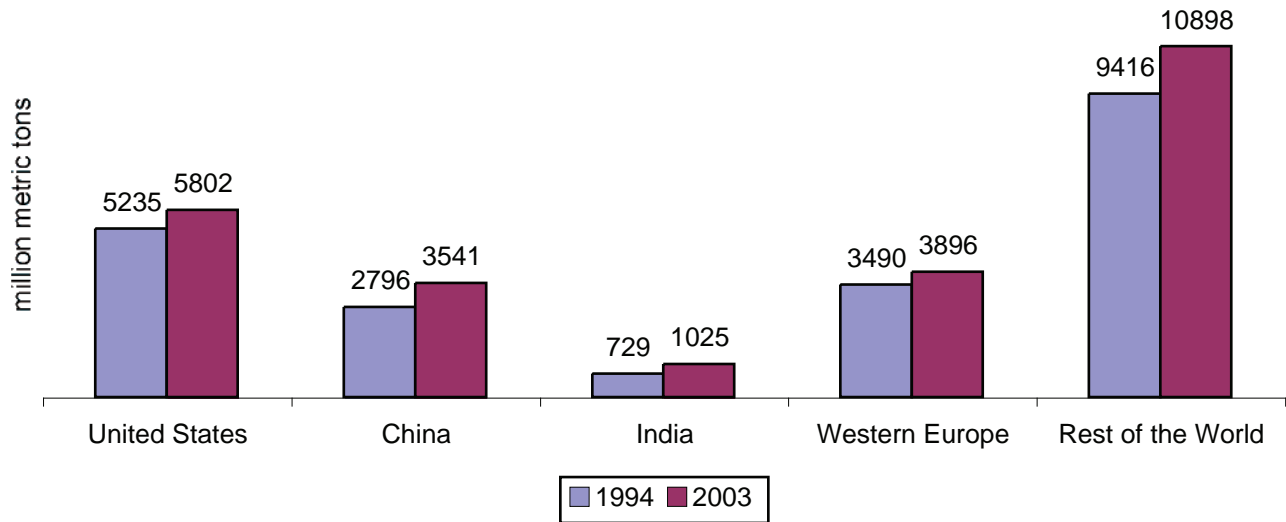
In 1993, the United States was responsible for 24% of all global emissions. In 2003, despite the rapid increase in emissions from China and India, the United States, with 5% of the world's population, remained responsible for 23% of all global emissions.² A rough estimate indicates that Washington state, with two percent of the U.S. population, generated 116 million metric tons of these emissions in 2003.³

The U.S., with 5% of the population, is responsible for 23% of global emissions.

² Author's calculations from Energy Information Administration, Annual Energy Review 2004, Table 11.19 World Carbon Dioxide Emissions from Energy Consumption, 1994-2003.

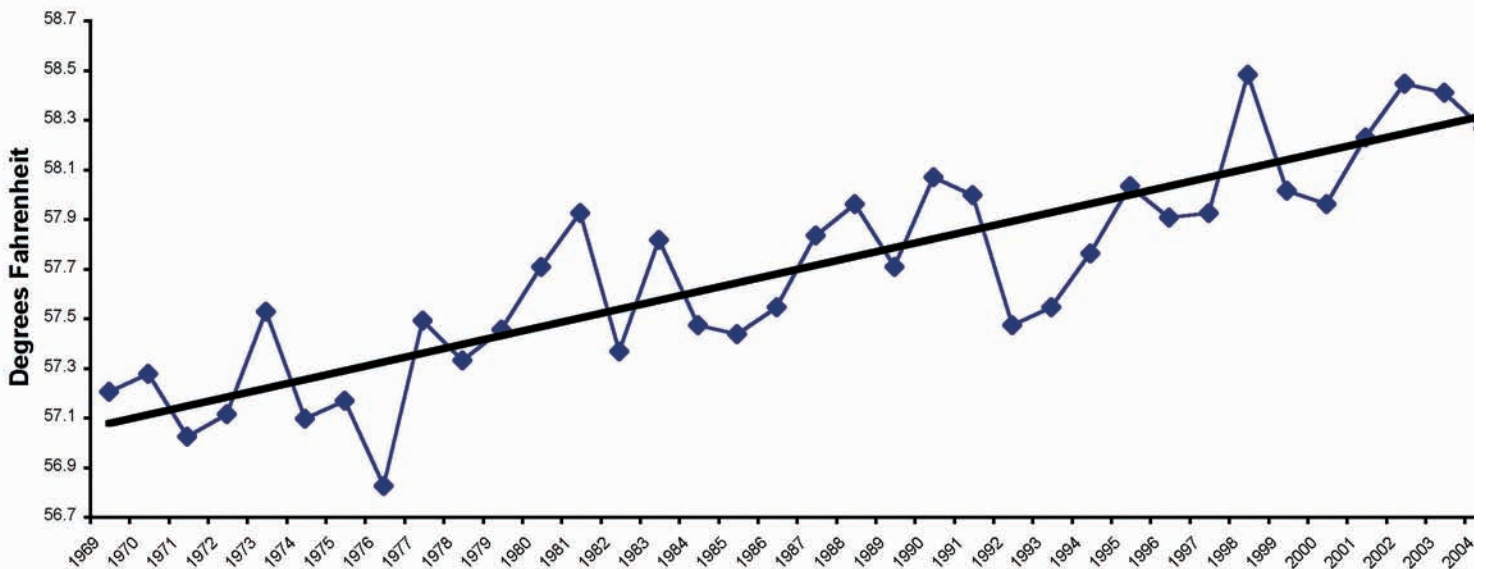
³ This is averaging the US production of emissions across the states by population: total emissions were 5802 million metric tons. This amount multiplied by Washington's population as a percent of the United States' population – 2% - results in 116 million metric tons.

Carbon Dioxide Emissions from Energy Consumption: 1994 and 2003



The result of these unremitting and increasing emissions is an increase in carbon dioxide levels in the air from 270 parts per million (ppm) at the beginning of the industrial revolution to 377 ppm in 2004.⁴ This in turn correlates with a rise in global temperature.

Global Mean Annual Temperature, 1969 - 2005 (with trendline)



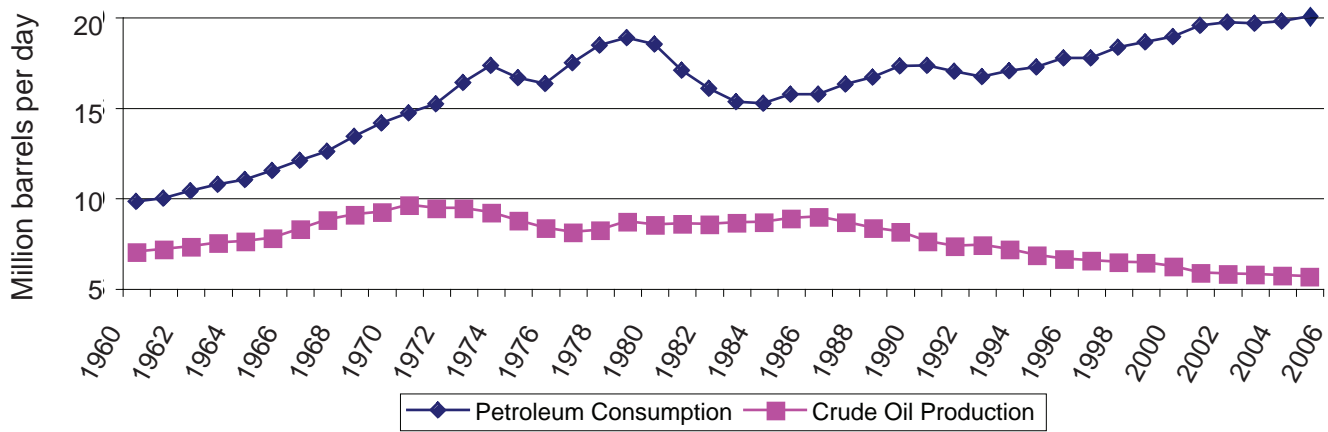
Source: Author's calculations from J Hansen, NASA's Goddard Institute for Space Studies (GISS), "Global Temperature Anomalies in 0.1 C," at <http://data.nasa.gov/gistemp/tabledata/GLB.Ts.txt>

⁴ Lester Brown, *Plan B 2.0, Rescuing a Planet Under Stress and a Civilization in Trouble*, p. 59.

The mean global temperature between 1951 and 1980 was 57.2 Fahrenheit. The global temperature has risen persistently since that time, to 58.6 degrees in 2005.⁵ This may not seem like a big change, but this degree and a half has already catalyzed profound environmental effects around the world. Concentrated heat waves have resulted in global shortfalls in grain harvests. Increasing floods and decreasing precipitation falling as snow have depleted natural reservoirs which, in turn, has diminished water available for dry summer seasons. Hurricanes are more frequent and more powerful.⁶

In addition to the environmental threats that our economic patterns and choices create, these same patterns and choices make us more and more vulnerable to the whims, decrees, and terror of organizations and people who do not have the best interest of our country at heart. This is particularly true of our consumption of petroleum products.

The Growing Gap: US Consumption vs. Production



Source: Energy Information Administration, Annual Energy Review 2004, Table 11.5 World Crude Oil Production, 1960 – 2004 and Table 11.10 World Petroleum Consumption, 1960 - 2003

Our dependence on foreign oil is worsening every day. Crude oil production in the United States peaked in 1970, and since then has fallen by two-fifths. Meanwhile, petroleum consumption has risen in our country by over a third. The result is that our dependence on foreign oil has almost tripled in volume, with imports growing from one-third of total consumption to almost three-quarters of total consumption. Any discussion of homeland security has to take into account that we are beholden to foreign nations, some of whom are unreliable friends, doubtful allies, or even adversaries.

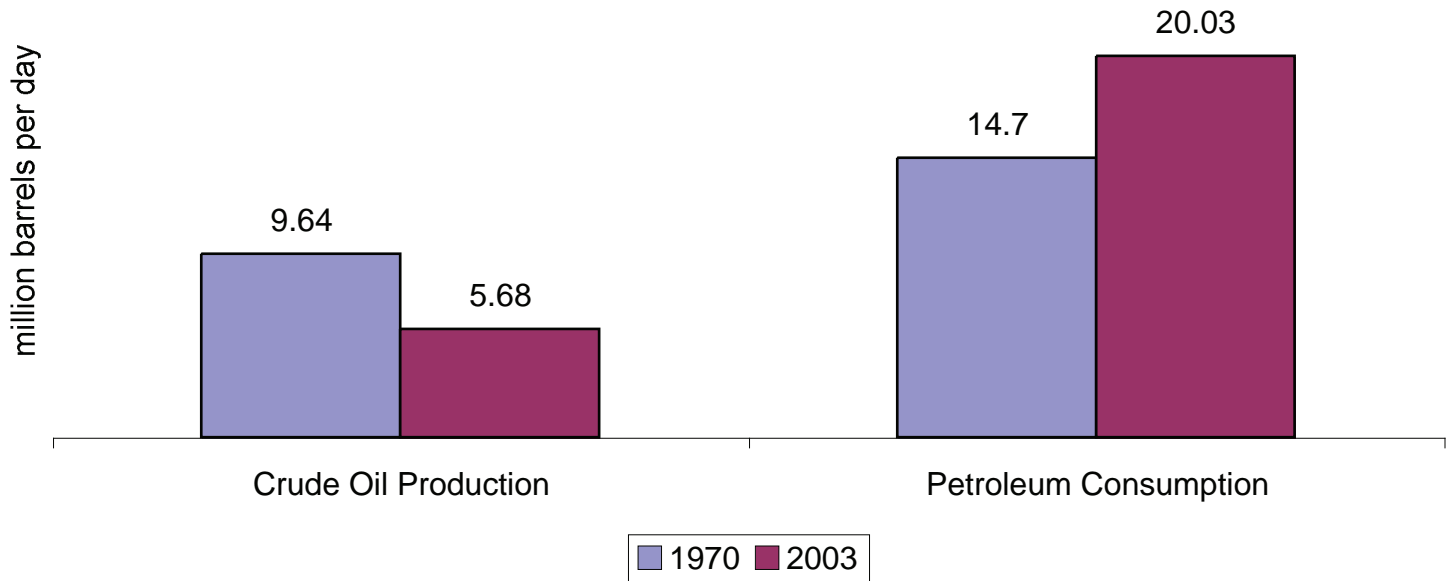


Our dependence on foreign oil is worsening every day.

5 Author's calculations from J Hansen, NASA's Goddard Institute for Space Studies (GISS), "Global Temperature Anomalies in 0.1 C," at <http://data.nasa.gov/gistemp/tabledata/GLB.Ts.txt>

6 See Lester Brown, *Plan B 2.0, Rescuing a Planet Under Stress and a Civilization in Trouble*, Chapter 4 "Rising Temperatures and Rising Seas".

Crude Oil Production and Petroleum Consumption in the US



Source: Energy Information Administration, Annual Energy Review 2004, Table 11.5 World Crude Oil Production, 1960 – 2004 and Table 11.10 World Petroleum Consumption, 1960 – 2003.

Oil imports are responsible for almost one-third of our trade deficit.⁷ According to former Federal Reserve Board Chair Alan Greenspan, higher energy prices since the end of 2003 lowered U.S. gross domestic product by one-half a percentage point in 2004 and another three-quarters of a percentage point in 2005.⁸ Any decision made in Saudi Arabia or Iran to withhold supply reverberates through our entire economy with energy price hikes that increase production costs for business, living and transportation costs for citizens, and inflation.

The answer is not to produce more crude oil in our country and maintain our addiction to a petroleum-based economy. First of all, we don't have the resources to make much of a dent in imports, especially with economic growth increasing our demand for oil. Secondly, it is becoming more and more evident that the peaking of crude oil discoveries and crude oil production will occur in the near future. This in itself undermines petroleum-based economic development.⁹ Third, this would only worsen the environmental degradation we are now witnessing with the increase in global warming.

The oil crunch is not a concern for the multinational oil companies. Exxon is spending more of its windfall on stock buybacks and dividends than on exploration for new sources of oil. Exxon, Shell, BP, Chevron, Conoco, and the other oil giants benefit from our economy's dependence on oil, and from the limited and narrowing production and refinement of crude oil. As supplies tighten and oil discoveries and production stagnate, the oil companies' current reserves gain in value. These companies focus on short-term and individual corporate gain. They have no incentive or mandate to consider the long-term societal and global consequences of petroleum-based economic activity and transportation.

7 "(E)nergy-related imports...now account for one-third of the total value of the U.S. Trade deficit..." <http://fpc.state.gov/documents/organization/67134.pdf> (Congressional Research Service CRS Report for Congress, "U.S. Trade Deficit and the Impact of Rising Oil Prices", Order Code RS22204. Also, "Trade in petroleum products accounted for 29 percent of the total deficit, up from 25 percent in 2004. Imports of petroleum goods climbed 39 percent, to \$251.6 billion, after rising by 39 percent in 2004." New York Times, February 10, 2006, Vikas Bajaj, "U.S. Trade Deficit Hit All-Time High in 2005". Also see http://www.epinet.org/content.cfm/webfeatures_econindicators_tradepict20060210: Economic Policy Institute, Trade Picture, February 10, 2006.

8 <http://fpc.state.gov/documents/organization/67134.pdf> (Congressional Research Service CRS Report for Congress, "U.S. Trade Deficit and the Impact of Rising Oil Prices", Order Code RS22204, P. CRS-5.

9 Lester Brown, *Plan B 2.0, Rescuing a Planet Under Stress and a Civilization in Trouble*, Chapter 2, "Beyond the Oil Peak".

Governments at all levels do have the responsibility to consider long-term economic growth and environmental capacities for current and future generations. In fact, governments must develop the parameters for and determine the law for what is acceptable and renewable energy and economic policy. When it fails to do so, it abdicates its responsibilities in a democracy and opens the door for private decisions and non-decisions that can literally imperil our future.

We do have the ability to catalyze and focus the research, technological, and productive capacity of our economy to realize growth while decreasing our dependence on oil. We have the ability to create transportation systems that “maximize mobility, not automobile ownership”.¹⁰ In particular, the Washington State Legislature has already put into place the Energy Freedom Fund to support research and development for renewable energy.¹¹ In 2005 the Legislature authorized the Washington State Rail Capacity & System Needs Study¹² to determine the need for increased capacity and convenience for freight and passengers in the Puget Sound area and the Portland-Seattle transportation corridor. These two initiatives provide the openings for economic growth, rational transportation, and renewable energy, and create a foothold against further environmental degradation and climate change. What are needed now are the resources to put this crucial research and development, planning, and policy into action and guide appropriate economic growth. These resources can and should be re-directed from the windfalls now captured by multinational oil companies.

2. Junctures for Profit-Taking: Crude Oil Production and Refinery Operations

Vertically-integrated oil companies¹³ hold unprecedented market power to determine investment in exploration, development, and refining. This enables the major oil companies to squeeze out excess profits at two junctures: the production and refinement of crude oil. Any natural disaster or real or contrived economic or political event around the world can (and does) push up the price of crude oil, regardless of the actual cost of production. Primarily because no new refineries have been built in the United States in the past thirty years, any real or contrived shortages of refined product enable oil refiners to realize excess profits. When either or both of these conditions are present, as has been the case especially from 2004 to the present, profit-taking results in price shocks at the pump, even though the actual cost of production and refinement has not changed. This is especially advantageous for vertically integrated oil companies. Over time, these oil companies establish an effective monopoly retail price level insulated from and higher than that of a truly competitive market.

2A. Crude oil production

A causal link for profit-taking is the global reach of the major integrated oil companies in crude oil production. Exxon, Shell, BP, Chevron, Conoco, and Occidental are among the top 35 crude oil producers in the world. Exxon produces more crude oil than the nationalized companies of Nigeria, Kuwait, Abu Dhabi, and Qatar. When oil prices are bid up, the extra profits go to both national and government-owned companies in Saudi Arabia, Iran, Mexico, and Venezuela and the major multinational oil companies.

¹⁰ Lester Brown, *Plan B 2.0, Rescuing a Planet Under Stress and a Civilization in Trouble*, P. 4.

¹¹ Engrossed Third Substitute House Bill 2039, Washington State, signed into law March 22, 2005

¹² ESSB 6091, Section 206 (Engrossed Substitute Senate Bill 6091)

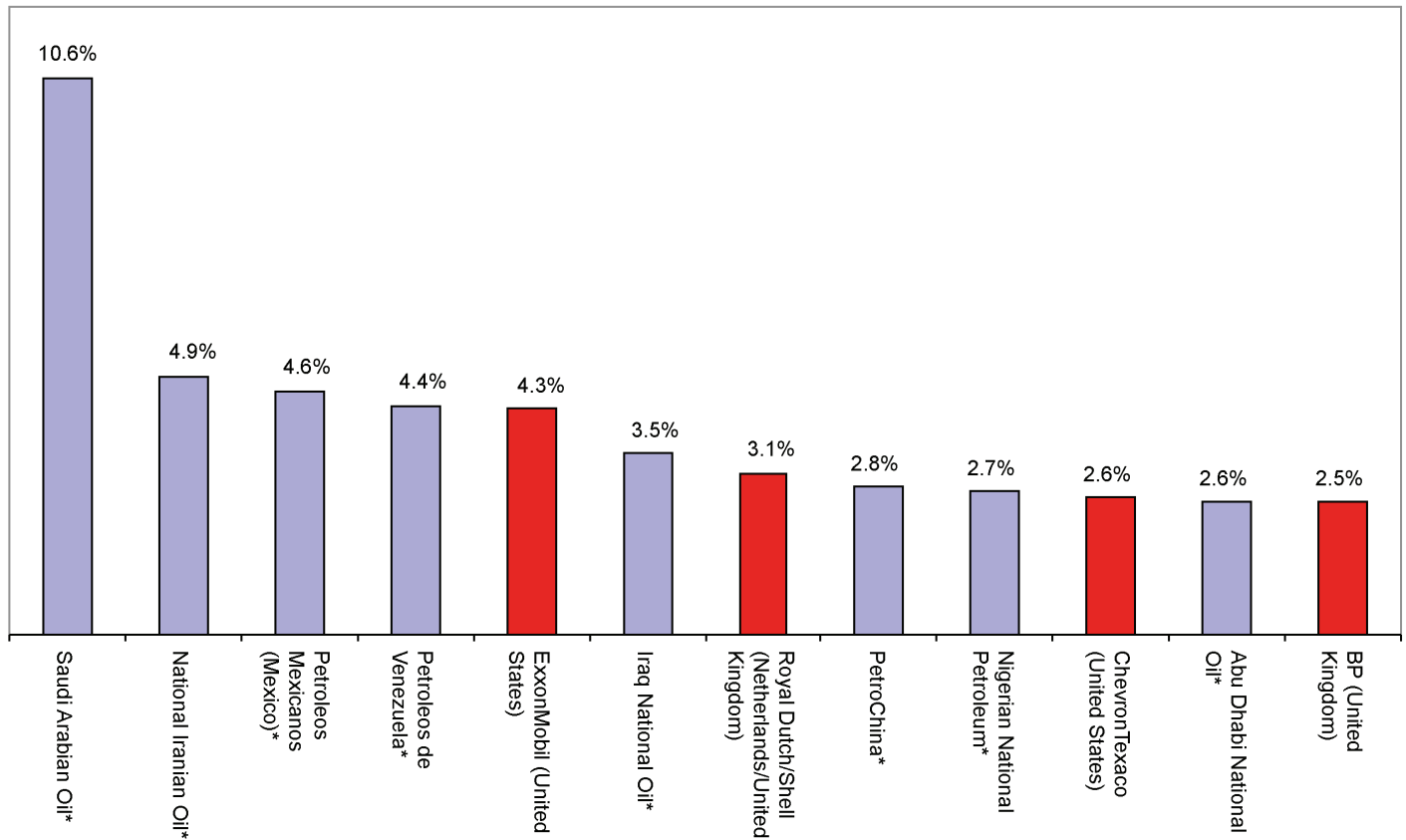
¹³ Vertical integration describes a type of company that controls by itself all facets of production. This type of company does not have to rely on inputs of raw materials or intermediate products from outside sources (other companies) to produce a finished product. In the petroleum industry, vertical integration happens when crude oil production, refinement, distribution of refined products, and wholesale and retail marketing processes are all controlled by a single company. When a vertically-integrated company like Exxon sells itself crude oil for refinement, the actual cost of the crude oil for Exxon is not the current market value, but the real cost of production. However, when Exxon sells its crude to other companies, these companies have to pay the market value. The difference in price and cost can be two-and-a-half times greater than the cost itself. Cost may be \$20 a barrel and market prices are now exceeding \$70 a barrel. This gives vertically-integrated oil companies a huge advantage over companies that have to purchase crude oil for refinement.

Worldwide Production of Crude Oil and Natural Gas Liquids: 2000

Company	Millions of Barrels	% of World Production
Saudi Arabian Oil*	2,889	10.6%
National Iranian Oil*	1,337	4.9%
Petroleos Mexicanos (Mexico)*	1,263	4.6%
Petroleos de Venezuela*	1,187	4.4%
ExxonMobil (United States)	1173	4.3%
Iraq National Oil*	940	3.5%
Royal Dutch/Shell (Netherlands/United Kingdom)	832	3.1%
PetroChina*	765	2.8%
Nigerian National Petroleum*	744	2.7%
ChevronTexaco (United States)	716	2.6%
Abu Dhabi National Oil*	695	2.6%
BP (United Kingdom)	690	2.5%
Kuwait Petroleum*	596	2.2%
Lukoil (Russia)*	568	2.1%
TotalFinaElf (France)	523	1.9%
National Oil (Libya)*	518	1.9%
Petroleo Brasileiro (Brazil)*	465	1.7%
Pertamina (Indonesia)*	464	1.7%
Yukos (Russia)	362	1.3%
Conoco (United States)	313	1.2%
Petroleum Development Oman*	307	1.1%
Egyptian General Petroleum*	297	1.1%
Sonatrach (Algeria)*	296	1.1%
Statoil (Norway)*	275	1.0%
ENI (Italy)*	273	1.0%
Sonangol (Angola)*	271	1.0%
Qatar General Petroleum*	252	0.9%
Empresa Colombiana de Petroleos (Colombia)*	251	0.9%
Petronas (Malaysia)*	249	0.9%
Repsol YPF (Spain)	233	0.9%
Syrian Petroleum*	191	0.7%
Oil & Natural Gas (India)*	180	0.7%
Occidental Petroleum (United States)	125	0.5%
Total	20,239	74.5%

Source: eia.doe.gov/emeu/finance/mergers/tab1.html "Table 1: Worldwide Production of Oil and Natural Gas by 35 Largest Producers, 2000". Data for Imperial Oil, an Exxon subsidiary, merged with Exxon; data for Phillip Petroleum, merged into Conoco data.

Percent of World Production of Crude Oil and Natural Gas Liquids, 2000



Source: eia.doe.gov/emeu/finance/mergers/tab1.html "Table 1: Worldwide Production of Oil and Natural Gas by 35 Largest Producers, 2000". Data for Imperial Oil, an Exxon subsidiary, merged with Exxon; data for Phillip Petroleum merged into Conoco data.
 *=Government Owned

Our current predicament illustrates the international politics-price-profit relationship. President Bush has accelerated his condemnatory statements about Iran and its attempt to develop nuclear power. Iran produces 3.8 million barrels of crude oil a day.¹⁴ The futures market fears a possible withdrawal of Iranian oil from the world market. Oil futures are bid up over \$70 a barrel.¹⁵ Oil company profits soar.

14 <http://www.eia.doe.gov/emeu/steo/pub/3atab.html>

15 <http://www.bloomberg.com/markets/commodities/energyprices.html>

2B. Refinery Capacity and Margins

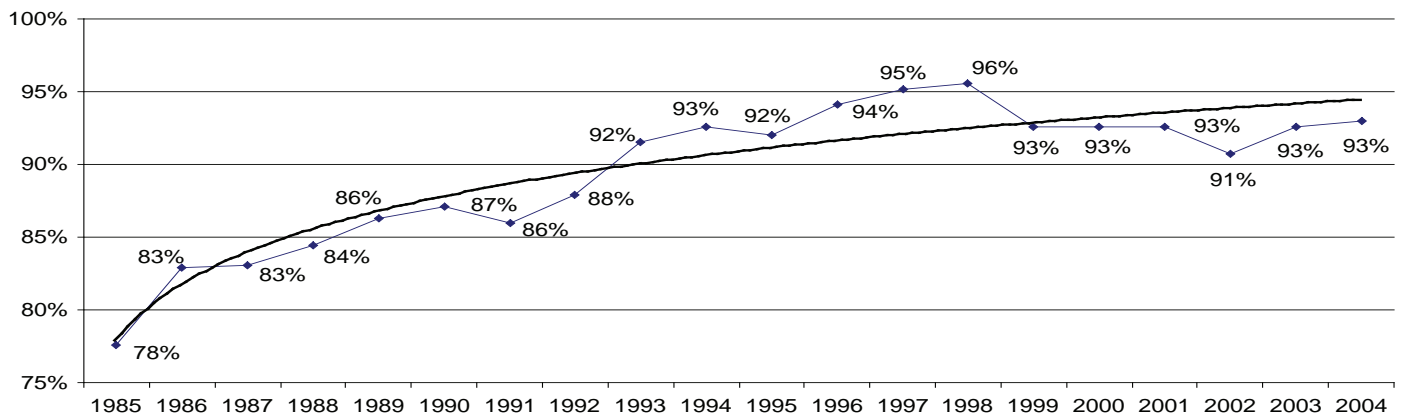
Refinery operations provide the intermediary step between crude oil production and finished fuel sales. These operations also provide a robust profit point. Refinery capacity has been squeezed in the past 20 years. No new refineries have been constructed in the United States in 30 years.¹⁶ While the percentage increase in utilization of refinery capacity in the United States was 19.5% between 1985 and 2004, the percent increase in crude oil refined was only 16.4%, indicating that refining capacity actually diminished over that period of time.¹⁷

The increase in demand has far outpaced the sluggish increase in refined product. Total sales of finished petroleum products have increased almost twice as much as production of refined product within the United States, so that sales outstripped production by 10% in 2004. As a result, the United States is now importing refined products, such as gasoline.

Year	Utilization of Refinery Capacity (percent)	Crude Refined (Thousand Barrels per Day)	Finished Petroleum Product Supplied (Thousand Barrels per Day)
1985	77.6%	14,513	14,207
1990	87.1%	14,974	15,405
1995	92.0%	15,118	15,766
2000	92.6%	16,251	17,453
2004	93.0%	16,891	18,517
Change from 1985 to 2004	15.4%	2,378	4,310

Source: Energy Information Administration, Department of Energy: http://tonto.eia.doe.gov/dnav/pet/pet_cons_psup_dc_nus_mbbldpd_a.htm (product supplied); <http://tonto.eia.doe.gov/dnav/pet/hist/mopueus2a.htm> (U.S. Percent Utilization of Refinery Operable Capacity (Percent)); http://tonto.eia.doe.gov/dnav/pet/pet_pnp_unc_dcu_nus_a.htm (Refinery Utilization and Capacity)

**Refinery Capacity Utilized: 1985 - 2004
with Logarithmic Trendline**

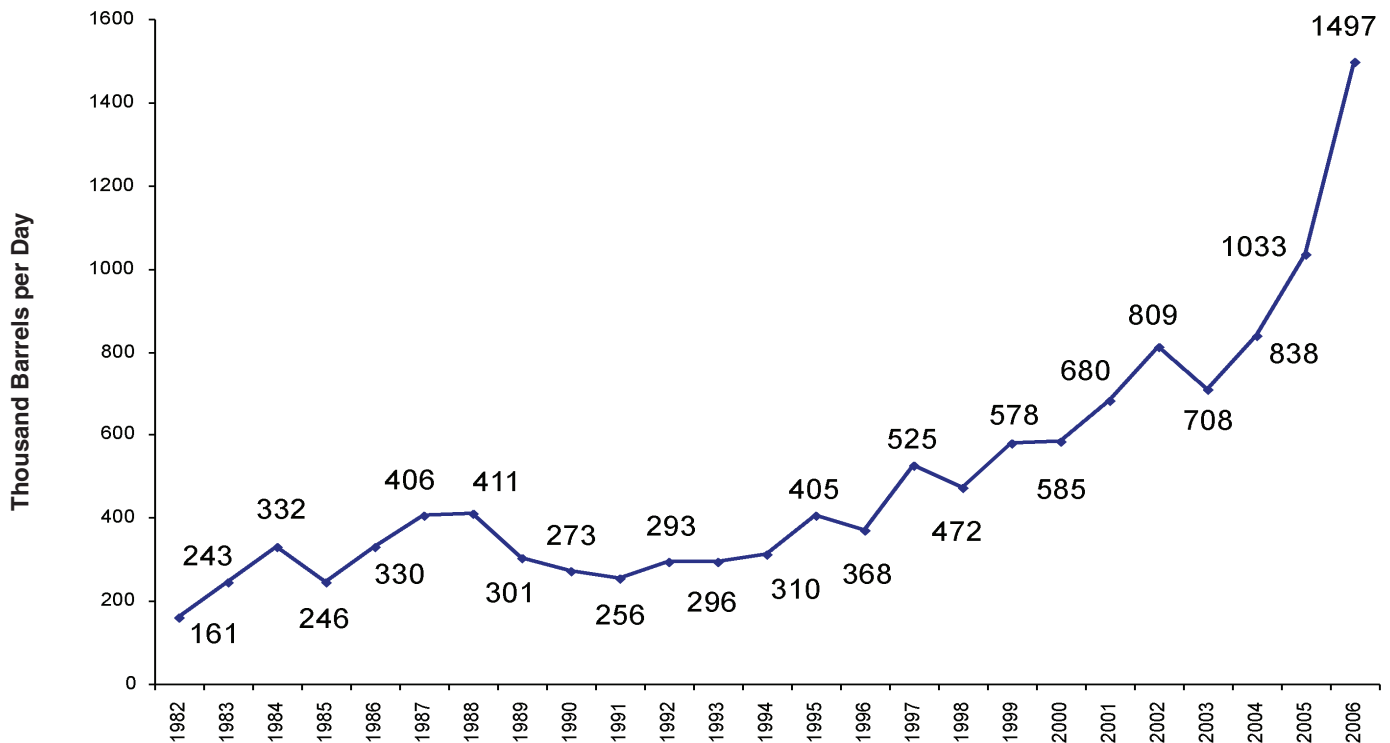


Source: Author's calculations from Energy Information Administration, Department of Energy: http://tonto.eia.doe.gov/dnav/pet/pet_cons_psup_dc_nus_mbbldpd_a.htm (product supplied); <http://tonto.eia.doe.gov/dnav/pet/hist/mopueus2a.htm> (U.S. Percent Utilization of Refinery Operable Capacity (Percent)); http://tonto.eia.doe.gov/dnav/pet/pet_pnp_unc_dcu_nus_a.htm (Refinery Utilization and Capacity)

¹⁶ Western States Petroleum Association, "What's Going on in the Gasoline Market", presentation to Washington State Legislature, October 3, 2005.

¹⁷ Author's calculations from <http://tonto.eia.doe.gov/dnav/pet/hist/mopueus2a.htm> (U.S. Percent Utilization of Refinery Operable Capacity (Percent)); http://tonto.eia.doe.gov/dnav/pet/pet_pnp_unc_dcu_nus_a.htm (Refinery Utilization and Capacity)

Gasoline Imports 1982 - 2006



Source: Author's calculations from <http://tonto.eia.doe.gov/dnav/pet/hist/wgtimus24.htm>, Energy Information Administration, U.S. Weekly Total Gasoline Imports

Refining and marketing resulted in 23% of total net income for the major integrated oil companies in the United States in 2004. Net income in these operations increased by 96.7%, compared to 2003, while production increased by only 1.5%.¹⁸

This inelastic refinery production benefits the major oil companies, especially as they have consolidated operations and ownership and developed significant informal price-setting power. The financial difficulty of entry into the refinery industry¹⁹ gives current refiners a market advantage and a significant disincentive to investing in additional refineries. Supply limitations enable them to realize quasi-monopoly pricing and windfall profits from their refining operations.

Refinery margins exceeded \$30 a barrel in September 2005. In one instance, immediately after Hurricane Katrina, gasoline on the New York Mercantile Exchange rose to the equivalent of \$122 a barrel, while crude oil was just above \$70 a barrel. This \$52 overage fueled windfall profits for the refinery operations of the oil industry.²⁰

Exxon's refining and marketing profits increased 40% between 2004 and 2005, while total product sales (in thousands of barrels a day) increased less than one percent. For the top eight integrated oil companies with refining operations, profits increased 20% from 2004, while sales **decreased** 3%.

18 Robert Pirog, Congressional Research Service, "Oil Industry Profits: Analysis of Recent Performance," August 4, 2005, p. CRS-8.

19 A minimum investment of \$2.5 billion is necessary to build a new refinery. See http://www.env-econ.net/2005/10/building_a_new_.html

20 Robert Pirog, "Oil Industry Profit Review 2005", Congressional Research Service, Order Code RL33373, p. 7, quoting from Matt Piotrowski, "Refiners Close 2005 With Stellar Profits," Oil Daily, Vol. 46, No. 56, March 9, 2006, p. 8-9. "As a result of Hurricane Katrina, gasoline prices on the New York Mercantile Exchange reached a peak equivalency of \$122 per barrel, while crude oil, also high priced, was just above \$70 per barrel. This \$52 spread... was a key factor in the profitability of the entire refining industry in the fourth quarter of 2005."

Refining and Marketing by Integrated Oil Companies

Company	Net Income		Product Sales (in thousands barrels a day)	
	2005	Change from 2004	2005	% Change from 2004
Exxon	\$ 7,992	40%	8257	0.6%
Shell	\$ 7,532	14%	7057	-7.1%
BP	\$ 4,405	-16%	5888	-8.0%
Chevron	\$ 2,766	-15%	3768	-3.6%
Conoco	\$ 4,173	52%	3251	3.5%
Marathon	\$ 3,013	114%	1455	3.9%
Amerada Hess	\$ 515	14%	456	6.5%
Murphy	\$ 125	52%	358	5.6%
Total	\$ 30,521	20%	30,490	-3.0%

Shortage of capacity plus increasing demand creates windfall profits for the integrated oil companies. They have no incentive to expand current facilities or build new refineries. “Expanded capacity is likely to reduce the near term ability of the industry to maintain the profit levels of 2006...”²¹

Consequently, while Exxon, Chevron, and Conoco, the three largest US-based oil companies, held over \$40 billion in liquid assets at the end of 2005,²² their future investments in refinery capacity are doubtful. Exxon believes that by 2020 30% of new vehicle sales will be in hybrid cars. This will cause fuel consumption to stagnate. Investing in new refineries, and increasing fuel supply while demand falls, would threaten Exxon’s near-monopoly pricing power and windfall profits. It is not in its corporate self-interest.²³ In other words, for the next 15 years and beyond, while demand grows and then levels off, Exxon will encourage the stagnation of refinery production in order to maximize profit-taking.

2C. Refinery Operations, Market Share and Profits in Washington

Five oil companies have refineries located in Washington state that produce close to 600,000 barrels of petroleum products a day. BP, Royal Dutch/Shell, and Conoco own and operate three of these refineries, in Cherry Point, Ferndale, and Anacortes. Tesoro owns and operates a refinery in Anacortes. Just this year, a small refinery in Tacoma with a capacity of 35,000 barrels a day owned and operated by U.S. Oil and Refining was purchased by Astra Oil, which in turn is owned by Transcor International, a Belgium-based corporation.²⁴

These companies gained record-high profits in 2005. BP’s profits almost doubled in two years from \$12.6 billion in 2003 to \$22.6 billion in 2005.²⁵ Conoco’s 2005 profits were more than 10 times greater than 2001 profits.²⁶ Royal Dutch Shell’s profits increased over \$7 billion between 2004 and 2005.²⁷

Tesoro Corporation is one of the largest independent petroleum refiners and marketers in the Western United States. Tesoro’s net earnings after taxes increased close to six times between 2003 and 2005, amounting to \$507

21 Robert Pirog, “Oil Industry Profit Review 2005”, Congressional Research Service, Order Code RL33373, p.8.

22 Ibid.

23 “As Gasoline Prices Soar, Americans Resist Major Cuts in Consumption” Ball, Jeffery, The Wall Street Journal, May 1, 2006, P. A-1. “Exxon says it believes that, by 2030, hybrid gasoline-and-electric cars and light trucks will account for nearly 30% of new-vehicle sales in the U.S. and Canada. That surge is part of a broader shift toward fuel efficiency that Exxon thinks will cause fuel consumption by North American cars and light trucks to peak around 2020 -- and then start to fall. ‘For that reason, we wouldn’t build a grassroots refinery’ in the U.S., Rex Tillerson, Exxon’s chairman and chief executive, said in a recent interview. Exxon has continued to expand the capacity of its existing refineries. But building a new refinery from scratch, Exxon believes, would be bad for long-term business.”

24 <http://www.transcor.be/>

25 BP Annual Review 2005, Summary Accounts, Group Income Statement: <http://www.bp.com/extendedsectiongenericarticle.do?categoryId=9007087&contentId=7014404>

26 ConocoPhillips Annual Report 2005, Financial and Operating Results, 5-Year Financial Review

27 Royal Dutch Shell, 2005 Annual Review, Selected Financial Data, Consolidated Statement of Income data

million, or twenty seven percent of total revenues.²⁸ Tesoro realizes \$2 million in net refinery margin per day in refining 192,000 barrels of petroleum product in Alaska and Washington.²⁹

The oil industry is becoming increasingly consolidated. In 1993 the top five companies in the U.S. oil refinery industry accounted for 34.5% of total market share, while the top ten accounted for 55.6% of market share. In 2004, the top five accounted for 56.3% of market share, while the top ten accounted for 83.3%. Of these, Conoco held 13% of total market share, Royal Dutch/Shell held 10%, BP held 9% and Tesoro held 3%.³⁰ These four companies control 94% of refining capacity in our state.

Washington's Refineries

Company	Vertically Integrated	Refinery Location	% of State Capacity
BP	yes	Ferndale	37%
Shell	yes	Anacortes	24%
Tesoro	no	Anacortes	19%
Conoco	yes	Ferndale	16%
Astra Oil (formerly U.S. Oil & Refining)	no	Tacoma	6%

Source: Public Citizen: Tyson Slocum's Testimony to Washington State Legislature, October 3, 2005 from www.eia.doe.gov/oil_gas/petroleum/data_publications/refinery_capacity_data/refcapacity.html

3. Oil Company Profits

Profits for the major oil companies have soared in the past four years and in particular in the past year. Profits in 2005 for vertically integrated oil companies were almost three times 2002 year profits, and 74% greater than 2004 year profits.³¹ This accelerated accumulation of profits continues into 2006, with first quarter 2006 earnings for these same companies increasing over first quarter 2005 earnings by \$2.8 billion, or 10%.

Oil Company Profits, 2002-2005

Company	Net Income in millions of dollars				increase in profits from 2002 to 2005	increase in profits from 2002 to 2005	increase in profits from 2004 to 2005	increase in profits from 2004 to 2005
	2002	2003	2004	2005				
Exxon Mobil	\$ 11,460	\$ 21,510	\$ 25,330	\$ 36,130	\$ 24,670	215%	\$10,800	43%
Royal Dutch/Shell	\$ 9,656	\$ 12,313	\$ 18,182	\$ 25,688	\$ 16,032	166%	\$ 7,506	41%
BP	\$ 6,872	\$ 12,618	\$ 17,262	\$ 22,632	\$ 15,760	229%	\$ 5,370	31%
Chevron Texaco	\$ 1,132	\$ 7,230	\$ 13,328	\$14,099	\$ 12,967	1145%	\$ 771	6%
Conoco Phillips	\$ (295)	\$ 4,735	\$ 8,129	\$ 13,529	\$ 13,824		\$ 5,400	66%
Occidental	\$ 989	\$ 1,527	\$ 2,568	\$ 5,281	\$ 4,292	434%	\$ 2,713	106%
Marathon	\$ 516	\$ 1,321	\$ 1,261	\$ 3,032	\$ 2,516	488%	\$ 1,771	140%
Amerada Hess	\$ (218)	\$ 643	\$ 977	\$ 1,242	\$ 1,460		\$ 265	27%
Murphy	\$ 112	\$ 294	\$ 701	\$ 846	\$ 734	655%	\$ 145	21%
Total	\$ 30,224	\$ 62,191	\$ 87,738	\$ 122,479	\$ 92,255	305%	\$34,741	40%

Source: Compiled by author from 2005 Annual Reports and SEC 10-K filings from Exxon, Royal Dutch/Shell, BP, Chevron, Conoco Phillips, Occidental, Marathon, Amerada Hess, and Murphy Oil.

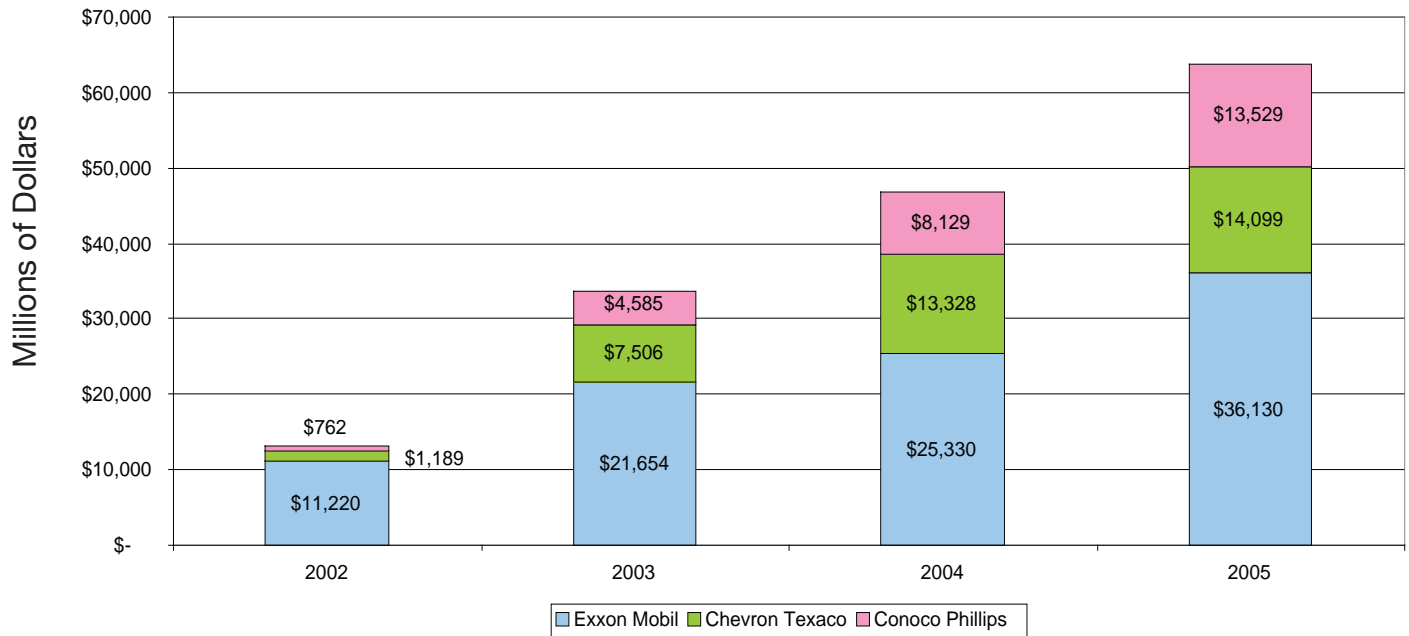
28 Tesoro Corporation 2005 Annual Report, SEC 10-K, Item 6. Selected Financial Data, P. 22

29 Tesoro Corporation Third Quarter Earnings 2005 Press Release and Statements of Consolidated Operations, page 4

30 Public Citizen, Mergers, Manipulation and Mirages: How Oil Companies Keep Gasoline Prices High, and Why the Energy Bill Doesn't Help, March 2004, Table 1, compiled by Public Citizen's Energy Program <www.citizen.org/cmep> from corporate annual reports and U.S. Energy Information Administration data; Table 1 of Slocum, Tyson, Public Citizen, Testimony before the U.S. Senate Committee on the Judiciary, February 1, 2006, "Consolidation in the Energy Industry: Raising Prices at the Pump?"

31 Robert Pirog, Congressional Research Service, "Oil Industry Profits: Analysis of Recent Performance," August 4, 2005; 2005 Annual Reports and SEC 10-K filings from Exxon, Royal Dutch/Shell, BP, Chevron, Conoco Phillips, Occidental, Marathon, Amerada Hess, and Murphy Oil.

Profits of Top Three US-Based Oil Companies

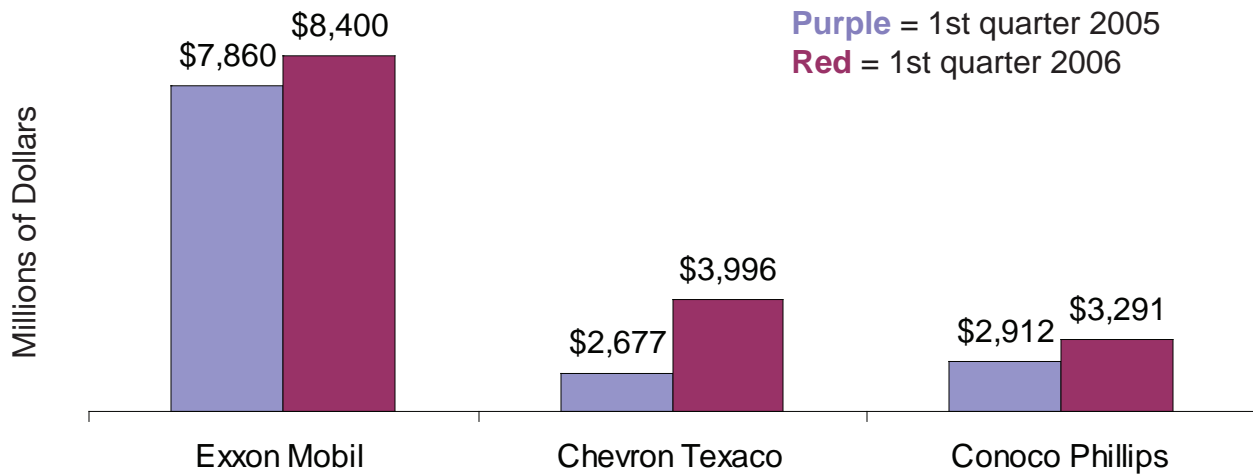


Oil Company Profits, 1st Quarter 2006

Company	Net Income in millions of dollars		increase in profits from 1st quarter 2005 to 1st quarter 2006	increase in profits from 1st quarter 2005 to 1st quarter 2006
	1st quarter 2005	1st quarter 2006		
Exxon Mobil	\$ 7,860	\$ 8,400	\$ 540	7%
Royal Dutch/Shell	\$ 6,675	\$ 6,893	\$ 218	3%
BP	\$ 6,602	\$ 5,623	\$ (979)	-15%
Chevron Texaco	\$ 2,677	\$ 3,996	\$ 1,319	49%
Conoco Phillips	\$ 2,912	\$ 3,291	\$ 379	13%
Occidental	\$ 846	\$ 1,229	\$ 383	45%
Marathon	\$ 324	\$ 784	\$ 460	142%
Amerada Hess	\$ 219	\$ 695	\$ 476	217%
Murphy	\$ 113	\$ 114	\$ 1	1%
Total	\$ 28,228	\$ 31,025	\$ 2,797	10%

Source: Compiled by author from 2006 1st Quarter Earnings Reports from Exxon, Royal Dutch/Shell, BP, Chevron, Conoco Phillips, Occidental, Marathon, Amerada Hess, and Murphy Oil.

Profit of Top Three US-Based Oil Companies 1st Quarter 2006 compared to 1st Quarter 2005



These profits are out of line with average corporate profit rates in our country. In 2005, three of the top six most profitable companies domiciled in the US were the oil giants – Exxon, Chevron, and ConocoPhillips. As an industry, petroleum refining realized a return to shareholders of over 60%, while crude oil production and oil and gas services realized returns of over 50% to shareholders. These are the top three industries for returns to shareholders. By contrast, aerospace and defense returned 10% to shareholders.³²

Exxon profits as a percent of average capital employed were 31.3% in 2005, compared to 23.8% in 2004 and 20.9% in 2003.³³ Chevron profits equaled 22% of average capital employed in 2005 and 26% of average capital employed in 2004.³⁴

³² Fortune 500 2006 Rankings of America's largest corporations Top Companies and Top Industries, from April 17, 2006 Fortune: Top Performers: money.cnn.com/magazines/fortune/fortune500/performers/companies/profits/ and money.cnn.com/fortune/fortune500/performers/industries/total_return_shareholders/1yr.html

³³ Exxon Mobil 2005 Annual Report, P. 4. Exxon states that the most significant measurement of profit is return to average capital employed, and the Exxon Annual Report refers to this measurement repeatedly. However, the oil and gas industry trade associations have gone to great lengths to compare net income as a percent of total revenues. By this measurement, the industry looks more average in profits. However, this is a deceiving statistic, in that it is based on money moving through a corporation or industry, without regard to the actual investments and capital employed. But even by return to total sales, Exxon still does well: 9.75%. Furthermore, if Exxon had recorded its intercompany sales of crude oil to its refinery operations at book value, rather than the market price, it would have correctly stated profits as a percent of revenue at 10.6%. This indicates a difference of almost \$31 billion between the book value of its crude petroleum and its pricing in the crude oil futures market. Author's calculations from Exxon's 2006 proxy (Form DEF 14-A), p. A-17, A-18, A-28.

³⁴ Chevron Corporation 2005 Annual Report, P. 26.

Oligopoly, Price Setting, Inelastic Supply and Price Gouging

One reaction to the run-up in fuel prices and the excess profits of the oil companies has been to charge these companies with price gouging. This overlooks the economic structure of the oil industry, which enables excess profits based on market prices with no need to price gouge. The domination of the oil market by a few corporations encourages a supply squeeze to maximize profit. No one company has monopoly power over pricing and supply. But these handful of companies together wield disproportionate market power.

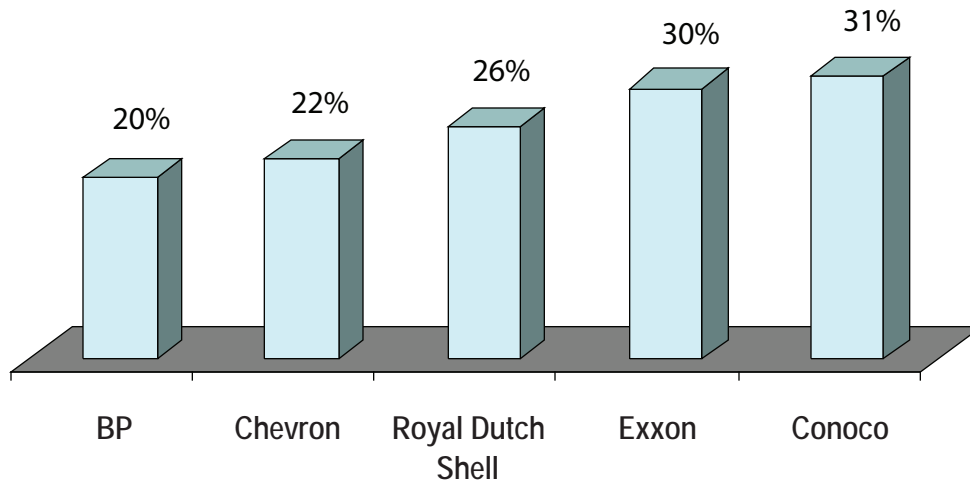
The oil industry is not a market in which a significant number of companies compete against each other to gain market share. The financial barriers are too high. For example, a new refinery costs at least \$3 billion. So instead of easy market entry and exit that defines a free and competitive industry, a few companies monopolize the industry, are interdependent, guard the gates against competition, and benefit from stagnating supply. The oil industry is an oligopoly, with characteristics of oligopoly price setting. But the companies do not collude in setting prices and production. They don't have to. The structure of the industry enables them to enjoy profits from prices set above where demand and supply would meet in a competitive market.³⁵

This is especially true when demand for the product supplied is relatively inelastic, that is, not effected by price. Many such products are essential commodities. People must get to work, buy groceries, take their young children to day care, and visit their parents. Especially in an economy built around the private automobile, with few options for convenient mass transit and rapid rail, gasoline purchase is not a choice. Further, the biggest cost for transportation is the automobile itself, so that gasoline becomes a secondary but necessary purchase to utilize the car.

Industries dominated by oligopolies are not free markets, but privileged markets. To insure the appropriate production and pricing of products supplied by oligopolies, governments should carefully monitor and regulate production and pricing. Another option is to develop a government corporation that can and does provide actual competition to the private oligopoly and through this competition force the oligopoly to increase supply while lowering prices.

35 An excellent illustration and explanation of oil companies and oligopoly can be found in http://www.newyorker.com/talk/content/articles/060612ta_talk_surowiecki: Surowiecki, James, "Pumped Up", The New Yorker, June 12, 2006

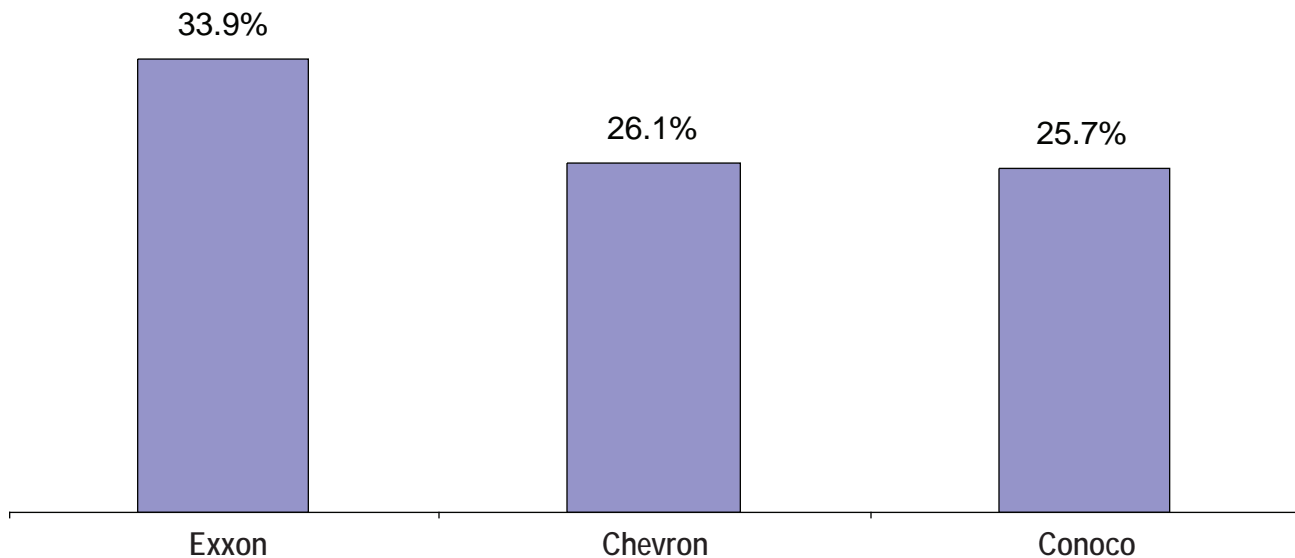
2005 Profits as a Percent of Average Capital Employed



Source: Exxon Mobil 2005 Annual Report, P. 4.; Royal Dutch Shell 4th Quarter 2005 Results, P. 2 of 21, http://www.shell.com/home/Framework?siteId=investor-en&FC2=&FC3=/investor-en/html/iwgen/quarterlyresults/2005/q4_2005_full_results_02022006.html; Chevron 2005 Annual Report, P. 26; BP Annual Report and Accounts 2005, P. 6, 65; Conoco 2005 Annual Report, P. 21, Table 1.

Exxon's profits as a percent of stockholders' equity were 34% in 2005 and 25% in 2004, while Chevron's were over 26% in 2005 and almost 33% in 2004.³⁶

2005 Profits as a Percent of Stockholder's Equity

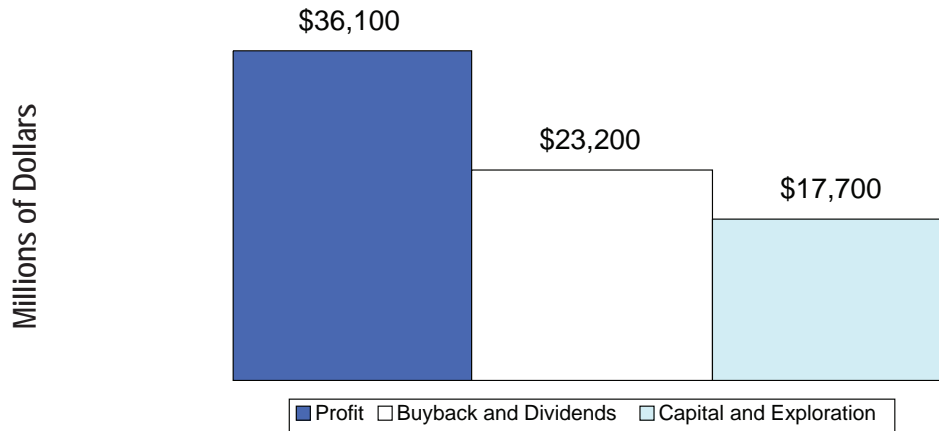


Source: Exxon Mobil 2005 Annual Report, P. 2.; Chevron 2005 Annual Report, P. 26; Conoco Phillips 2005 Annual Report, P. 1, 41.

3A. What Happens to Oil Company Profits?

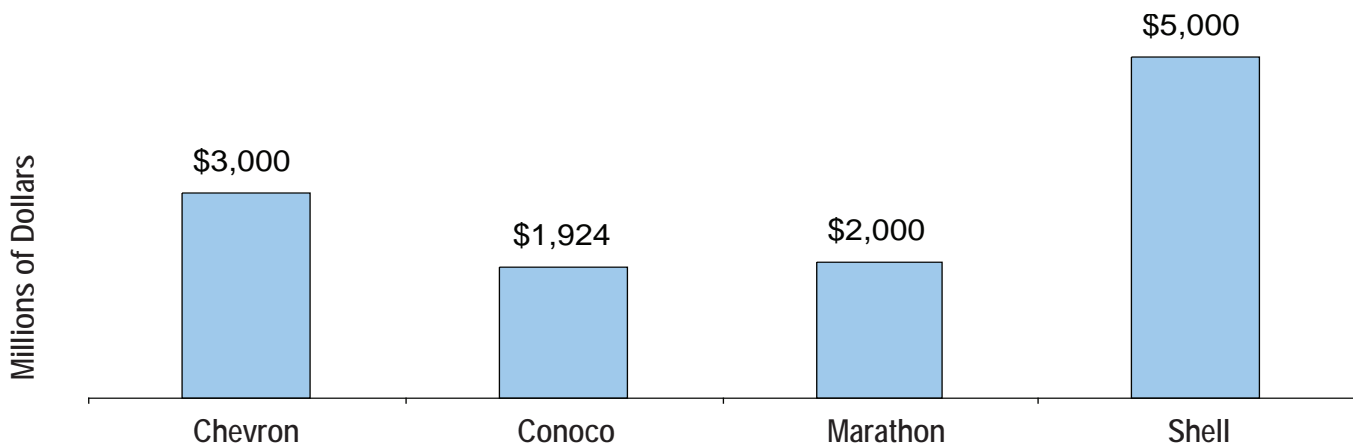
Where do the oil company profits go? Billions of dollars go to exploration. But billions of dollars more go to the acquisition of other companies, concentrating market power in the oil industry. And billions more go to stock buybacks, which does nothing for developing energy resources. In 2005 Conoco bought Burlington Resources for \$35.6 billion.³⁷ Chevron purchased Unocal for \$17.8 billion.³⁸ In 2005 Exxon, the world's largest integrated oil company, spent \$17.7 billion for capital and exploration and **\$23.2 billion for stock buybacks and dividends.**³⁹

Exxon Profit Stock Buybacks and Dividends, and Capital and Exploration



Source: ExxonMobil, News Release, January 30, 2006, "Exxon Mobil Corporation Announces Estimated Fourth Quarter 2005 Results", P. 5.

Stock Buybacks Transacted or Announced in 2005 and January 2006



Source: Chevron Corporation, January 27, 2006 News Release, P. 2.; ConocoPhillips, January 25, 2006 News Release, P. 2; Marathon Oil Corporation, January 30, 2006 News Release, P. 1; Royal Dutch Shell 2005 Summary Operating and Financial Review, P. 22.

37 "ConocoPhillips to Acquire Burlington Resources in \$35.6 billion Transaction", ConocoPhillips, Houston Texas, December 12, 2005

38 Bloomberg.com "Chevron 4th-Quarter Profit Rises to \$4.14 Bln as Prices Soar", January 27, 2006.

39 ExxonMobil, News Release, January 30, 2006, "Exxon Mobil Corporation Announces Estimated Fourth Quarter 2005 Results", P. 5.

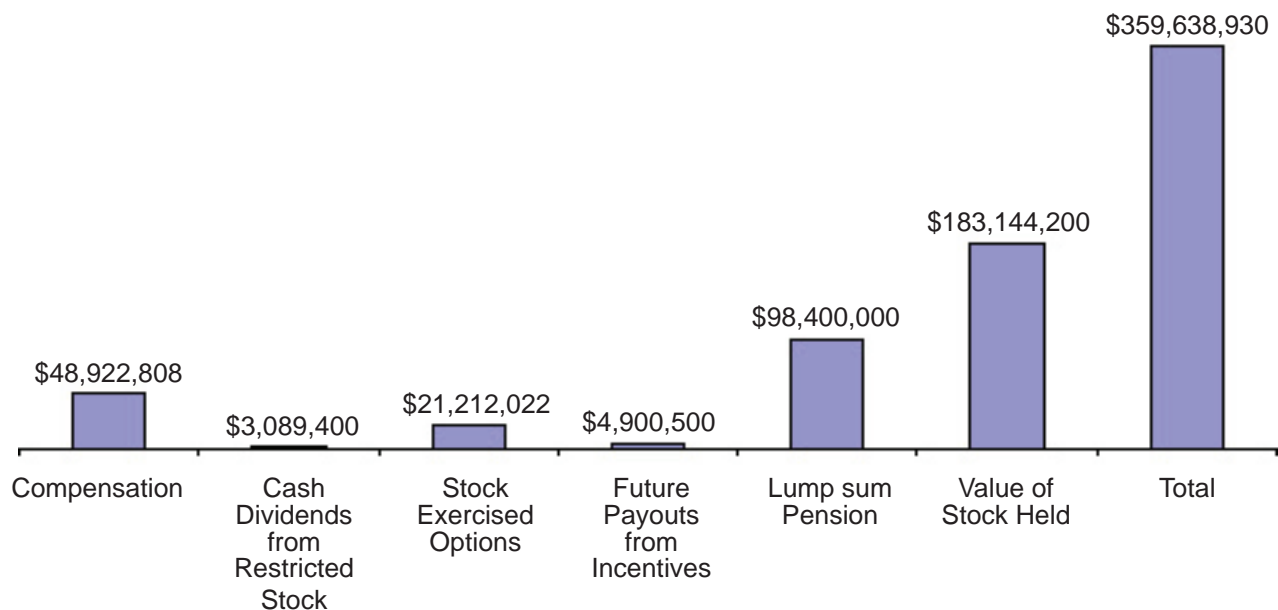
3B. Oil Company Chief Executive Officer (CEO) Compensation: Based on Windfalls

CEO salaries are expenditures subtracted from net income that should be understood as windfall not associated with company performance. The salaries, incentive payments, stock options, dividends, and associated perks of the chief executive officers and other top officers of the oil giants run in the hundreds of millions of dollars. The takings realized by the newly-retired CEO of Exxon, Lee Raymond, are an example, but not an aberration.

Last November Mr. Raymond told Congress, “We’re all in this together, everywhere in the world...”⁴⁰ while explaining that gasoline prices were high because of global supply and demand. Apparently, Mr. Raymond and the Exxon Board have a self-centered idea of being all together. Mr. Raymond was granted \$49 million as compensation in 2005, \$38 million in 2004 and \$28 million in 2003, for a total of \$115 million over three years. This includes Exxon-paid help with his taxes, or perhaps better termed as tax avoidance assistance. In addition, Mr. Raymond now has \$183 million in restricted stock awards and received almost \$7 million in cash dividends in the past three years (which are taxed at 15%, as compared to a 35% tax rate on earned income). Last year he exercised stock options to realize another \$21 million. He has another \$70 million in exercisable stock options. He will realize a future payout of \$5 million from other incentives.⁴¹

Mr. Raymond retired on December 31, 2005 and was awarded a lump sum payment over \$98 million. He also receives a payment of \$1 million from Exxon for advice. Exxon continues to pay for a security system, personal security guards, a car and driver, and use of Exxon aircraft for any personal matter.

Mr. Raymond’s Most Excellent Year at Exxon in 2005



Source: Exxon Mobil Corporation Form DEF 14A – Proxy, April 12, 2006

Exxon’s top five executive officers together received almost \$210 million in compensation in the past three years. They now own Exxon stock worth \$283 million. They have received cash dividends of almost \$10 million in the past three years. They exercised stock options worth \$38 million, and hold \$112 million in exercisable stock options. They will realize over \$9 million in payouts from other incentives. Altogether, the value of their five pensions is \$156 million.⁴²

40 ABC News: Oil: Exxon Chairman’s \$400 Million Parachute, April 14, 2006

41 Exxon Mobil Corporation Form DEF 14A – Proxy, April 12, 2006, especially pages 20 though 25.

42 Exxon Mobil Corporation Form DEF 14A – Proxy, April 12, 2006, especially pages 20 though 25.

Where the Oil Companies want you to think profits go!

Recently the oil companies have taken to mass advertising to “explain” how they are helping to solve the energy crisis. A good example is BP’s advertising in major national newspapers. In Monday’s New York Times front section, BP took out a full-page advertisement. BP claimed “(w)e’re also producing energy by the bushel.”

BP states that in 2005 BP fuels contained more than 575 million gallons of biofuels.⁴³ Sounds like a lot, but it pales in comparison to the 5.9 million barrels a day of refined product that BP sold last year.⁴⁴ *BP’s biofuels added up to six-tenths of one percent of these sales.*

BP also boasted that it would invest \$500 million over ten years to fund bioscience research for clean energy supplies. This too sounds like a lot, but it is not. *It amounts to \$50 million a year, or two-tenths of one percent of BP’s profits last year.*

Two-tenths of one percent of BP’s profits will go to clean energy research.

3. The Link between Windfall Profits and Gasoline Prices

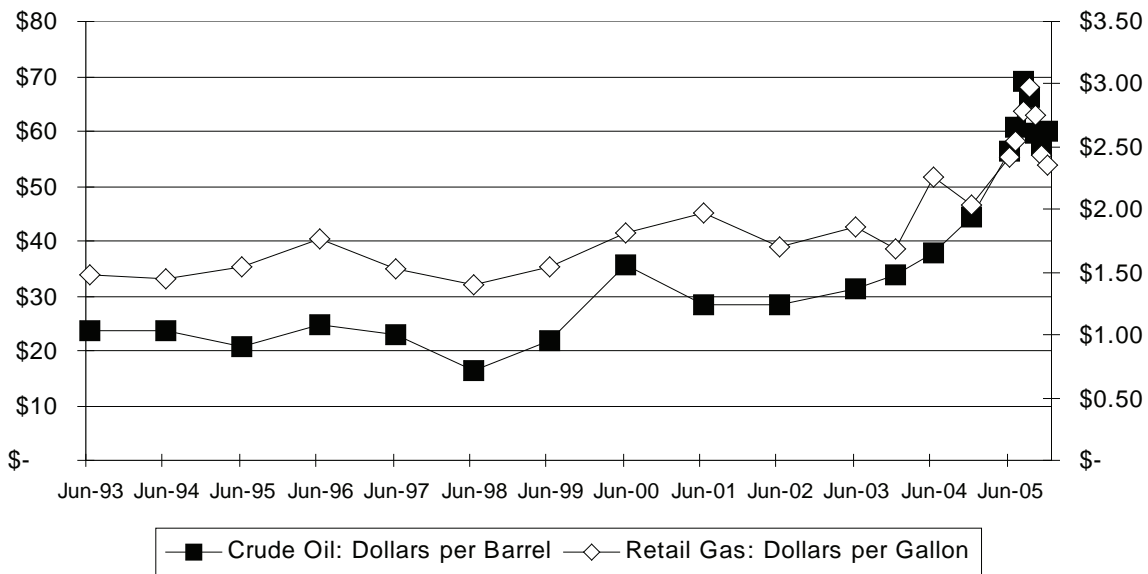
What is the link between windfall profits and gasoline prices? Gasoline prices track crude oil costs. As crude oil costs increase, gasoline prices follow. Crude oil in 1993 sold for \$24 a barrel in constant 2005 dollars. Retail gasoline prices were \$1.48 in constant 2005 dollars. In 2000, crude oil cost \$36 a barrel, and retail gasoline sold for \$1.82. By the end of 2004, crude was up to \$44 a barrel, and retail gasoline was at \$2.04. In September 2005 crude hit \$66 a barrel, and gasoline cost \$2.97.⁴⁵ In May 2006 crude oil futures topped \$70 a barrel, while gasoline jumped to over \$3.00 a gallon.

⁴³ New York Times, June 19, 2006, P. A7.

⁴⁴ Robert Pirog, “Oil Industry Profit Review 2005”, Congressional Research Service, Order Code RL33373, P. 4. One barrel equals 42 gallons.

⁴⁵ Author’s calculations from EIA data (Energy Information Administration), <http://www.eia.doe.gov>; Cushing Oklahoma Crude Oil Future Contract 1; West Coast All Grades All Formulations Retail Gasoline Prices (Cents per Gallon); adjusted by implicit price deflator for constant 2005 dollars.

Crude Oil Gasoline Prices, 1993 - 2005



Source: Author's calculations from EIA data (Energy Information Administration), <http://www.eia.doe.gov>; Cushing Oklahoma Crude Oil Future Contract 1; West Coast All Grades All Formulations Retail Gasoline Prices (Cents per Gallon); adjusted by implicit price deflator for constant 2005 dollars

But what does this have to do with integrated oil company profits? Everything, because, as the Lord Browne of Madingley, the Group Chief Executive for BP, explains in the BP 2004 Annual Report,

“We execute our strategy against the context of the time. We make plans to achieve three targets:

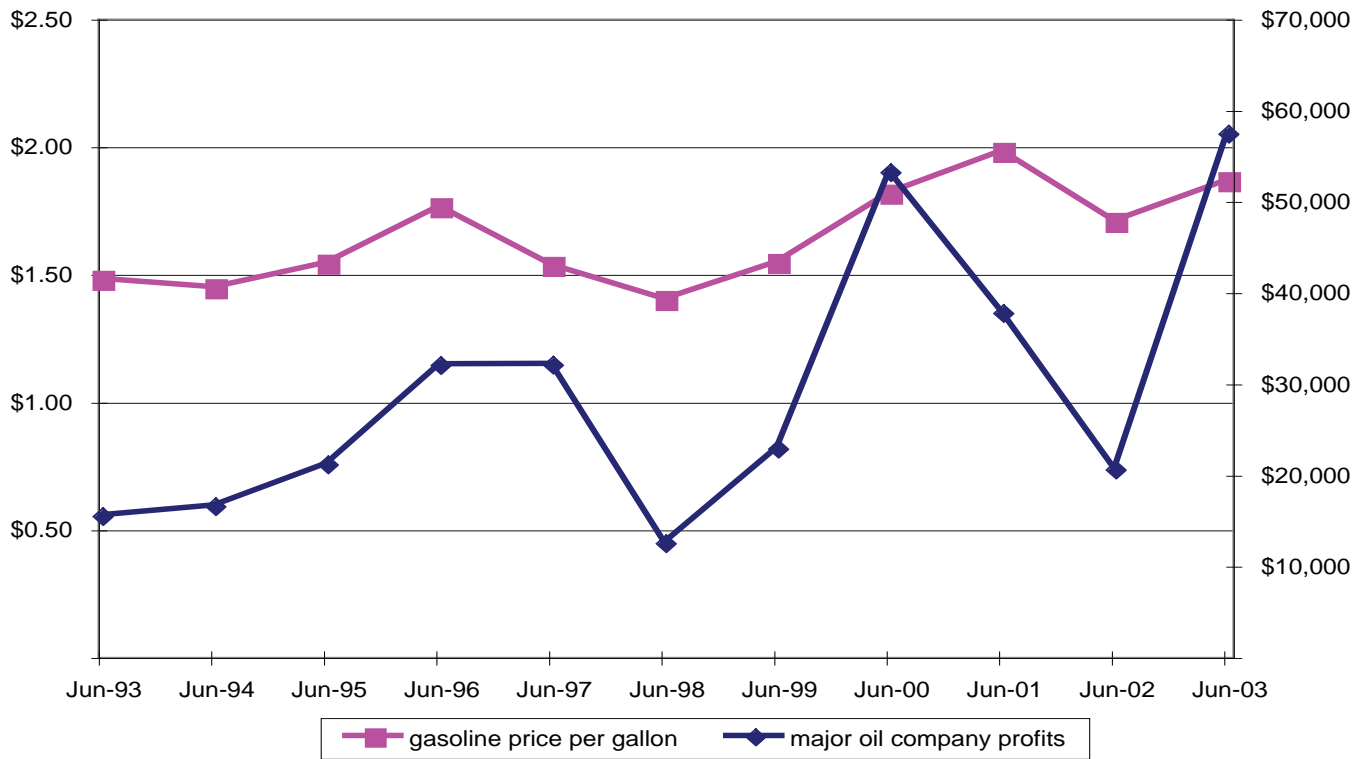
- To underpin growth by a focus on performance, particularly on cash returns, investing at a rate appropriate for long-term growth.
- To increase dividends.
- To return to shareholders, by way of share buybacks, 100% of free cash flow generated above what is needed for investment and dividends: **this generally occurs, all other things being appropriate, when the price of oil exceeds \$20 a barrel.**⁴⁶

Lord Madingley's words are borne out comparing gasoline prices to oil company profits. When crude oil prices were \$24 a barrel and gasoline cost \$1.48 in 1993, the largest integrated oil companies gained over \$15 billion in profits. When gasoline cost \$1.82 in 2000, this group of companies made over \$53 billion. In 2003, when gas cost \$1.87, profits exceeded \$57 billion.⁴⁷

⁴⁶ BP 2004 Annual Report, p. 6, emphasis added. For additional insight into BP's strategic thinking, listen to Lord Browne's interview on National Public Radio, <http://www.npr.org/templates/story/story.php?storyId=5489803>.

⁴⁷ Energy Information Administration, 2003 Performance Profiles of Major Energy Companies, www.eia.doe.gov/emeu/perpro/summary.htm. For 2003, this grouping included the top 28 major U.S. energy companies reporting to the Energy Information Administration's Financial Reporting System.

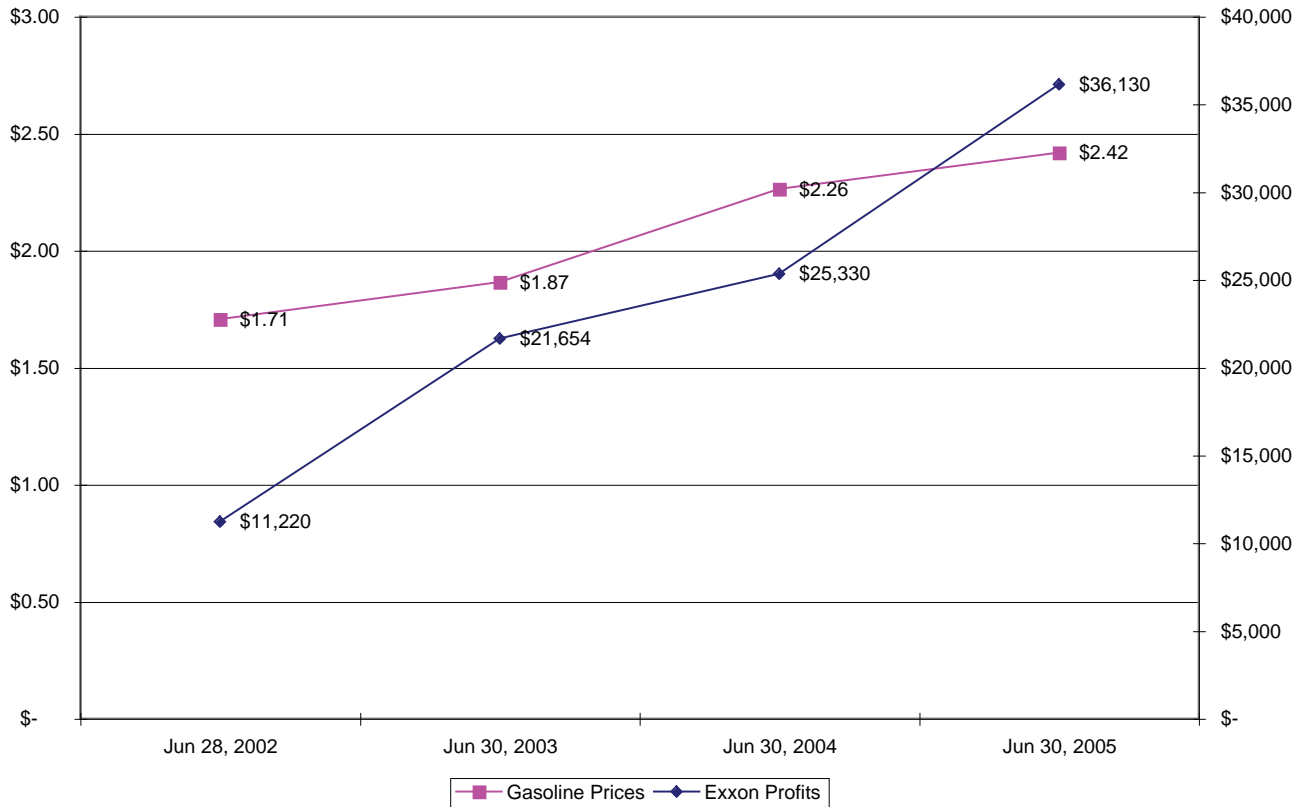
Profits of Major Oil Companies (in millions) and Gasoline Prices (per gallon) 1993 - 2003



A look at the largest integrated oil company reinforces the causal link between profits and gasoline prices. With gas at \$1.71 in 2002, Exxon made \$11 billion in profits. When gas averaged \$2.26 in 2004, Exxon made \$25 billion. Last year, with gas at \$2.42 a gallon, Exxon made \$36 billion in profits, a historic record for corporate income.⁴⁸

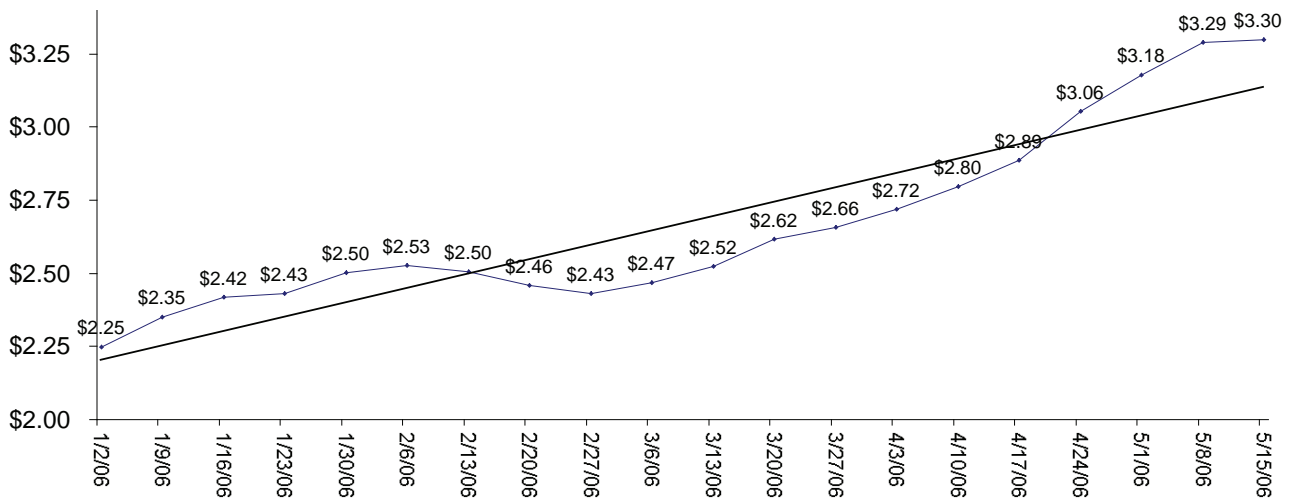
⁴⁸ Robert Pirog, "Oil Industry Profit Review 2005", Congressional Research Service, Order Code RL33373.

Gasoline Prices Per Gallon and Exxon Profits in Millions



Since January 1st, gasoline prices have steadily increased, continuing the increase in profits for the integrated oil companies into 2006.⁴⁹ Exxon's profits increased by over half a billion dollars, comparing 1st quarter 2006 revenues to 1st quarter 2005 revenues. Chevron's profits increased by 49%, or over \$1.3 billion, comparing 1st quarter 2006 revenues to 1st quarter 2005 revenues.

Retail Gasoline Prices for 2006 with trendlines



Source: http://www.eia.doe.gov/oil_gas/petroleum/data_publications/wrgp/mogas_history.html

49 http://tonto.eia.doe.gov/dnav/pet/hist/mg_tt_p5w.htm

5. The Windfall Profits Tax

The State of Washington clearly has *an interest* in re-directing excess oil company profits to benefit the citizens and businesses of our state. The state legislature can take immediate emergency action to

- protect the people and businesses of the state through the mitigation of energy costs,
- catalyze the renewable energy industry in our state to move us toward energy independence, and
- finance rail and transit to enable convenient and rapid transportation independent of the automobile.

Washington has the power to tax the income the oil industry generates in our state. Previous legislative actions have set both the precedent and the policy pathway to do this. The state currently enforces a petroleum products tax. The tax is imposed on the wholesale value of products derived from refining crude oil. At a tax rate of .5%, the tax generated \$26.5 million in 2004, or two-tenths of a percent of all state taxes. The revenues from this tax go to the pollution liability insurance program, to assist owners of underground storage tanks in obtaining insurance, so that tanks can be upgraded or replaced in order to prevent leaks.⁵⁰ The state also enforces an oil spill tax on crude oil transported in the navigable waters of the state and off-loaded at an in-state marine terminal. The tax is 4 cents per barrel and generated \$6.1 million in revenue in 2004.⁵¹ The revenues are utilized for oil spill prevention, response, and clean-up.⁵²

In 2006 State Representative Bob Hasegawa proposed legislation, House Bill 2977, to impose a tax on oil company profits when retail gasoline prices exceeded \$1.75 a gallon. This proposal is a good starting point for a comprehensive state-based windfall profits tax. There is a historical correlation between retail gasoline at \$1.75 a gallon and the crude oil price of \$30 a barrel.⁵³ According to BP's Group Chief Executive, oil at \$20 a barrel generates the revenues sufficient for investment and dividends.⁵⁴ A conservative approach would incorporate a windfall profits tax which kicks in when the price of crude oil exceeds \$30, that is, when it is 50% greater than the price that results in revenue necessary for investment and dividends.

Oil companies with annual revenues greater than \$5 billion, that have crude oil production or refinery activities in the United States, and that have a nexus through sales, property, and/or payroll in the state of Washington would be subject to such a windfall profits tax. In 2005 twenty companies could have been subject to this tax, including Exxon, Shell, BP, Chevron, Conoco, and Tesoro.⁵⁵ The windfall profits tax itself could be graduated, but not marginal. That is, the tax would be levied on all profit apportioned to Washington state through the three-factor formula of payroll, property, and sales. For every 10 cents the average annual price of gasoline in Washington state rises, the tax rate would increase by 2%.

50 Tax Reference Manual - 2005, Department of Revenue, State of Washington, p. 125-126. The tax is triggered by the amount of money in the pollution liability insurance program trust fund. Because the trust fund exceeded \$15 million as of April 2004, the tax was not imposed for fiscal year 2005. This tax is scheduled to expire on June 1, 2007.

51 State fiscal year, which runs from July 1, 2004 – June 30, 2005. In fiscal year 2004, the tax generated \$5.8 million.

52 Tax Reference Manual - 2005, Department of Revenue, State of Washington, p. 127-129.

53 This correlation takes price points within ten cents (plus or minus) of \$1.75 and matches those with crude oil prices. The averages result in a price for gasoline of \$1.76 and a price for crude oil of \$31 a barrel. The price points are June 1996, June 2000, June 2002, and December 2003. Author's calculations from EIA data (Energy Information Administration), <http://www.eia.doe.gov>; Cushing Oklahoma Crude Oil Future Contract 1; West Coast All Grades All Formulations Retail Gasoline Prices (Cents per Gallon); adjusted by implicit price deflator for constant 2005 dollars

54 See BP 2004 Annual Report, p. 6.

55 A compilation of qualifying companies from the Fortune 500 2006 (http://money.cnn.com/magazines/fortune/fortune500/full_list/index.html) and the Energy Information Administration Financial Reporting System list of major energy-producing companies (<http://www.eia.doe.gov/emeu/finance/page1b.html>) includes 20 companies with annual revenues greater than \$5 billion that have crude oil production or refinery activities in the United States. The companies are: Amerada Hess, Anadarko Petroleum, Apache Corporation, BP (headquartered in the United Kingdom), Chevron/Texaco, CITGO (owned by the national oil company of Venezuela), Devon Energy, Dominion Resources, Exxon Mobil, Kerr-McGee, Marathon, Murphy Oil, Occidental Petroleum, ConocoPhillips, Shell (headquartered in the Netherlands), Sunoco, Tesoro, Total Fina Elf (headquartered in France), Valero Energy, and the Williams Companies.

Windfall Profits Tax Design

Gasoline price equal to or greater than	but less than	Tax rate on net income apportioned to Washington state
	\$1.75	zero
\$1.75	\$ 1.85	2%
\$1.85	\$1.95	4%
\$1.95	\$2.05	6%
\$2.05	\$2.15	10%
\$2.15	\$ 2.25	12%
\$2.25	\$ 2.35	14%
\$2.35	\$2.45	16%
\$2.45	\$2.55	18%
\$2.55	\$2.65	20%
\$2.65	\$2.75	22%
\$2.75	\$2.85	24%
\$2.85	\$2.95	26%
\$2.95	\$3.05	28%
Price band as of August 2006		
\$3.05	\$3.15	30%
\$3.15	\$3.25	32%
\$3.25	\$3.35	34%
\$3.35	\$3.45	36%
\$3.45	\$3.55	38%
\$3.55	\$3.65	40%
\$3.65	\$3.75	42%
\$3.75	\$3.85	44%
\$3.85	\$3.95	46%
\$3.95	\$4.05	48%
\$4.05	\$4.15	50%

The structure of this tax creates a disincentive to raising gasoline prices and an incentive to keeping prices at an appropriate and reasonable level. As a tax on total profits that increases with the price of gasoline, it discourages passing on this very tax to the consumer. Further, this tax is developed in recognition that oil companies will sell gasoline at the most profitable marginal price point. The tax is levied retroactively, using the average annual gasoline price as the trigger. Thus, the tax doesn't change that price point.

What the tax does change is the distribution of some of the profits. The companies will hoard some of their net income in cash reserves, and spend the rest on shareholder distributions, stock buybacks, and investment, as well as executive compensation. The tax would move some of that money to stimulate the renewable energy industry in our state, provide seed money for high-speed rail, enable energy retrofitting of public schools, and mitigate increased energy costs for both the public and private sectors.

4A: Revenues and Cash Flows

How much revenue would this tax raise for the state of Washington? Before the spring 2006 run-up in gasoline prices, the Washington State Office of Financial Management estimated that House Bill 2977 would have raised \$794 million in the 2007-2009 biennium and \$830 million in the 2009-2011 biennium.⁵⁶ The redesigned policy proposed in this brief defines a taxable nexus to all petroleum business activities, including wholesale and retail activities. With gasoline currently priced at over \$3.00 a gallon, and little expectation that this price will fall significantly, a conservative estimate for revenue is \$600 million annually, with incremental increases over time.

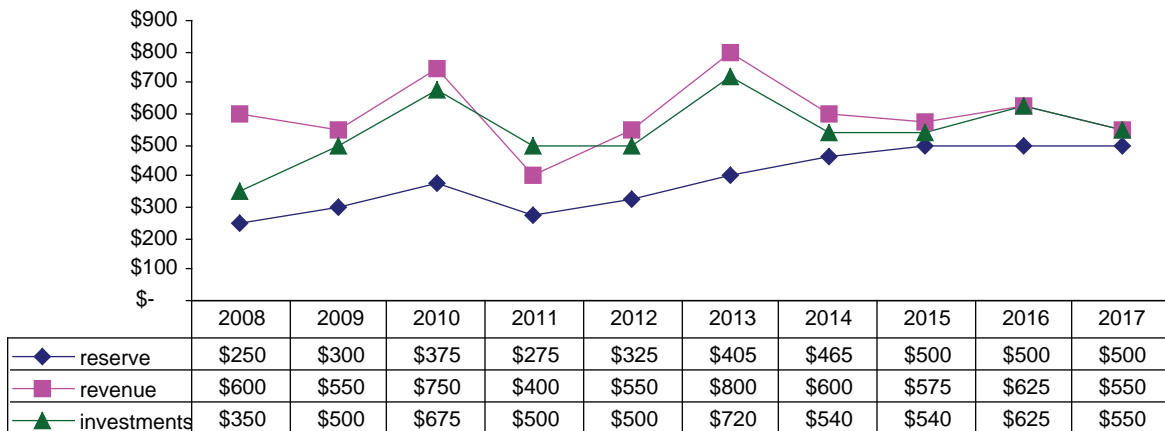
The windfall profits tax revenue would be lumpy over time, depending on several factors, including the average annual price of gasoline, the profits of those oil companies that meet the \$5 billion revenue threshold, and the allocation of these profits to Washington state. It would make sense to dedicate the revenue to a trust fund to develop and sustain renewable energy technologies and industries, to mitigate accelerating energy costs, and to finance rapid transit, high speed rail, and other approaches to increased mobility independent of the automobile. Once a certain threshold for reserves was met, then directed expenditures from this trust fund for public needs could proceed.

What might be an appropriate threshold before expenditures from incoming revenues are initiated? Assuming a \$600 million average annual estimated revenue stream, placing the first \$250 million in reserve and allocating the remainder for renewable energy, transit, and mitigation of costs would create a stream of funding and a back-up to draw upon in years in which windfalls were not so robust. The funding stream would build up over time, enabling long-term financing and bonding for investment projects.

With \$600 million in annual average revenues, annual investments from the trust funds would begin at \$350 million in the first year, rise to \$500 million in the second year, and remain above or equal to \$500 million in years out. The reserves would start at \$250 million in the first year, and then accumulate ten percent of new revenues each successive year, except for those years in which an infusion of reserves would be needed to maintain investments at \$500 million. Within nine years the reserves would total \$500 million, and remain at that level, enabling all future revenues to be invested in energy and transportation projects, with the exception of those years in which the reserves fall below \$500 million. In these years, again ten percent of new revenues would be channeled into the reserves. A hypothetical ten-year \$600 million average annual revenue stream, with revenues, reserve, and expenditures is diagramed on the following page.

⁵⁶ Multiple Agency Fiscal Note Summary, 2977 HB, 2/7/06, based on Washington State Department of Revenue calculations and analysis.

Energy and Transportation Trust Fund Revenues, Reserves, and Investments



4B. Investments

What would be the appropriate use of this revenue? The imperatives for long-term economic and environmental sustainability and energy self-sufficiency create a framework for funding decisions. The previous actions of the Legislature have put into statute certain funds and activities financed through these funds that are designed to enable energy self-sufficiency and economic viability. Organizations including Climate Solutions⁵⁷, the Apollo Alliance⁵⁸, and the Discovery Institute⁵⁹ have been working for years to determine and develop policies and programs that will enable economic growth, efficient transportation, and environmental health. We don't need to start from scratch, and we don't need many, if any, new policy mandates. What is needed are streams of revenue. With this in mind, let's sketch out how the revenue provided from the windfalls from petroleum could enable our state to achieve energy independence. These possible investments are not meant to be prescriptive, but rather exemplary possibilities for economic growth and environmental health.

- **Energy Freedom Fund:** \$100 million a year. Earlier this year the Legislature passed into law the Energy Freedom Program (Engrossed Third Substitute House Bill 2939)⁶⁰ and created the Energy Freedom Trust Fund. \$25 million was appropriated to this trust fund, to be invested over three years from July 2006 through June 2009. The purpose of the Energy Freedom Program is to develop a viable bioenergy industry, to promote public research and development in bioenergy sources and markets, and to support a viable agriculture industry to grow bioenergy crops.

An applicant for Energy Freedom Fund project financing must demonstrate that

- the project will convert farm products or waste directly into electricity or fuel or other coproducts associated with such conversion;
- the project demonstrates technical feasibility and directly assists in moving a commercially viable project into the marketplace;

57 <http://www.climatesolutions.org/>

58 http://www.apolloalliance.org/state_and_local/Washington/index.cfm

59 <http://www.discovery.org/cascadia/>

60 <http://apps.leg.wa.gov/billinfo/summary.aspx?bill=2939&year=2006>

- the facility will produce long-term economic benefits to the state;
- the project does not require continuing state support;
- the assistance will result in jobs or higher incomes for the citizens of the state;
- the state is provided an option to purchase a portion of the fuel or feedstock to be produced by the project;
- the project will increase energy independence or diversity;
- the project will use feedstocks produced in the state, if applicable;
- any product produced by the project will be suitable for its intended use, meet accepted national or state standards, and will be stored in a safe and environmentally sound manner; and
- the application provides for adequate financial reporting.⁶¹

Ninety percent of the \$25 million is designated for low-interest loans; ten percent for grants.

The initial appropriation of \$25 million is a start. However, at this level the fund will leave significant unmet research and development and commercialization projects languishing on the design table, for lack of funding. A funding stream of \$100 million a year could enable our state to be at the cutting edge of renewable energy. Some of the funding could go to research at the University of Washington, Washington State University, Western Washington University, and the Pacific Northwest National Laboratory in the Tri-Cities for projects to perfect the production of cellulosic ethanol, agriculture development for both bio-diesel and ethanol, and research and development for plug-in hybrid trucks and cars. One object will be to create the technology and expertise, renewable energy and agricultural products to be exported to other states, thereby bringing money into our state's economy. Other funding could be targeted to building at-scale crusher facilities to refine agricultural and forest products into biodiesel and ethanol.

Retrofitting Diesel School Buses and Local Government Fleets: \$10 million a year. The Legislature appropriated \$5 million in 2004 and each succeeding year to enable school districts to retrofit school buses to use cleaner fuels, such as biodiesel.⁶² This funding comes to an end in June 2008, while the program has been extended until 2020. Further, the Legislature has provided \$2 million for local governments to retrofit their vehicles. While the Department of Ecology received 82 applications for this funding, the Department was only able to fund 28 of these applications.⁶³ An appropriation of \$25 million annually would accelerate the conversion of school buses and other public vehicles to clean non-petroleum-based fuels, such as bio-diesel.

Mitigation of Costs: Reduction in the Business and Occupation Tax (B&O): \$72 million a year. The increase in energy costs has been borne by businesses, government, and citizens. Energy costs equal an average of about three percent of the state's economic output.⁶⁴ Energy costs increased over the past two years by about thirty percent.⁶⁵ With the state's gross domestic product of \$239 billion, this translates to added costs of over \$2 billion for the entire economy, almost all of which is exported out of the state. To mitigate these costs, the state could implement an across-the-board decrease in the B&O tax of three percent, resulting in an annual savings of \$72 million for businesses in our state.⁶⁶

61 <http://www.leg.wa.gov/pub/billinfo/2005-06/Pdf/Bill%20Reports/House%20Final/2939-S3.FBR.pdf>

62 See Washington State Superintendent of Public Instruction, September 5, 2003, BULLETIN NO. 72-03 PUPIL TRANSPORTATION AND TRAFFIC SAFETY EDUCATION RE: Air Pollution Controls for Existing Diesel School Buses

63 <http://www.ecy.wa.gov/programs/air/cars/DieselGrantPage.htm>

64 Northwest Environment Watch, Cascadia Scorecard 2005, P. 35.

65 Using OSPI data as a proxy for business. See Michelle Sabin, Office of the Superintendent of Public Instruction, survey and e-mail correspondence, June 14, 2006 (below).

66 This would only mitigate about 10% of annual energy cost increases (approximated at \$900 million), but it would be a net gain in less taxes for business, as the increase in energy costs accounts for, at the most, \$11 million in annual business and occupation taxes: \$2.4 billion (B&O annual collections) * 3% (energy costs as proportion of economic activity) * 15% (annual increase in energy costs) = \$11 million.

Incentives for energy retrofitting, utilization of renewable energy, solar energy panels, and other technologies enabling energy self-sufficiency for private business: \$75 million a year. The state should also be encouraging businesses to switch to renewable energy sources. Without this switch the mitigation costs embodied in the decrease in the B&O tax will get recycled back to the oil industry, with no increase in energy independence. Businesses could apply for funding for energy retrofits for company plant, equipment and automobiles. The funding would run through the Department of Ecology or the Department of Community, Trade, and Economic Development, which would be responsible for developing the allowable uses for this grant program and would review and qualify proposals for funding. A company could receive, through the proposed B&O tax reductions and the public grants for moving from petroleum-based energy usage, up to a total of five percent of its B&O tax (previous to these adjustments).

Incentives for energy retrofitting, utilization of renewable energy, solar energy panels, and other technologies enabling energy self-sufficiency for state and local government entities: \$10 million. State and local governments account for about nine percent of gross domestic product, while business accounts for about sixty-four percent.⁶⁷ Using this proportion, the state could create a similar program for state and local government entities to fund energy retrofitting, utilization of renewable energy, solar energy panels, and other technologies enabling energy self-sufficiency. No agency could get more than 5% of its annual funding in grants for this energy self-sufficiency program. Again, the funding would run through the Department of Ecology or Department of Community, Trade, and Economic Development, which would be responsible for developing the allowable uses for this grant program and would review and qualify proposals for funding.

Mitigation of increased transportation and heating costs for school districts: \$20 million. Per student allocations to school districts for basic education are being redirected from classroom instruction to pay for increased transportation and heating costs. The state is reimbursing school districts \$2.1 million for extra fuel costs in the 2005-2006 year, but that does not cover the full gap in predicted and actual fuels costs, both in the past and projected to future years. According to the data submitted by school districts as part of OPSI's fuel-based cost increase grant process, fuel costs increased over \$43 million, or 31%, for between the 2004-2005 and 2006-2007 school years.⁶⁸ It would be reasonable to allocate \$20 million annually from the windfall profits trust fund for fuel costs for schools.

Mitigation of increased transportation and heating costs for other public services: \$20 million. K-12 education accounts for 43% of our state's general fund spending.⁶⁹ The general fund also provides revenue for services ranging from higher education, to care for the developmentally disabled, to stewardship of the state's natural resources. These services have also been forced to increase energy expenditures as a result of increasing fuel prices. It would be reasonable to allocate a comparable sum, \$20 million, from the windfall profits trust fund as mitigation for increases in fuel costs borne by these public services.

Rail and Rapid Transit: \$250 million. We will not escape our dependence on oil if we continue to promote a transportation system based on the single occupancy vehicle. Washington's population grew from 3 million in 1970 to 4 million in 1980 to over 6 million in 2005⁷⁰, with no new major dedicated transportation routes. We are adding 100,000 people a year, with most of the growth in the Vancouver-Olympia-Tacoma-Seattle-Everett corridor.⁷¹ With these population growth estimates, we should be prepared for congestion on I-5 from Portland past Everett. We can absorb more people in a rational manner, but only if we develop trains and other mass transit on dedicated right-of-ways. We need a rail line from Portland to Seattle that is dedicated to passenger

67 The federal government accounts for about twenty seven percent of gross domestic product.

68 Michelle Sabin, Office of the Superintendent of Public Instruction, survey and e-mail correspondence, June 14, 2006

69 Washington State Senate Ways and Means Committee, Citizen's Guide

70 www.ofm.wa.gov/pop/decseries/historicalpop.xls

71 www.ofm.wa.gov/pop/april1/press2005.pdf; see also Blue Ribbon Commission on Transportation, Final Report to the Governor and Legislature, December, 2000, p. 6-7: www.cascadiaproject.org/transportationWorkingGroup/5_BRCT_Final_Report/FinalReport.pdf

transit, that stops in the urban cores of Vancouver, Longview, Olympia, Tacoma, and Seattle, and that is faster than the automobile. As recommended in the Statewide Rail Capacity and System Needs Study Interim Report, instead of three trains a day, we should expect 13 trains from Seattle to Portland. Instead of taking three and a half hours, these trips should take two and a half hours.⁷²

We must extend and expand dedicated rail service in the Puget Sound corridor, with trains running from Everett, Auburn, Bellevue, and Federal Way. Sound Transit trains currently run four trains in the morning and evening between Tacoma and Seattle and two trains between Everett and Seattle. Each additional train has brought dramatic increases in ridership, from less than a half million in 2001 to over one and a quarter million in 2005.⁷³ The demand is pent up. We need to at least triple the number of trains if we want to keep ahead of population growth and move some commuters from single occupancy vehicles to mass transit. Similarly, the Discovery Institute has proposed two new regional rail trains between Everett and Bellingham, with stops at Mount Vernon, Stanwood, and Marysville, moving up to 1800 riders each day off I-5 and onto rail transit.⁷⁴

We can emulate our neighbor to the south, Portland, Oregon, in developing our own Sound Transit light rail and bus system. The Portland system, MAX, is outpacing most other U.S. cities in ridership gains “because of compact route design and frequent service along corridors where transit has been used to focus development. Also, dedicated rights-of-way have been extended to give bus transit a rush-hour speed advantage comparable to light rail.”⁷⁵

Between 1993 and 2005 the public has invested \$476 million in rail transit infrastructure projects, about \$37 million a year. It is not enough. We are not keeping up with population growth and transit demand, and as a result by default we are increasing dependency on the automobile and on oil. Infrastructure development is not cheap. Developing a dedicated passenger rail line from Portland to Seattle will cost about \$1 billion.⁷⁶ But the alternative of increased dependency on petroleum-based transportation is even costlier. Every year we export about \$10 billion out of our state to pay for this energy consumption.⁷⁷ These expenditures highlight the benefits of dedicating \$250 million a year to rail infrastructure development and maintenance. This investment makes common sense from environmental, energy independence, and cost-benefit perspectives.

A blue callout box with a white dotted border and a background of clouds. The text inside reads: "We must extend and expand dedicated passenger rail service in the Puget Sound corridor..."

72 Washington State Transportation Commission, “Statewide Rail Capacity and System Needs Study”, May 16, 2006, p. 99.

73 Ibid., p. 63.

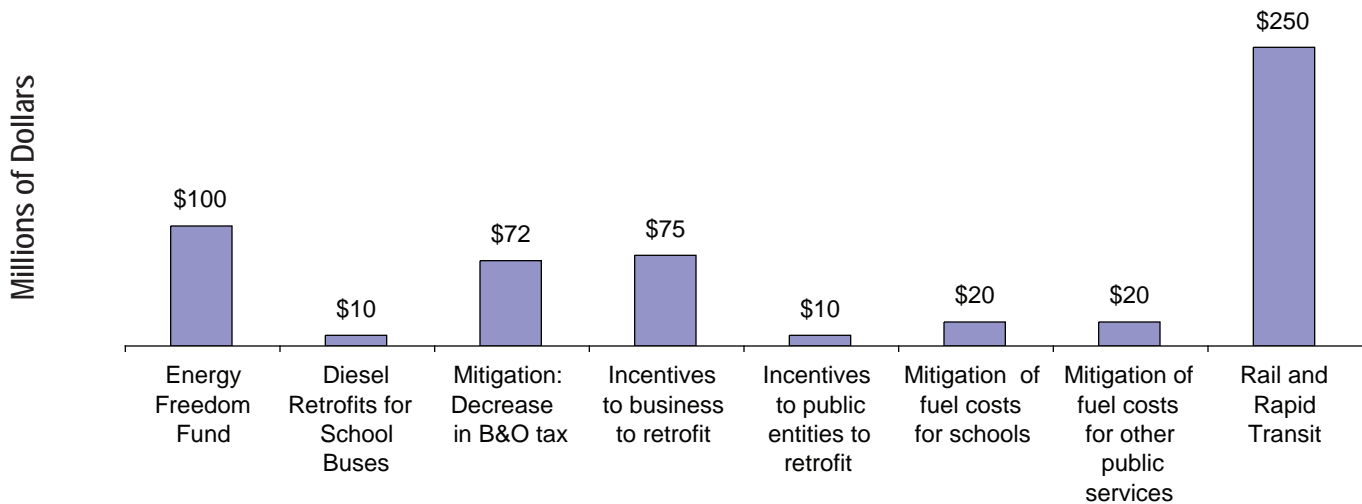
74 <http://www.discovery.org/scripts/viewDB/filesDB-download.php?id=325>

75 <http://www.discovery.org/cascadia/cascadiaCorridor/>

76 Author’s discussion with Patrick Mazza of Climate Solutions , Doug Howell, King County Department of Natural Resources and Parks, and Rich Feldman, Apollo Alliance of Washington State, June 4, 2006

77 http://sightline.org/daily_score/daily_score/archive/2006/05/02/giant-sucking-sound

Possible Annual investments from Oil Windfalls



5. Conclusion

The petroleum-based economy of Washington state has ensnared citizens and businesses in a downward spiral of environmental degradation and economic dependency. The enforcers of this dependency are the major integrated oil companies. Their quasi-monopoly market power enables them to disproportionately benefit from high fuel prices. Their incentives are to keep fuel supplies tight and to not expand the production of refined fuels. This enables their profits to be artificially enhanced, at the expense of businesses, citizens, governments, and, indeed, democracy, in our state.

We have no illusions that policy solutions will be forthcoming from the federal government. It falls to the states, as the laboratories of democracy, to develop proposals for renewable energy, energy conservation, and transportation. We have the responsibility and authority to do so, as gasoline and other petroleum products are essential commodities for economic activity. Do we have the will to do so? Can our democracy take up this challenge? In Chicago in the early 1980's Barak Obama, currently a United States Senator from Illinois, described the morale of residents and workers in the Chicago Housing Authority. "They ...confess a weariness... They had lost whatever confidence they might have once had in their ability to reverse the deterioration they saw all around them. With that loss of confidence came a loss in the capacity for outrage. The idea of responsibility – their own, that of others – slowly eroded, replaced with gallows humor and low expectations."⁷⁸

What Obama wrote about Chicago describes a defeatism that has spread across our country. We are much more apt to think how we can make do in the short run, sacrificing here and there and patching together our lives, our finances, and our families. But we live in a country founded in revolution with the spirit, sense and reality of a "can-do" way of life. We have the power within our democracy to bring forth whole new ways of thinking and acting as citizens, as consumers, as workers and as entrepreneurs. With the environmental encroachments and economic degradations that our embedded reliance on petroleum has created, we cannot afford defeatism. We have to act.

⁷⁸ Obama, Barak, Dreams from My Father, P. 236.

The market strategy of the major integrated oil companies sucks billions of dollars from the Washington economy in windfall profits. We must challenge these architects of dependency. These windfalls could and should go to the development of renewable energy and mass transit, lessening our state's vulnerability to the market manipulations of private energy companies.

We cannot continue to hold markets sacrosanct, regardless of how they distort economic activity, externalize costs and pollution, inequitably reinforce privilege and power, and actually create market failure. Through democracy, that is, through governance and lawmaking, we have the power to re-set the parameters for energy production and consumption, and in so doing, enforce parameters of fairness and equity for the citizens and businesses in our state. We can appraise the health of our democracy by testing our willingness to redirect oil windfalls to renewable energy, rapid transit, and robust economic activity in our state. Failure is not an option.

Addendum - The Need for A Study Commission on the Oil Industry

The windfall profits tax would be a catalyst for incubation of public and private strategies for energy independence and conservation. However, there is a dearth of underlying information on prices, profits, vertical integration and allocation of costs and profits, refinery margins, actual cost of crude oil, and industry attempts to realize further consolidation and thereby enhance their monopoly pricing power.

Legislation proposed in the Washington State House of Representatives in 2006 (House Bill 3044 sponsored by State Representative Steve Conway)⁷⁹ begins to address the need for public data on the oil industry, including transparency of pricing, flows of refined product within and out of the state, and refinery profit margins. It acknowledges that citizens, businesses, and public entities are in the dark about oil company operations and market manipulations. It empowers the Utilities and Transportation Commission (UTC) to gain and make publicly accessible gasoline pricing and availability. It also requires each oil company to file with the commission the price to be charged for petroleum products. It prohibits changes in these prices without prior filing, while specifically prohibiting the UTC from setting prices.

House Bill 3044 is the first step to enabling the public to gain an understanding of the market power and monopoly pricing structure of the oil industry. The development of a rational energy policy will require a more intensive investigation of petroleum industry practices. At the federal level, Congressional committees have refused to issue subpoenas for the investigation of oil company practices, and have even refused to swear in corporate leaders to testify under oath. It becomes all the more imperative for the states to take the lead to uncover industry manipulations. In Washington state, we need a legislative task force with the power to issue subpoenas and gather sworn testimony from industry insiders.

Oil is an essential commodity for the Washington state economy, and necessary for the viability of businesses and the livelihood of citizens. This recognition necessitates that as a public we have far greater knowledge of the oil industry. We need a commission to unearth the production, marketing, and pricing secrets of the oil companies. Armed with this knowledge, we can develop the public policy parameters for the production, distribution, and pricing of petroleum products that will facilitate economic prosperity in our state.

⁷⁹ <http://apps.leg.wa.gov/billinfo/summary.aspx?bill=3044&year=2006>

About the Author

John Burbank is the founder and executive director of the Economic Opportunity Institute. He holds a Master's Degree in Public Policy from the Evans School of Public Policy, University of Washington.

About the Economic Opportunity Institute

The Economic Opportunity Institute (EOI) is a public policy research and development institute. EOI focuses on analysis of and solutions for the most pressing problems of economic security and opportunity that confront middle class and low-income families in Washington state. EOI's policy work embraces solutions that are long lasting, universal, pragmatic, and replicable in other states.

EOI's work focuses on state taxation policies, early childhood education, family leave insurance, retirement security, Social Security, minimum wage and the state of the Washington state economy.

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Sources for Further Information

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U.S. PIRG: <http://www.uspirg.org>

The findings and conclusions presented in this report are those of the author alone and do not necessarily reflect the opinion of our funders and research friends and colleagues.

**Economic Opportunity Institute
1900 N. Northlake Way, Suite 237
Seattle, WA 98103
www.eoionline.org
206-633-6580**