BOARD OF SUPERVISORS AGENDA LETTER

Clerk of the Board of Supervisors
105 E. Anapamu Street, Suite 407
Santa Barbara, CA 93101
(805) 568-2240

Agenda Number:

Department Name:	**BOS**
Department No.:	011
For Agenda Of:	August 26, 2008
Placement:	Departmental
Estimated Tme:	2 Hours
Continued Item:	Yes. File No. 08-00707
If Yes, date from:	July 15, 2008
Vote Required:	

TO: Board of Supervisors

FROM: Supervisor Firestone, 3rd District Supervisor
Supervisor Centeno, 5th District Supervisor

SUBJECT: **Energy Crisis**

County Counsel Concurrence
As to form: N/A

Auditor-Controller Concurrence
As to form: N/A

Other Concurrence:
As to form: N/A

Recommended Actions:

a. Receive a presentation from staff and representatives of oil interests regarding the current state of oil and natural gas resources as relates to the County of Santa Barbara; and

b. Receive testimony from the general public regarding oil activities and energy programs relating to Santa Barbara County; and

c. Approve the submission of a letter to the Governor of the State of California calling for a change in policy to allow expanded oil exploration and extraction in the Santa Barbara County region.

Background:

The current and projected state of the Santa Barbara County financial resources to continue basic County services calls for an aggressive stance on the development of new revenues. Additionally, there is a growing concern on a local, state and national level for the need to assess potential energy resources to reduce dependence on foreign sources.

The technology of oil drilling has changed significantly over the past four decades. Coupling this with the economic impacts resulting from the volatility of oil production in other parts of the world outside the United States strongly suggests that the State of California needs to assess its policies relating to new exploration and extraction of oil in lands controlled by the State.

Enclosed as Attachment A is a summary of energy facts prepared by staff at our request which provides an overview of national, state and county status. It provides facts regarding current use and potential

sources for future use. With regard to oil and natural gas in the Santa Barbara County region, the following are estimates of remaining reserves:

- Currently producing leases: 13.2 million barrels of oil, 13.9 billion cubic feet of natural gas
- Undeveloped reserves on developed leases: 187.4 million barrels of oil, 47.9 billion cubic feet of natural gas
- Unleased state lands: 761 million barrels of oil, 189 billion cubic feet of natural gas (includes Tranquillon Ridge)

The off-shore area of Southern California Planning Area has significantly higher potentially and economically recoverable oil (4.47 billion barrels) and natural gas (8 trillion cubic feet).

Given the current budget constraints of the County, it is only prudent to support the exploration and extraction of oil and natural gas both on and off shore, with an enhancement of revenues to local governments. Staff prepared estimates demonstrating the financial impact of oil on our General Fund and Fire District funds. These estimates are reflected in the following charts:

County Revenue for Oil Companies	
Fees	$1,635,435
California Royalty Revenue	$78,983
Coastal	$623,000
Property Taxes	$3,203,906
	$5,541,324

Chart 1

Future Preliminary Rough Estimates of Property Tax and Royalty Sharing from PXP Tranquillon Ridge & Venoco Full Field Developments at 100 per barrel of oil			
	Property Tax	Royalty	Total
PXP Tranquillon Ridge (14 year life & 1% of State Royalty Revenue)	$8,522,857	$1,000,000	$9,522,857
Venoco South Ellwood Field (30 year life & 21% of State Royalty Rate)	$1,760,667	$6,580,000	$8,340,667
Venoco Paredon (15 year life & 8.4% of State Royalty Rate)	$2,052,000	$2,251,000	$4,303,000
TOTAL:	**$12,335,524**	**$9,831,000**	**$22,166,524**

Chart 2

The County currently receives approximately $5.5 million in revenues from oil operations. Based on an estimated $100 per barrel and activation of PXP Tranquillon Ridge, Venoco South Ellwood and Venoco Paredon fields, the County could receive, on average, over $22 million annually over the next 14 years.

The figures in Chart 2 are rough estimates based on projected reserves by the involved oil companies. The property tax figures have not been validated by the County Assessor and are the subject of a number of assumptions yet to be tested.

The County of Santa Barbara cannot afford to pass on the maximization of the potential of the revenues to be derived from the oil and gas reserves projected to exist, including increased local government percentage participation the revenues derived from the producers. The improvements in technology to prevent spills, the reduction of seepage resulting from enhanced production techniques, the economic impacts resulting from world demand and tensions, and the potential for pre-emption by the federal government all combine to justify an aggressive proactive position by the State of California to maximize the benefits of expanded oil and natural gas exploration and extraction. Therefore it is recommended that the Board of Supervisors approve the submittal of a letter to Governor Arnold Schwarzeneggar for a change in policy to allow expanded exploration and extraction of oil and natural gas (Attachment B).

Attachments:

Attachment A – Appendix A: World Energy Profile
Appendix B: Nation Energy Profile
Appendix C: California Energy Profile

Attachment B – Letter to Governor Arnold Schwarzenegger

Appendix A: World's Energy Profile

	Consumption (2005)	*Production (2005)*	*Est. Reserves (as of 2006)*
Petroleum	***83.6 million barrels/day***	***84.6 million barrels/day***	***1.1 trillion barrels***
Natural Gas	***103.7 billion feet^3***	***101.5 trillion feet^3***	***6,226.5 trillion feet^3***
Coal	***6,489 million short tons***	***6,483 million short tons***	***997.7 million short tons***
Total Electricity		***17,250.6 billion kilowatt/hours***	
(Conventional)		***11,455.3 billion kilowatt/hours***	
(Hydroelectric)		***2,900 billion kilowatt/hours***	
(Nuclear Electric)		***2,625.6 billion kilowatt/hours***	
(Geothermal, Wind, Solar, Wood and Waste)		***369.7 billion kilowatt/hours***	

Appendix B: Nation's Energy Profile

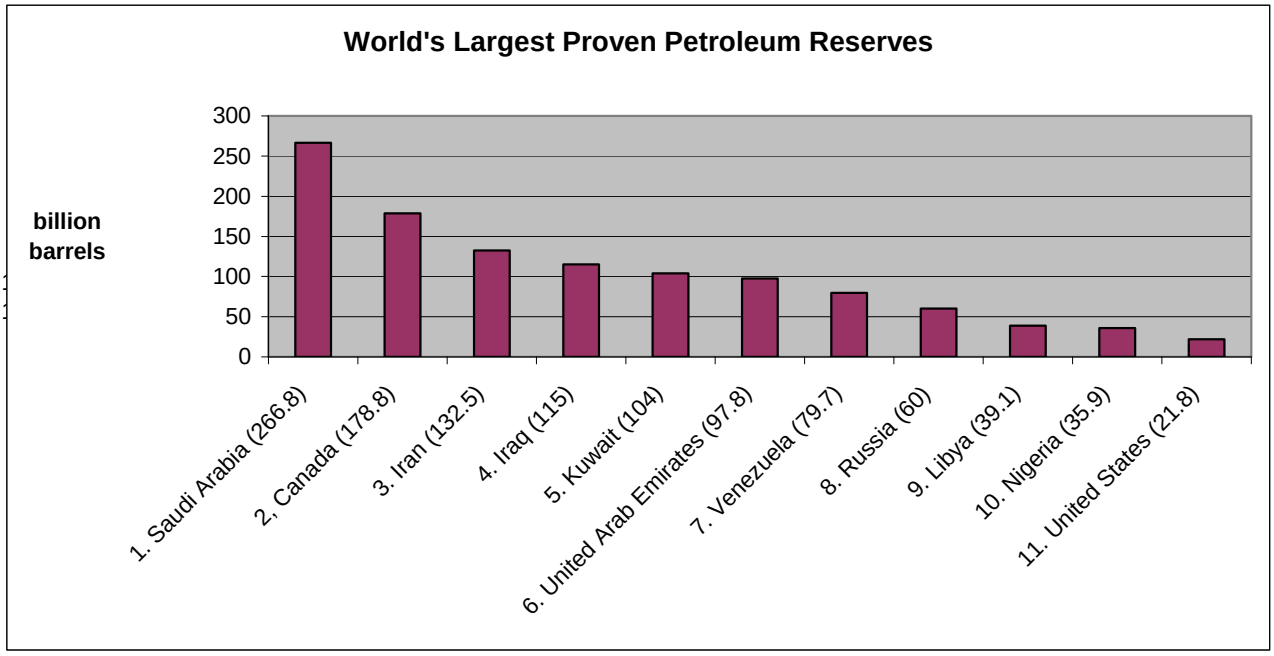
Overall

The United States of America is the world's largest producer, consumer, and net importer of energy. The graph on the following page depicts how the nation used its energy in 2007 by source and sector; however, the US Department of Energy does not distinguish between public and private sector consumption.

Petroleum

In 2006, the US ranked as

- **the world's 3rd largest oil producer** (at 8.3 million barrels/day) behind Saudi Arabia and Russia (at 10.7 and 9.7 million barrels/day, respectively);
- **the world's largest oil consumer** (at 20.7 million bbls/day), followed by China and Japan (at 7.2 and 5.2 million bbls/day, respectively).
- **11th largest in proven petroleum reserves, accounting for 1.9% of total proven reserves among the top 11 countries**



Natural Gas

In 2005, the US ranked as the world's **2nd largest natural gas producer** (18 trillion feet^3) behind Russia, and **the largest natural gas consumer** (22 trillion feet^3).

Electricity

In 2005, the U.S. ranked as **the world's largest producer and consumer of electricity**. Consumption was reported at 3,816 billion kilowatt hours (kw/h), followed by China (2,197 billion kw/h), Japan (974 billion kw/h), Russia (779 billion kw/h), Germany (545 billion kw/h), India 489 billion kw/h), and France (451 billion kw/h).

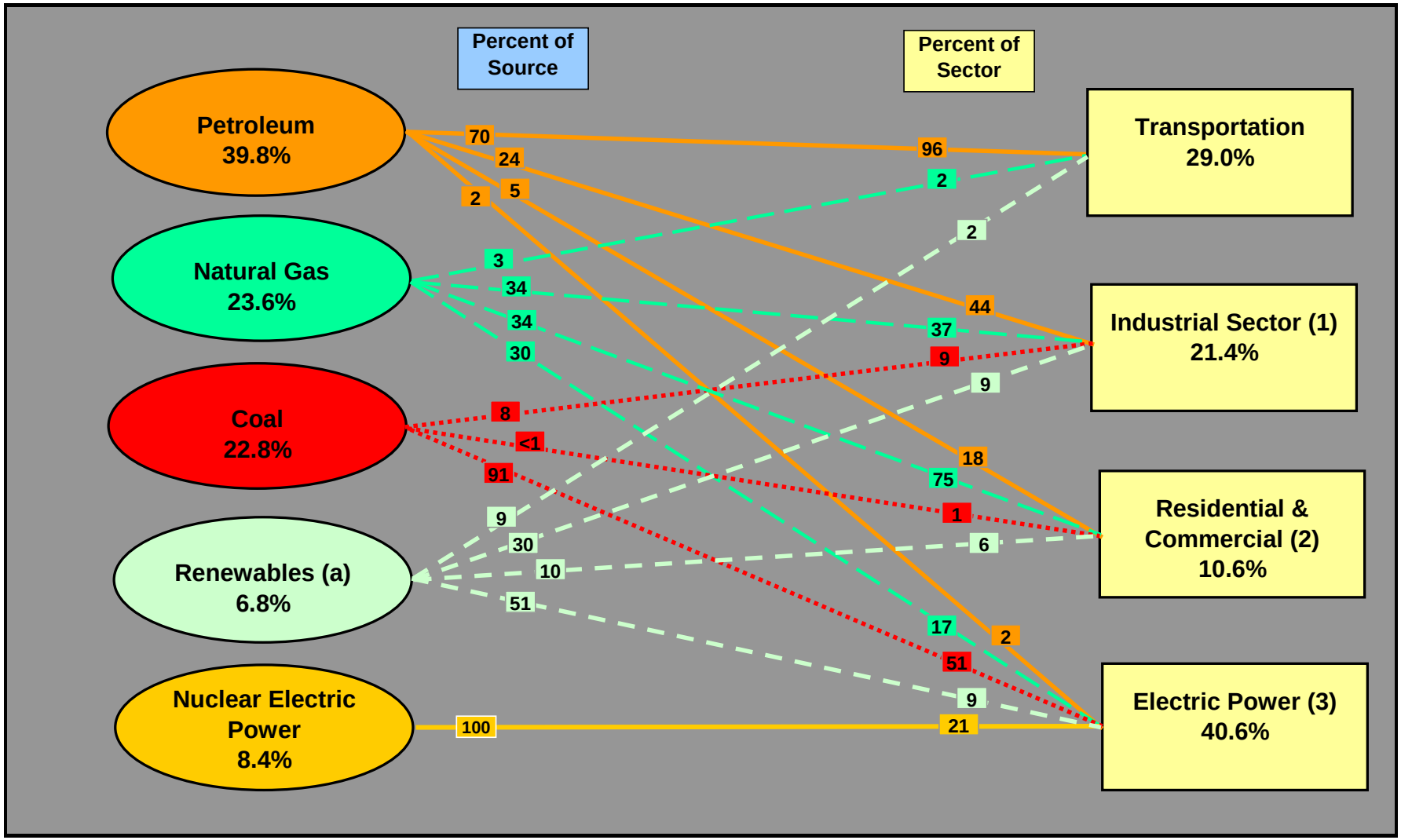
In 2005, the US ranked as

- the **2nd largest net hydroelectric electric power generator** (at 270 billion kw/h), behind Canada (at 360 billion kw/h);
- **the largest net nuclear electric power generator** (at 782 billion kw/h) followed by France and Japan (at 429 and 278 billion kw/h, respectively);
- **the largest net geothermal, solar, wind, and wood and waste electric power generator** (at 100 billion kw/h) followed by Germany, Spain and Japan (at 43, 23, and 23 billion kw/h), respectively.

Coal

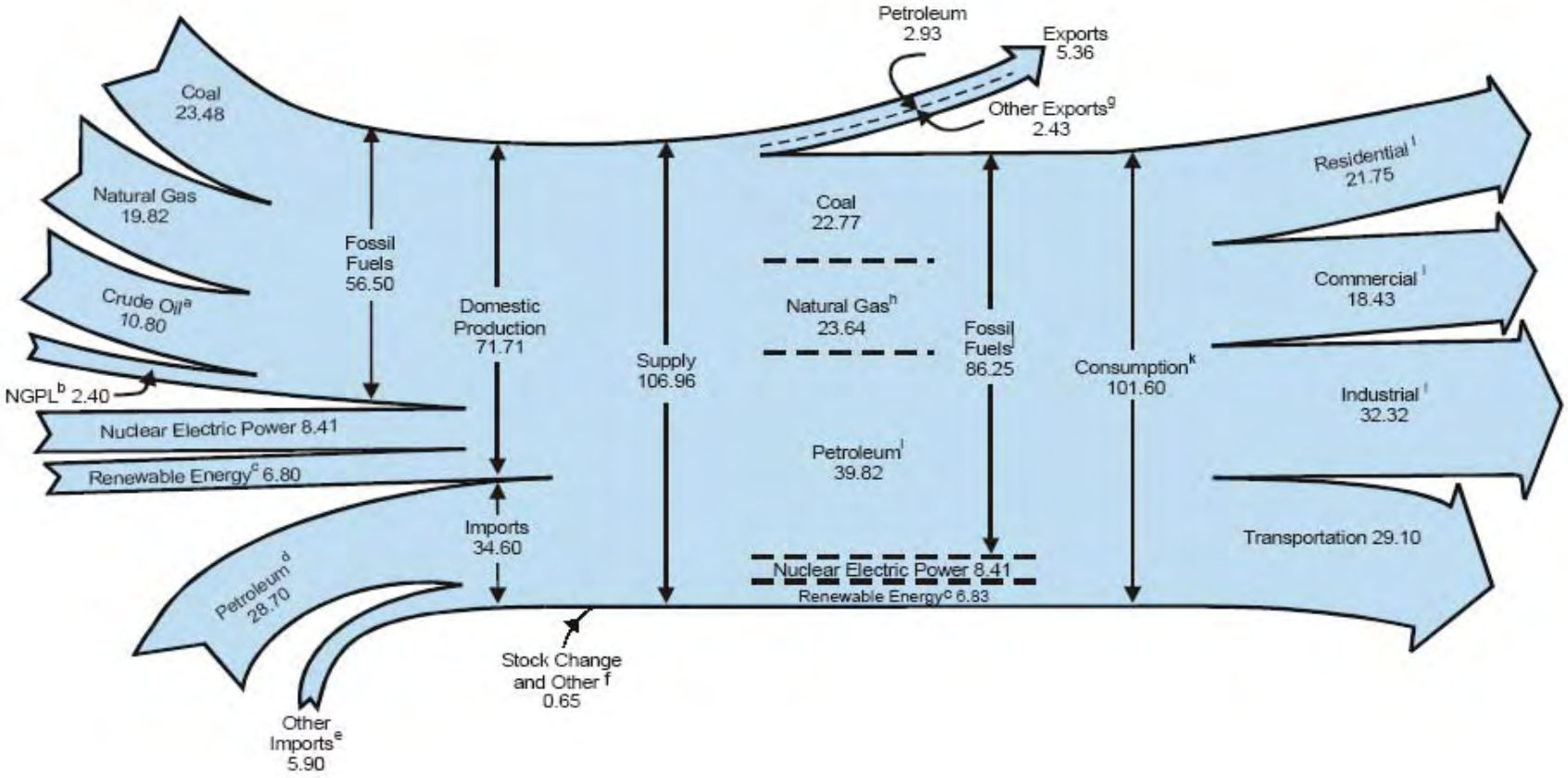
In 2005, the US was **the world's 2nd largest producer and consumer of coal** (at 1.131 and 1.125 billion short tons, respectively).

U.S. Primary Energy Consumption by Source and Sector, 2007



a. Conventional hydroelectric power, geothermal, solar/PV, wind, & biomass.
Note: Sum of components may not equal 100 percent due to independent rounding.
Source: Energy Information Administration website.

U.S. Energy Flow in 2007 (quadrillion btu)



[a] Includes lease condensate.
[b] Natural gas plant liquids.
[c] Conventional hydroelectric power, biomass, geothermal, solar/photovoltaic, and wind.
[d] Crude oil and petroleum products. Includes imports into the Strategic Petroleum Reserve.
[e] Natural gas, coal, coal coke, fuel ethanol, and electricity.
[f] Adjustments, losses, and unaccounted for.
[g] Coal, natural gas, coal coke, and electricity.
[h] Natural gas only; excludes supplemental gaseous fuels.
[i] Petroleum products, including natural gas plant liquids, and crude oil burned as fuel.
[j] Includes 0.03 quadrillion Btu of coal coke net imports.
[k] Includes 0.11 quadrillion Btu of electricity net imports.
[l] Primary consumption, electricity retail sales, and electrical system energy losses, which are allocated to the end-use sectors in proportion to each sector's share of total electricity retail sales. See Note, "Electrical Systems Energy Losses," at end of Section 2.

Notes: • Data are preliminary. • Values are derived from source data prior to rounding for publication. • Totals may not equal sum of components due to independent rounding.

Sources: Tables 1.1, 1.2, 1.3, 1.4, and 2.1a.

Source: Energy Information Administration website.

Appendix C: California's Energy Profile

Overall

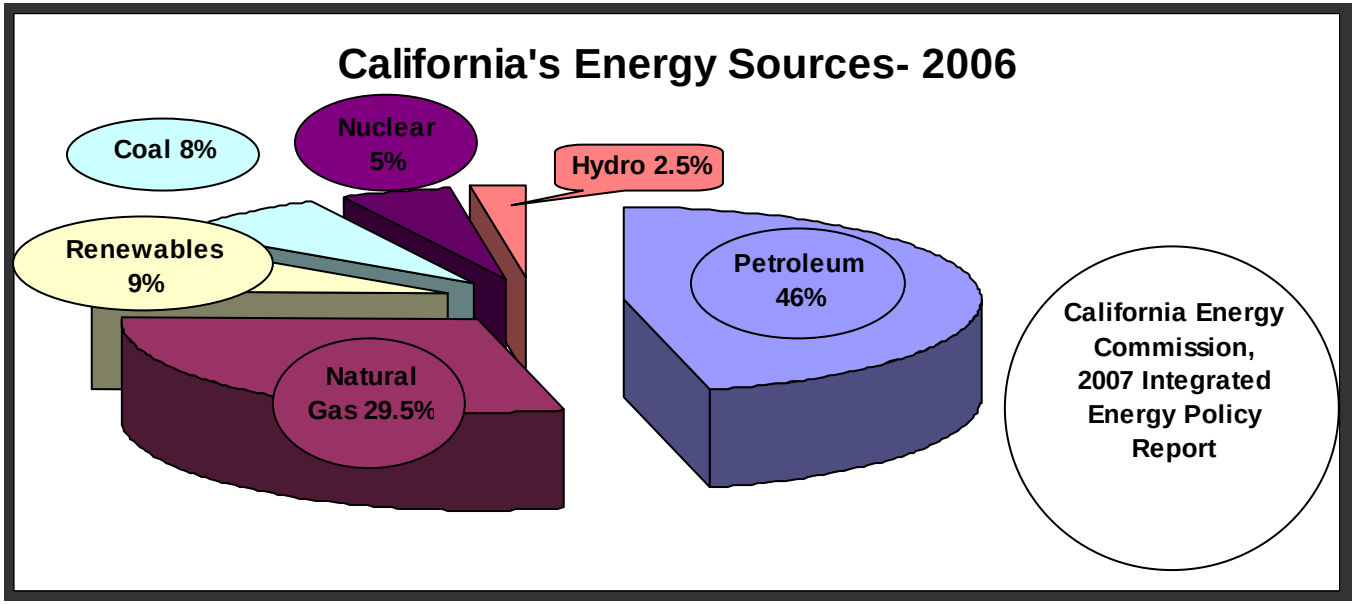
California is the most populace state in the union, representing about 12.6% of the nation's population in 2007 with a populace of 37,662,518. The state also represented 12.5% of the nation's labor force, and 13% of the nation's Gross Domestic Product in 2007. Meanwhile, its per capita consumption of energy is lower than the national average. Motor gasoline consumption was 11.3% of the nation's total in 1986.

The Energy Information Administration of the U.S. Department of Energy characterizes California's Energy Profile as follows:[1]

> ***"Resources and Consumption:*** *California is rich in conventional and renewable energy resources. It has large crude oil and substantial natural gas deposits in six geological basins, located in the Central Valley and along the Pacific coast. Most of those reserves are concentrated in the southern San Joaquin Basin. More than a dozen of the Nation's 100 largest oil fields are located in California, including the Belridge South oil field, the second largest oil field in the contiguous United States. In addition, Federal assessments indicate that large undiscovered deposits of recoverable oil and gas lie offshore in the federally administered Outer Continental Shelf (OCS), although Federal law currently prohibits oil and gas leasing in that area. California's renewable energy potential is extensive. The State's hydroelectric power potential ranks second in the Nation (behind Washington State), and substantial geothermal and wind power resources are found along the coastal mountain ranges and the eastern border with Nevada. High solar energy potential is found in southeastern California's sunny deserts.*
>
> *California is the most populous State in the Nation and its total energy demand is second only to Texas. Although California is a leader in the energy-intensive chemical, forest products, glass, and petroleum industries, the State has one of the lowest per capita energy consumption rates in the country. The California government's energy-efficiency programs have contributed to low per capita energy consumption. Driven by high demand from California's many motorists, major airports, and military bases, the transportation sector is the State's largest energy-consumer. More motor vehicles are registered in California than any other State, and worker commute times are among the longest in the country.*

See California Energy Commission, *Integrated Energy Policy Report 2007*, for more information.

[1] http://tonto.eia.doe.gov/state/state_energy_profiles.cfm?sid=CA

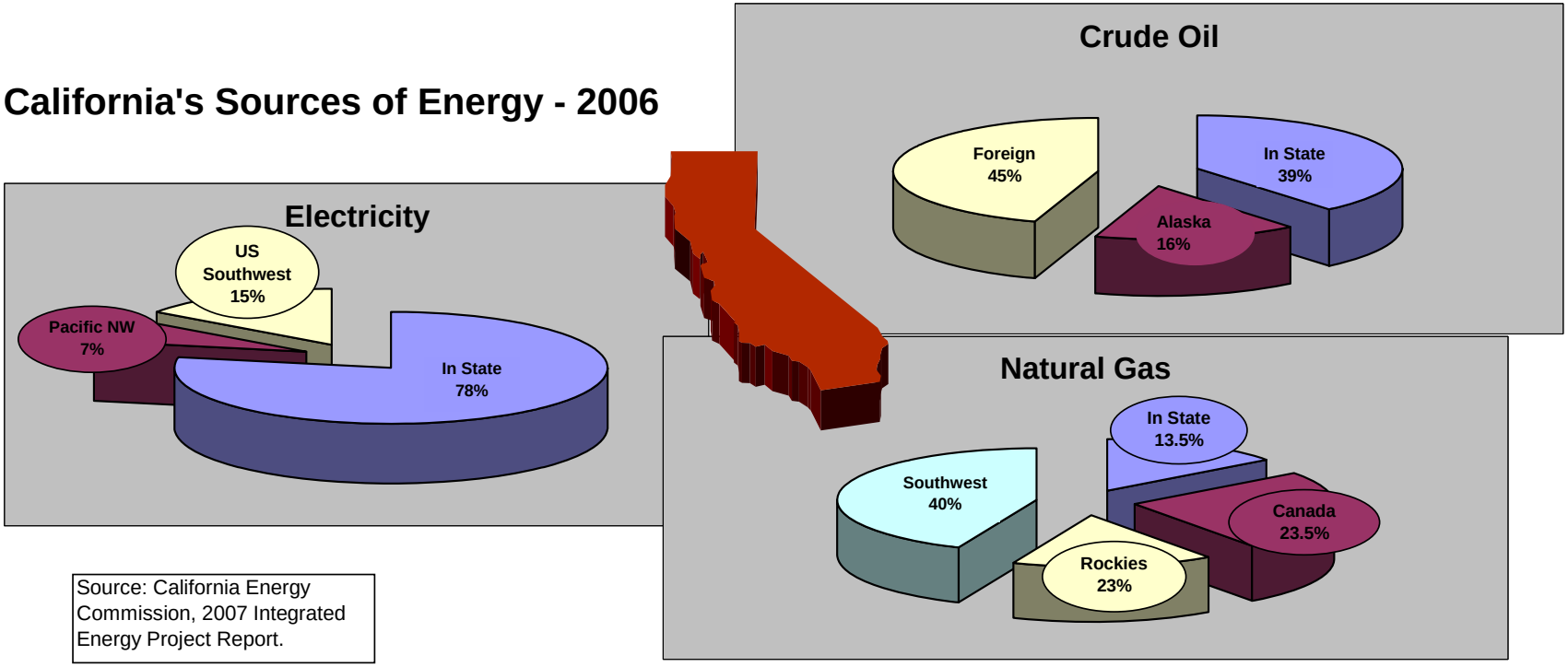


California's Electricity Mix in 2006

Mix	Natural Gas 41.5%	Large Hydro 19%	Coal 15.7%	Nuclear 12.9%	Geothermal 4.7%	Biomass 2.1%	Small Hydro 2.1%	Wind 1.8%	Solar 0.2%
In-state	88%	77%	62%	84%	99%	92%	93%	92%	100%
Imported	12%	23%	38%	16%	1%	8%	7%	8%	0%

Source: California Energy Commission, 2007 Integrated Energy Policy Report

California's Sources of Energy - 2006

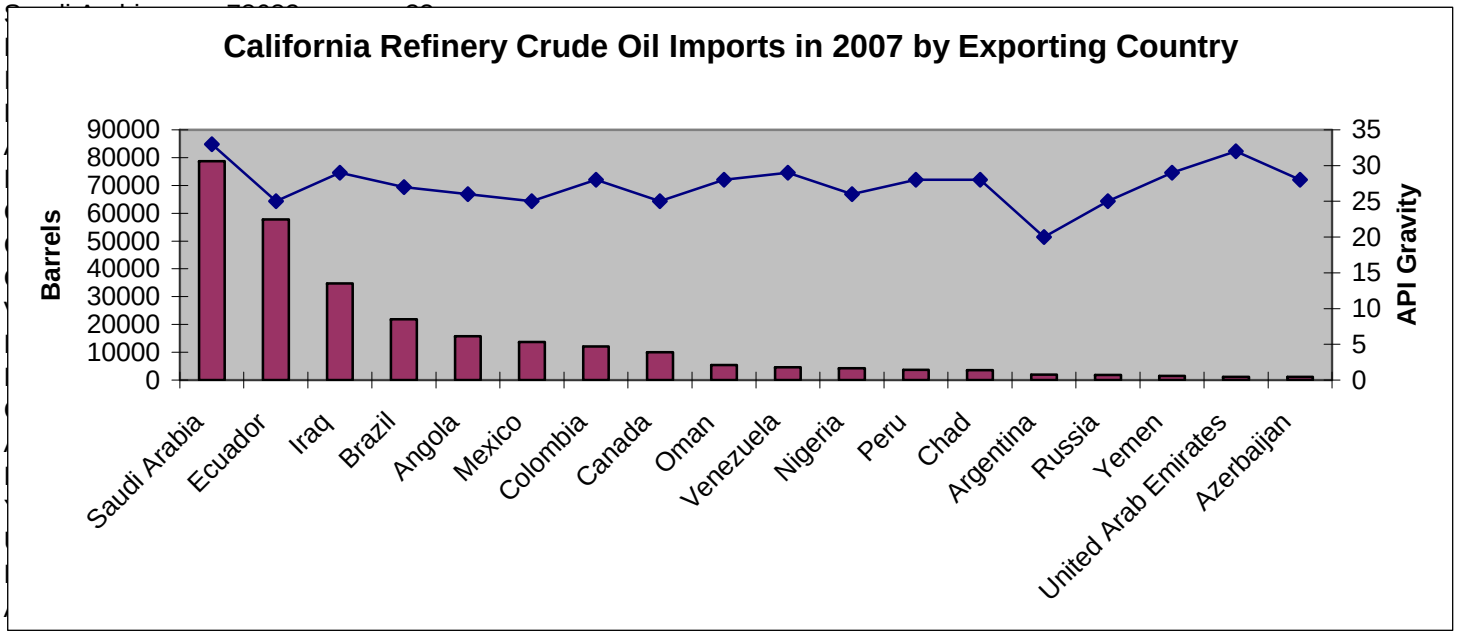


Source: California Energy Commission, 2007 Integrated Energy Project Report.

California Refineries:

Source: Gordon Schremp, California Energy Commission, *California's Petroleum Infrastructure,* February 1, 2007.

- 14 refineries produce transportation fuels that meet California's standards
- 8 smaller refineries produce asphalt and other products
- California's refineries provide neighboring states with the majority of their transportation fuel
- California's refineries receive crude oil via pipeline and marine vessel
- These refineries operate at or near maximum capacity, except during periods of planned maintenance or unplanned shutdowns
- In 2005, California's refineries had the following output:
    - 43.1% gasoline meeting CARB standards
    - 7.4% non-California gasoline
    - 11.6% diesel meeting CARB standards
    - 4.7% diesel meeting EPA standards
    - 12.4% jet fuel
    - 1.7% asphalt and road oil
    - 2.4% liquefied refinery gases
    - 3.1% residual fuel oil
    - 5.2% still gas
    - 7% petroleum coke
    - 1.5% other products



Source: U.S. Department of Energy, Energy Information Administration, historic databases on website.

Imports by Refinery & Refining Entity

	Refinery	*Location*	*2006 Capacity (barrels/day)*	*2007 Crude Oil Imports (bbls) X Refinery*	*% of Total Imports*	*2007 Crude Oil Imports (bbls) X Entity*	*% of Total Imports*	*Entity*
1	Big West of California	Bakersfield	66,000	-	0%	0	0%	Big West
2	Chevron	El Segundo	260,000	56,014,000	20%	125,864,000	46%	Chevron
3	Chevron	Richmond	242,901	69,850,000	25%			
4	ConocoPhillips	Arroyo Grande	44,200	-	0%	25,873,000	9%	ConocoPhillips
5	ConocoPhillips	Rodeo (SF)	76,000	3,955,000	1%			
6	ConocoPhillips	Wilmington	139,000	21,918,000	8%			
7	ExxonMobil	Torrance	149,500	-	0%	0	0%	ExxonMobil
8	Paramount Petroleum	Paramount	46,500	5,543,000	2%	5,543,000	2%	Paramount
9	Shell	Martinez	155,600	11,043,000	4%	22,123,000	8%	Shell
10	Shell	Wilmington	98,500	11,080,000	4%			
11	Tesoro	Martinez (Avon)	166,000	20,094,000	7%	20,094,000	7%	Tesoro
12	Valero	Wilmington	80,887	25,782,000	9%	41,477,000	15%	Valero
13	Valero	Benecia	144,000	15,695,000	6%			
14	BP West Coast	Los Angeles	260,000	35,043,000	13%	35,043,000	13%	BP
			1,929,088	276,017,000	100%			

Source: U.S. Department of Energy, Energy Information Administration, websites databases

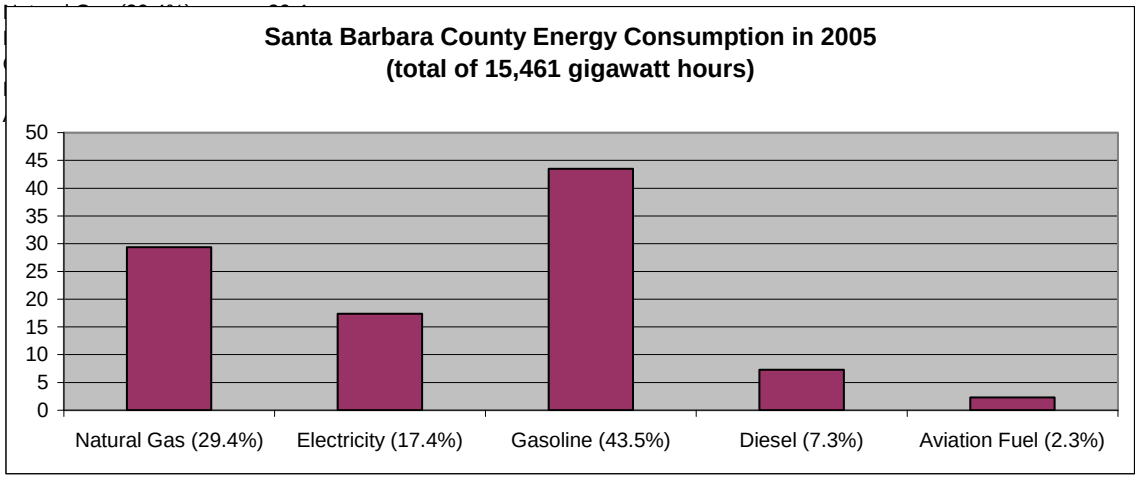
California Refiner Oil Imports by Exporter (barrels of oil)							
	Refiner						
	Chevron	*Valero*	*BP*	*ConocoPhillips*	*Tesoro*	*Shell*	*Paramount*
Exporter							
Saudi Arabia	77,424,000	-	1,258,000	-	-	-	-
Ecuador	8,486,000	14,410,000	776,000	6,689,000	6,304,000	13,765,000	5,543,000
Iraq	8,914,000	4,214,000	13,744,000	4,099,000	-	2,827,000	-
Brazil	8,643,000	4,427,000	4,592,000	2,189,000	336,000	999,000	-
Angola	1,404,000	4,538,000	6,800,000	370,000	2,103,000	-	-
Mexico	588,000	6,554,000	735,000	5,520,000	-	254,000	-
Colombia	1,213,000	4,523,000	409,000	2,333,000	3,614,000	-	-
Canada	796,000	1,886,000	-	2,096,000	2,732,000	2,439,000	-
Oman	2,474,000	-	2,796,000	-	100,000	-	-
Venezuela	5,187,000	76,000	-	707,000	-	1,839,000	-
Nigeria	3,396,000	-	866,000	-	-	-	-
Peru	1,344,000	-	-	-	1,301,000	-	-
Chad	3,552,000	-	-	-	-	-	-
Argentina	-	-	1,621,000	340,000	-	-	-
Russia	-	849,000	-	-	970,000	-	-
Yemen	-	-	-	-	1,514,000	-	-
UAE	1,204,000	-	-	-	-	-	-
Azerbaijan	-	-	-	360,000	751,000	-	-
Equatorial Guinea	-	-	893,000	-	-	-	-
Indonesia	-	-	553,000	-	-	-	-
Bolivia	-	-	-	307,000	-	-	-
China	-	-	-	863,000	-	-	-
Norway	-	-	-	-	369,000	-	-
Trinidad & Tobago	621,000	-	-	-	-	-	-
Kuwait	618,000	-	-	-	-	-	-
	125,864,000	41,477,000	35,043,000	25,873,000	20,094,000	22,123,000	5,543,000

Santa Barbara County's Energy Profile

Overall

Santa Barbara County's population in 2007, estimated at 424,425, was 1.13% of California's population, 1.1% of the state's work force, and 1.25% of California's gross domestic product.

Energy Consumption



Source: Community Environmental Council, *A New Energy Direction,* 2007, p. 10.

Electricity: Santa Barbara County is situated at the end of two electrical grid systems; Southern California Edison (SCE) serves the southern portion of the County, Pacific Gas & Electric (PG&E) serves the northern portion. In 2006, the County consumed a total of 3,177 gigawatt[2] hours of electricity; 43% of which came from PG&E and 57% from SCE.[3]

Natural Gas: Santa Barbara County is served by the Southern California Gas Company, although the Cuyama Valley does not have natural gas service. In 2005, the County consumed 155 million therms of natural gas.[4]

Transportation Fuels: In 2005, the County consumed 184 million gallons of gasoline, 28 million gallons of diesel, 8.4 million gallons of jet fuel, and 525,000 gallons of aviation gasoline.

[2] A gigawatt hour equals one million kilowatt hours, and one kilowatt hour is enough electricity to run ten 100-watt light bulbs for an hour (Community Environmental Council, *A New Energy Direction,* 2007, p. 9).
[3] California Energy Commission, email from Andrea Gough, July 28, 2008.
[4] Community Environmental Council, *A New Energy Direction,* 2007, p. 9.

Energy-Demand Reduction – County's Energy Element:

The County adopted the *Energy Element* of the Santa Barbara County Comprehensive Plan in December of 1994. This Element contains long-range planning guidelines and mechanisms to encourage energy efficiency and alternative energies in Santa Barbara County.

In May of 1995, the County implemented Policy 2.1 [Voluntarily Going Beyond State Building Energy Standards] of the *Energy Element*, by establishing the Innovative Building Review Program (IBRP). The IBRP is a free program that gives incentives, including an expedited plan check review, for projects that reach the IBRP's target levels, which go beyond California Energy Efficient Standards (Title 24). Local professionals, including contractors, architects, engineers, and energy consultants, make up a committee that gives free advice to applicants on energy-efficient design or products.

Since inception of the program, over 1,060 residential and 10 commercial projects have reached the program's target levels. In recent years, more projects are reaching the higher target levels within the program and going beyond Title 24 by larger percentages. In 2008, the Building & Safety Division plans to update the IBRP, including recognition of projects that achieved mid level compliance ranges with the Santa Barbara Contractors Association Built Green and the nationally recognized LEED compliance programs or equivalent.

In 1997, Santa Barbara County implemented Policy 5.10 [Alternatively Fueled Vehicles] of the *Energy Element* by preparing a report that attempted to address local regulatory barriers to introducing electric vehicles and related charging facilities. At the time, the California Air Resources Board's Low-Emission Vehicle Clean Fuels Regulation was requiring by 2003 that 10% of all vehicles that each major automaker delivers to the California market to be zero emission vehicles. In addition, the County analyzed the entire fuel cycle of the electric vehicle to determine the real environmental benefits of electric vehicles.

In 2000, Santa Barbara County marketed the economic and environmental benefits of solar energy systems for commercial and residential uses. The County produced a video, *Heating with the Sun, Solar Applications in Santa Barbara County* and designed a six-panel brochure, making them available to the public.

Energy-Demand Reduction – County's Green Team

The County's efforts to use energy more efficiently and conserve energy are illustrated in the Green Team Annual Update 2007, which was received by the Board of Supervisors at its October 23, 2007, hearing.

Conventional Energy Production

Santa Barbara County has hosted oil and gas production, both onshore and offshore, for more than a century. Total production from those sources is illustrated on the following pages.

Conventional Energy Production -- Onshore Oil & Gas

- ***History:*** Oil production in Santa Barbara County dates back to the 1887 in Summerland, and now is focused on developing long-existing onshore fields in the northern portion of the county, including the Cuyama Valley. About 2 billion barrels of oil and 780 billion cubic feet of gas have been extracted from onshore fields between 1923 and 2006, although these figures include state tidelands between 1923 and 1958. Most fields have been in production for decades, as have most of California's onshore oil/gas fields; new technological developments have enhanced producers' ability to recover more reserves economically.
- ***Estimated Reserves:*** Economically recoverable oil reserves in the County as of 2006 are estimated to be 29 million barrels (MMbbl), according to DOGGR estimates.[5] This amounts to about 15 years of production at the current rate of 2 MMbbl per year. The 29 MMbbl estimate represents a decrease from reserves estimates of 54 MMbbl in 1996 and 140 MMbbl in 1986. To put these figures in perspective, PXP estimates that recoverable reserves in Tranquillon Ridge are 170 to 200 MMbbl. DOGGR estimates that recoverable reserves in District 4 (mainly Kern County) are 2,079 MMbbl.

  Natural gas reserves as of 2006 are estimated to be 23 billion cubic feet (Bcf), or about 12 years of production at the current rate of 1.9 Bcf per year. This represents a decrease from reserves estimates of 51 Bcf in 1996 and 99 Bcf in 1986. For comparison, PXP estimates that recoverable gas reserves in Tranquillon Ridge are 40 to 50 Bcf. DOGGR estimates that recoverable gas reserves in District 4 are 1,171 Bcf.

  Santa Barbara's onshore oil fields are mature, and most of the easily extracted oil has been produced. Over the past 20 years, DOGGER has adjusted the oil reserves estimates for Santa Barbara onshore fields downward,[6] based in part on observed production rates, which are affected by economic factors. Given current high oil prices, it may be feasible to more thoroughly drain the less easily extracted oil from some of the County's existing oil fields using enhanced recovery methods, such as steam injection. Application of such technologies could boost estimates of total recoverable reserves. The potential for enhanced recovery will depend on a number of factors, including oil prices, economics of production,[7] availability and allocation of capital, air pollution and greenhouse gas constraints, and willingness of oil companies to invest in the technology to extract the remaining oil, which may involve financial risk.

[5] California Division of Oil, Gas and Geothermal Resources, 2006 Annual Report. The estimates for most Santa Barbara onshore fields were updated in 2004 and 2006.
[6] The oil reserves estimates have decreased 1.5 times the amount the total oil produced during the past 20 years.
[7] The cost of drilling, well reworking, and enhanced recovery increases with increasing energy cost.

Onshore Crude Oil Production & Reserves
Santa Barbara County, 2006

Field	# Producing Wells	Production (Mbbl)	Cumulative (Mbbl)	Reserves (Mbbl)	1996 Cumulative (Mbbl)	1996 Reserves (Mbbl)	1986 Cumulative (Mbbl)	1986 Reserves (Mbbl)
Barham Ranch	23	115	4,337	1,779	2,937	1,012	324	290
Careaga Canyon	1	1	398		381	9	286	
Casmalia	107	142	43,117	2,075	41,228	1,824	38,235	11,267
Cat Canyon	185	354	302,537	2,323	297,089	22,910	282,570	52,430
Cuyama, South	84	264	224,441	4,629	221,240	3,752	217,047	7,945
Lompoc	28	154	47,867	450	46,933	394	43,901	4,392
Orcutt	152	638	178,175	13,936	171,897	6,316	163,993	12,130
Russell Ranch	25	35	68,587	354	68,137	431	67,236	1,323
Santa Maria Valley	68	129	206,286	1,276	203,815	14,827	194,400	44,050
Zaca	30	157	31,358	2,236	29,140	2,377	26,203	6,297
"any field"	1	9	50		14		5	
County Total	704	1,999	1,107,153	29,058	1,082,811	53,852	1,034,200	140,124

Source: DOGGR annual reports 2006, 1996, 1986

Fields no longer producing:

Capitan	19,922	706
Four Deer	1,372	964
Jesus Maria	295	190
Los Alamos	321	146

Current (2006) estimated oil reserves are approx 29 MMbbl

	cumulative production	estimated reserves	change in cumulative	change in reserves
1986	1,034,200	140,124		
1996	1,082,811	53,852	48,611	-86,272
2006	1,107,153	29,058	24,342	-24,794
change 1986-2006	72,953	-111,066		
reserves change/ cumulative production change	-1.52			

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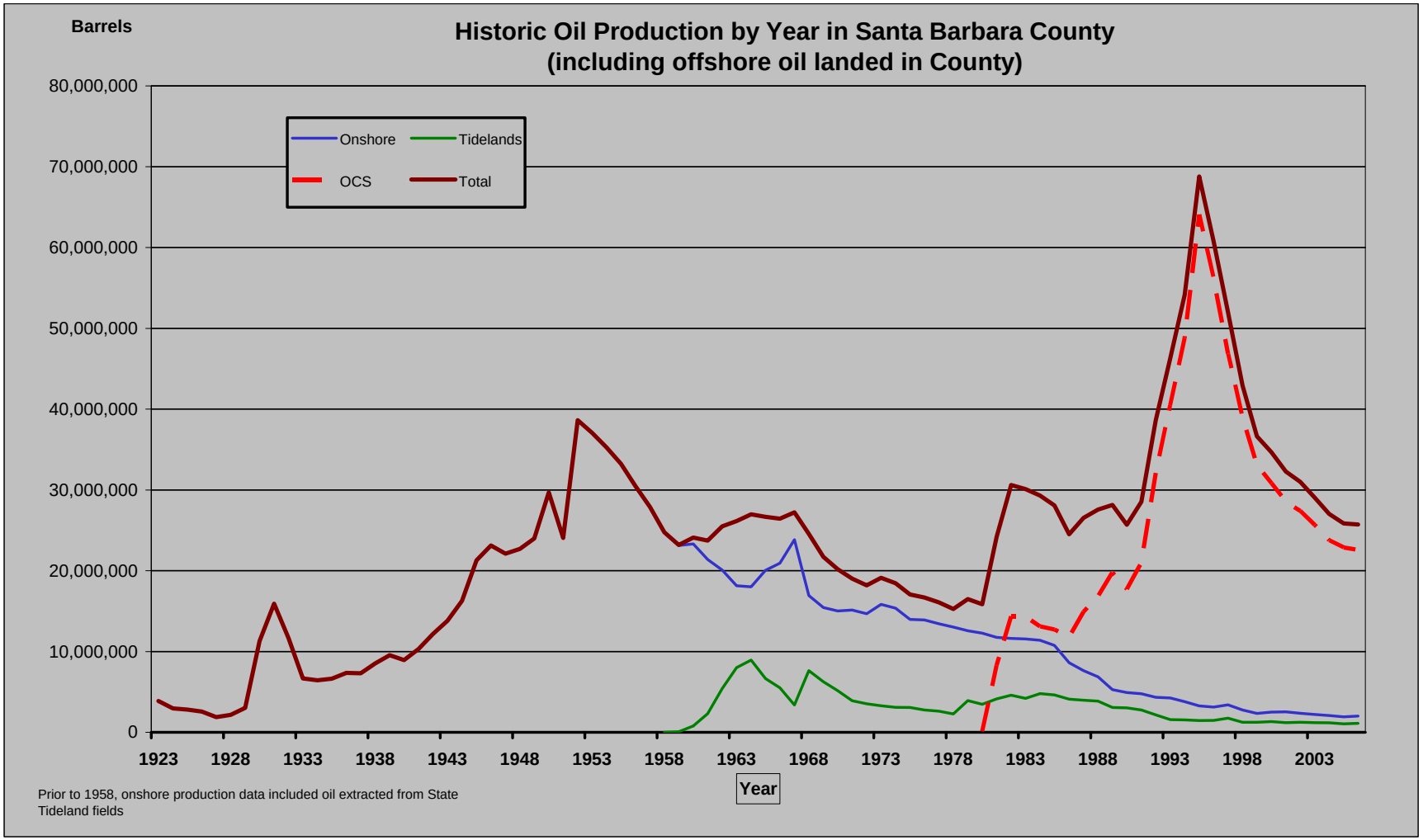
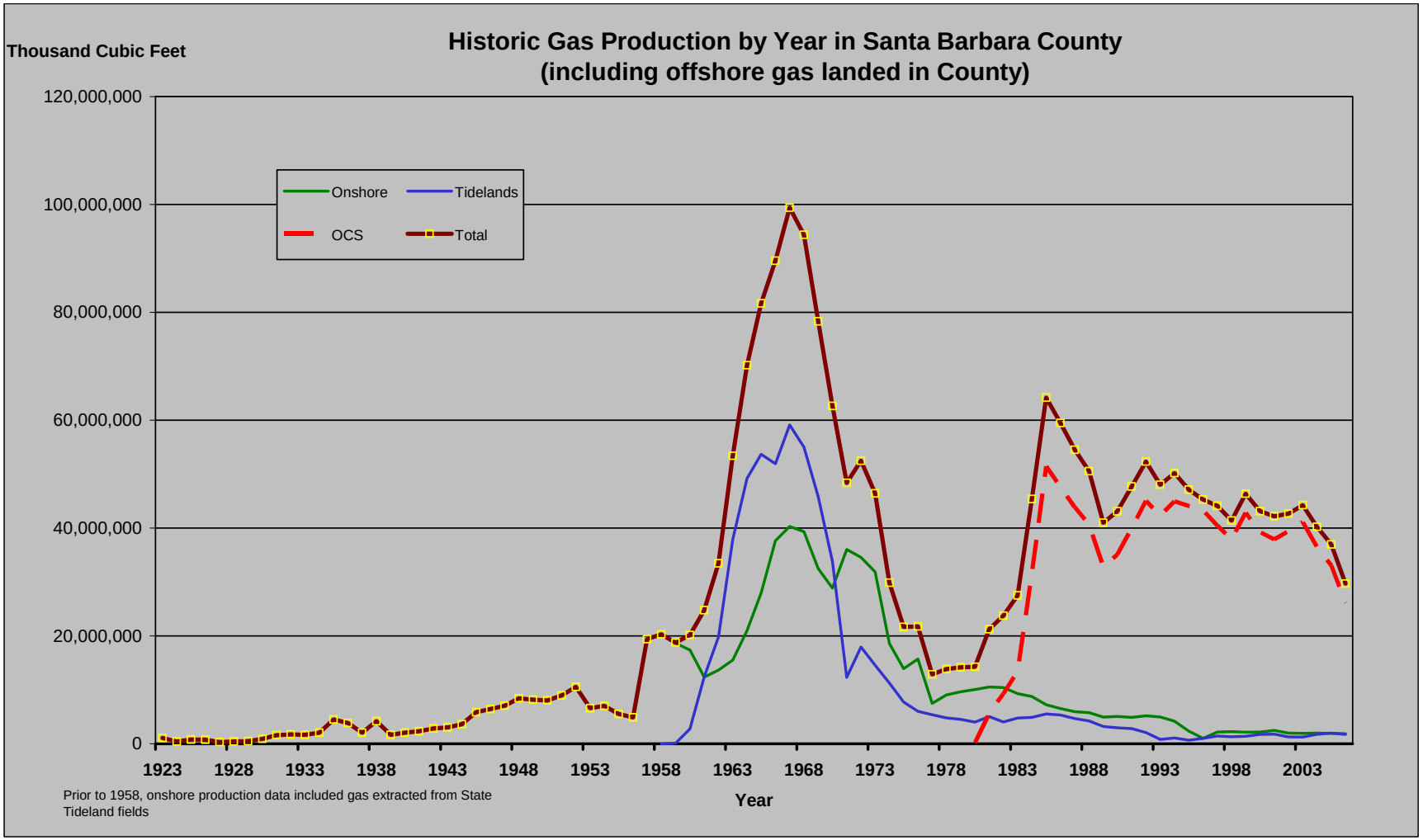

Barrels
Historic Oil Production by Year in Santa Barbara County
(including offshore oil landed in County)
80,000,000
70,000,000
60,000,000
50,000,000
40,000,000
30,000,000
20,000,000
10,000,000
0
Onshore
Tidelands
OCS
Total
1923
1928
1933
1938
1943
1948
1953
1958
1963
1968
1973
1978
1983
1988
1993
1998
2003
Year
Prior to 1958, onshore production data included oil extracted from State Tideland fields


Historic Gas Production by Year in Santa Barbara County
(including offshore gas landed in County)
Thousand Cubic Feet
120,000,000
100,000,000
80,000,000
60,000,000
40,000,000
20,000,000
0
Onshore
Tidelands
OCS
Total
1923
1928
1933
1938
1943
1948
1953
1958
1963
1968
1973
1978
1983
1988
1993
1998
2003
Year
Prior to 1958, onshore production data included gas extracted from State Tideland fields

- ***Leasing Process:*** Most of Santa Barbara County's onshore oil and gas reserves are privately owned; the same holds true for surface-access rights. The U.S. Forest Services, with help from the Bureau of Land Management, controls surface leasing within Los Padres National Forest. The U.S. Air Force controls surface leasing within Vandenberg Air Force Base, and owns about 15% of the subsurface rights on the Base.

- ***Revenue sharing.*** Most leases in the County entail payment of royalties to private owners. Payment of royalties on federal lands includes provisions for sharing such revenues with the respective states, but not adjacent local jurisdictions.

Conventional Energy Production – Offshore State Submerged and Tidelands

- ***History:*** A total of 34 tracts were leased in state waters offshore Santa Barbara County between 1929 and 1968. This number rose to 35 leases in 1996 when one existing lease was divided into two for administrative purposes. Twenty three of these leases were produced; however, only two are producing today. Besides these two producing leases offshore Ellwood, another five non-producing leases remain situated offshore Carpinteria.

  Oil companies first began producing nearshore oil and gas from the State Tidelands offshore Summerland around 1896, employing piers to support offshore drilling rigs. Total production is unknown because the state did not differentiate between onshore and offshore production in its statistic reports until 1958. Since 1958, total state tidelands production offshore Santa Barbara County through 2006 had reached 156 million barrels of oil and 579 billion cubic of natural gas.

- ***Estimated reserves:***

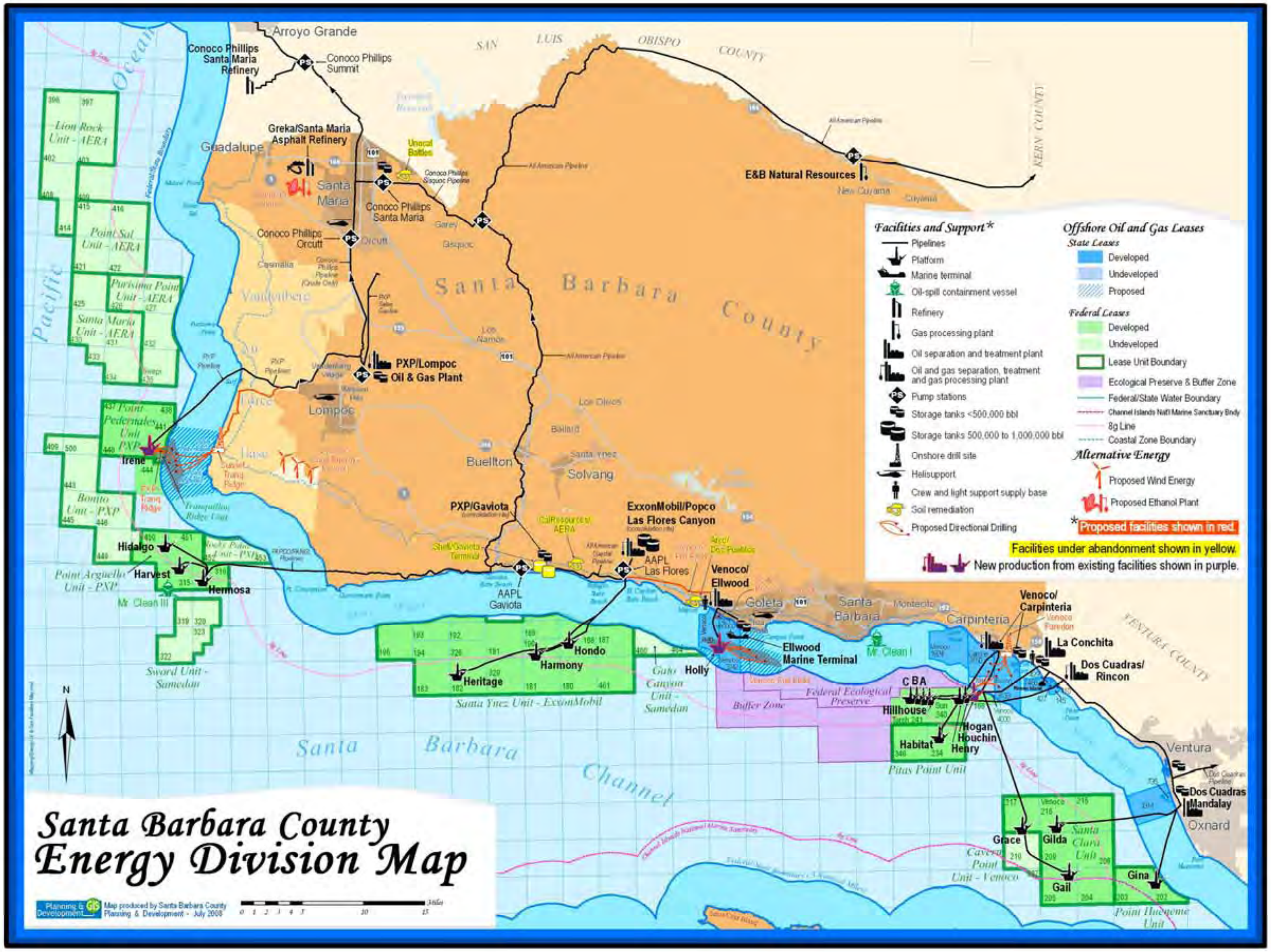
  The California State Lands Commission (CSLC) does not publish reserve estimates; however, CSLC staff provided the following reserve estimates for state submerged and tidelands offshore Santa Barbara County, not including the Channel Islands

  1. Currently producing state leases have an estimated 13.2 million barrels of oil and 13.9 billion cubic feet of natural gas in remaining reserves.

  2. Undeveloped reserves on developed leases have an estimated 187.4 million barrels of oil and 47.9 billion cubic feet of natural gas remaining.

  3. Unleased state lands, including lands that were once leased but later quitclaimed, have an estimated 761 million barrels of oil and 189 billion cubic feet of natural gas. This category includes the Tranquillion Ridge field.

- ***State Leasing Process:*** Several areas offshore California had been under a legislatively or administratively imposed moratorium on new leasing until 1994, when the state enacted the California Sanctuary Act. That act prohibits any new oil and gas leasing in State Tidelands with three exceptions, two of which are in play offshore Santa Barbara County today.


Santa Barbara County
Energy Division Map
Map produced by Santa Barbara County Planning & Development - July 2008
Facilities and Support*
Pipelines
Platform
Marine terminal
Oil-spill containment vessel
Refinery
Gas processing plant
Oil separation and treatment plant
Oil and gas separation, treatment and gas processing plant
Pump stations
Storage tanks <500,000 bbl
Storage tanks 500,000 to 1,000,000 bbl
Onshore drill site
Helisupport
Crew and light support supply base
Soil remediation
Proposed Directional Drilling
Offshore Oil and Gas Leases
State Leases
Developed
Undeveloped
Proposed
Federal Leases
Developed
Undeveloped
Lease Unit Boundary
Ecological Preserve & Buffer Zone
Federal/State Water Boundary
Channel Islands Nat'l Marine Sanctuary Bndy
8g Line
Coastal Zone Boundary
Alternative Energy
Proposed Wind Energy
Proposed Ethanol Plant
*Proposed facilities shown in red.
Facilities under abandonment shown in yellow.
New production from existing facilities shown in purple.
Santa Barbara County
San Luis Obispo County
Kern County
Ventura County
Pacific Ocean
Santa Barbara Channel
Arroyo Grande
Conoco Phillips Santa Maria Refinery
Conoco Phillips Summit
Greka/Santa Maria Asphalt Refinery
Guadalupe
Santa Maria
Conoco Phillips Santa Maria
Unocal Battles
Conoco Phillips Orcutt
Orcutt
Casmalia
Vandenberg
PXP/Lompoc Oil & Gas Plant
Lompoc
Buellton
Solvang
Los Olivos
E&B Natural Resources
New Cuyama
PXP/Gaviota
AAPL Gaviota
ExxonMobil/Popco Las Flores Canyon
AAPL Las Flores
Venoco/ Ellwood
Goleta
Santa Barbara
Carpinteria
Venoco/ Carpinteria
La Conchita
Dos Cuadras/ Rincon
Ventura
Dos Cuadras
Mandalay
Oxnard
Ellwood Marine Terminal
Mr. Clean I
Mr. Clean III
Lion Rock Unit - AERA
Point Sal Unit - AERA
Purisima Point Unit - AERA
Santa Maria Unit - AERA
Point Pedernales Unit PXP
Irene
Bonito Unit - PXP
Point Arguello Unit - PXP
Hidalgo
Harvest
Hermosa
Sword Unit - Samedan
Heritage
Harmony
Hondo
Santa Ynez Unit - ExxonMobil
Gato Canyon Unit - Samedan
Holly
Buffer Zone
Federal Ecological Preserve
C B A
Hillhouse
Habitat
Hogan
Houchin
Henry
Pitas Point Unit
Grace
Gilda
Gail
Gina
Carpinteria Point Unit - Venoco
Santa Clara Unit
Point Hueneme Unit
Miles

1. The State Lands Commission may grant a new oil/gas lease if it determines that the underlying resources are being drained by producing wells originating from adjacent federal lands and finds the lease to be in the best interests of the state (Section 6244 of the California Public Resources Code). The Tranquillon Ridge project fits within this exception.

2. The commission may grant an extension of a lease boundary into an area within the sanctuary if the existing lease is producing and the field is found to extend beyond the lease boundary (Section 6872.5 of the California Public Resources Code). No new infrastructure is allowed within the expanded lease area. The proposed South Elwood Full-Field Project may fit within this exception.

3. Any other new leasing requires three steps, as follows: (1) declaration of a severe interruption in energy supplies by the U.S. President to an extent that requires tapping into the nation's Strategic Petroleum Reserve, (2) a finding by California's Governor that the energy resources of the California Coastal Sanctuary would contribute significantly to the alleviation of that interruption, and (3) enactment of legislation to amend the act (Section 6243 of the California Public Resources Code).

- ***Revenue Sharing:*** Currently, California allocates up to 1% of its royalties to adjacent local jurisdictions, based upon shoreline miles of local parks. A larger, 20% revenue-sharing formula was enacted with Senate Bill 1187 in 1996; it applied to any new production (as defined in the bill, for which a development plan had been submitted to either the state or local jurisdiction prior to January 1, 2002. This sharing provision would apply to the proposed South Elwood Full-Field Project, if approved, and the proposed Paredon Project offshore Carpinteria, if approved. It does not apply to the Tranquillon Ridge Project currently.

Conventional Energy Production – Offshore Outer Continental Shelf (OCS)

- ***History:*** The U.S. Department of the Interior conducted ten lease sales in federal waters offshore California between 1963 and 1984, resulting in a total of 369 leases.[8] About 200 of these leases were concentrated offshore the tri-county region of Ventura, Santa Barbara, and San Luis Obispo (see figure x).[9] Among other things, the County's response to these lease sales included the following actions:

  1) Approval of several letters over a number of years requesting that offshore development be phased and leasing efforts reduced to minimize industrialization of the County's coastal areas and other environmental impacts of developing many leases simultaneously. Also, prior to adoption of the National Environmental Policy Act of 1970, the County sought public review of proposed lease sales and adequate opportunity to formally comment on these proposals.

[8] Subsequent splitting of leases increased this total to 371.
[9] Federal revenue earned from the 10 lease sales was $3.9 billion. To date, bonuses (the term given to lease sale revenues) represent the highest source of federal revenue earned from OCS oil and gas activities, compared to royalties and rents.

2) Creation of the Energy Division to develop policy recommendations, process permit applications, and ensure compliance with conditions of approved permits stemming from demand for new onshore infrastructure and industrial facilities to handle increased offshore production.
3) Adoption of several policies, regulations, and programs to minimize the impacts by addressing oil transportation modes, consolidation of processing, storage, and transportation facilities, screening and siting criteria for onshore support facilities, offsetting unavoidably significant impacts to coastal resources (the Coastal Resources Enhancement Fund has collected nearly $17 million between 1988 and 2008).
4) Efforts to change federal regulatory processes to be more responsive and cognizant of localized impacts of offshore oil development, including a successful effort to move oversight of air quality from the Minerals Management Service to the U.S. Environmental Protection Agency, with delegation of permitting and enforcement responsibility to the state air resources boards and local air pollution control districts.

By Executive Order in 1989, former President Bush cancelled proposed lease sales offshore California and Florida, and asked the National Research Council (NRC) to assess the adequacy of the available scientific and technical information to assess the potential environmental effects of oil and gas development offshore these two states. In its subsequent report, *The Adequacy of Environmental Information for Outer Continental Shelf Oil and Gas Decisions: Florida and California*, the NRC concluded that more scientific and technical information was necessary in order to make informed decisions about the environmental effects of future lease sales. The Interior Department has since undertaken several studies to address identified gaps in scientific and technical information; however, the NRC has not reviewed these studies to opine on their adequacy in addressing its previous conclusions.

Only 79 of these leases remain offshore California. Lessees relinquished 176 of these leases between 1963 and 1995, while another 116 lease expired or terminated between 1973 and 1999. Many leases were relinquished due to a long period of considerably low oil prices between 1986 and 2002. None of the relinquished or terminated leases ever produced oil or gas.

The 79 leases remaining as of the beginning of the year 2001 include four existing leases offshore Orange County, 11 offshore Ventura County, 62 offshore Santa Barbara County, and two offshore San Luis Obispo County. Of these 79 leases, 43 are either producing or situated within producing units, and 36 have never produced.

- ***Estimating Reserves:***

The following reserve estimates apply to the Southern California Planning Area of the OCS, which extends from the northern border of San Luis Obispo County south to the U.S.-Mexico border.

1. The Minerals Management Service (MMS) last published its estimated reserves underlying discovered and producing leases, of which there are 43, at 393.9 million barrels of oil and

978.9 billion cubic feet of natural gas, as of 2005.[10] Unpublished revisions to these reserve estimates as of May of 2008 are 438 million barrels of oil and 907 billion cubic feet of natural gas.[11] The increase in oil reserves reflects greater-than-anticipated production from ExxonMobil's Sacate field offshore Santa Barbara County's south coast.

2. MMS most recent estimate of technically recoverable reserves underlying 36 undeveloped leases in the offshore Santa Barbara County at 1.1 billion barrels of oil and 448 billion cubic feet of natural gas.

3. Lastly, MMS estimates technically recoverable, median-value reserves within the Southern California Planning Area at 5.74 billion barrels of oil and 10 trillion cubic feet of gas, and places its economically recoverable, media-value estimate (assuming oil valued at $80/barrel and gas at $12/thousand cubic feet) at 4.47 billion barrels and 8 trillion cubic feet of natural gas.

- ***Federal Leasing Process:***

The U.S. Department of the Interior (Interior) is charged with leasing submerged lands in offshore federal waters in accordance with the Outer Continental Shelf Lands Act (OCSLA). The OCSLA prescribes the following steps.

1. *Five Year Leasing Program:* Interior prepares an oil and gas leasing program every five years (43, USC, 1344) that identifies potential areas for leasing. Subsequent lease sales during the five years of the effective program must conform to the areas identified in the program. The current five-year leasing program covers a period from July 1, 2007 through June 30, 2012, and proposes 20 leases sales in the Gulf of Mexico (central and western areas) and offshore the states of Virginia and Alaska.

   On August 1, 2008, Interior announced that it was commencing preparation of a new program out-of-cycle, and published a Request for Comments in the Federal Register. The new program is planned to address OCS leasing nationwide for the period of mid-2010 through mid-2015. Comments on the Request for Comments are due to Interior on September 15, 2008. This action follows President Bush's recent withdrawal of the previously mentioned Executive Order that withheld leasing in certain planning areas.

2. The OCSLA authorizes Interior to grant oil and gas leases to the highest responsible, qualified bidder(s) via a competitive lease sale (see 43 USC § 1337). No lease sale may extend beyond the size or location of planned leasing identified in the current 5-Year Leasing Program.

   Adoption of the National Environmental Policy Act in 1970 subjected lease sales to environmental review and public review. Initial protective measures identified in the

[10] OCS Report MMS 2007-012, *Estimated Oil and Gas Reserves, Pacific Outer Continental Shelf, http://www.mms.gov/omm/pacific/offshore/ofrrpt.htm*

[11] Drew Mayerson, Chief, Office of Reservoir Estimates and Production, Minerals Management Service, Pacific OCS Region, phone conversation of July 23, 2008.

Environmental Impact Statement to reduce adverse environmental effects are identified as lease stipulations. These stipulations apply to all tracts leased in a particular sale throughout the life of the project. These stipulations precede more detailed environmental review and mitigation of exploration and development on individual leases. All lease sales are subject to the Consistency Review Process of the federal Coastal Zone Management Act, wherein the California Coastal Commission examines the action for consistency with the California Coastal Management Program. See http://www.mms.gov/ld/leasing.htm for more information about leasing oil and gas resources on the OCS.

- ***Revenue Sharing:*** The United States government owns both surface and subsurface rights of the nation's OCS. The government leases portions of the OCS lands to private-sector enterprise for the purpose of developing minerals in return for bonuses (initial cost of a lease), rents, and royalties. The majority of Outer Continental Shelf revenues are deposited in the Treasury for discretionary use in funding Federal programs and reducing the deficit. Additionally, certain amounts have been earmarked for specific funds such as the Land and Water Conservation Fund, the National Historic Conservation Fund, the Beaufort Sea Escrow (Section 7) Funds, and OCSLA Section 8(g) Funds. To date, the federal government has earned approximately **$177 billion** in offshore oil/gas revenues

  Actual sharing of OCS revenues with coastal states or impacted local jurisdictions has been relatively small and highly restricted as to the allowed uses of funds. The first legislation to share revenues occurred with the inclusion of the Coastal Energy Impact Program in the enactment of the Coastal Zone Management Act of 1976. This program was deactivated in 1990. The amount of revenues shared with Santa Barbara County under this program is uncertain.

  The second revenue-sharing program started with enactment of Section 8(g) to the OCSLA. These funds were shared with coastal states that had offshore leases with no restrictions on the use of the funds as shown below.

Revenue-Sharing Pursuant to the OCS Lands Act

All Years	Royalties (1986-2000)	Rents (1986-2000)	Bonuses (1986-2000)	Sec. 7 Rents	Sec. 8(g) Escrow (1986)	Sec. 8(g) Settlement (1986-2001)	Totals
Alabama	83,041,897	577,121	1,153,206		66,000,000	7,000,000	157,772,224
Alaska	153,690	3,698,221	3,359,838	3,690,074	373,900,000	134,000,000	518,801,823
California	41,066,558	808,747	9		338,000,000	289,000,000	668,875,314
Florida	0	167,258	2,216,037		30,000	0	2,413,295
Louisiana	194,097,135	5,658,526	39,842,123		572,000,000	84,000,000	895,597,784
Mississippi	2,745,962	254,659	774,979		14,000,000	2,000,000	19,775,600
Texas	168,488,076	4,078,114	21,617,455		382,000,000	134,000,000	710,183,645
Totals	489,593,318	15,242,646	68,963,647	3,690,074	1,745,930,000	650,000,000	2,973,419,685

Alaska's escrow disbursement consists of a 1986 Section 8(g) disbursement of $51,000 and a 1988 Section 7 disbursement of $322,900,000. This table was originally prepared by the Minerals Revenue Management Division of the Minerals Management Service. That agency has not yet updated its statistics to include total through 2007.

California, in turn, has shared 2.4% of its $668,875,314 with Santa Barbara County, including cities within the county, for a total of $15,902,661[12].The State applied restrictions to the use of these funds and often required matching funds.

Since 1991, Congress has twice adopted amendments to implement Coastal Impact Assistance Programs (CIAP), which allocates revenues to both coastal states and coastal counties that are earned from non-8(g) leases.[13] The one-time CIAP of 2001 allocated $1,239,203 to Santa Barbara County with restrictions on uses of these funds. A more recent CIAP will allocate revenues between 2008 and 2011, with Santa Barbara County's share estimated at $2,300,149.

Renewable Energy Production – Waste Conversion

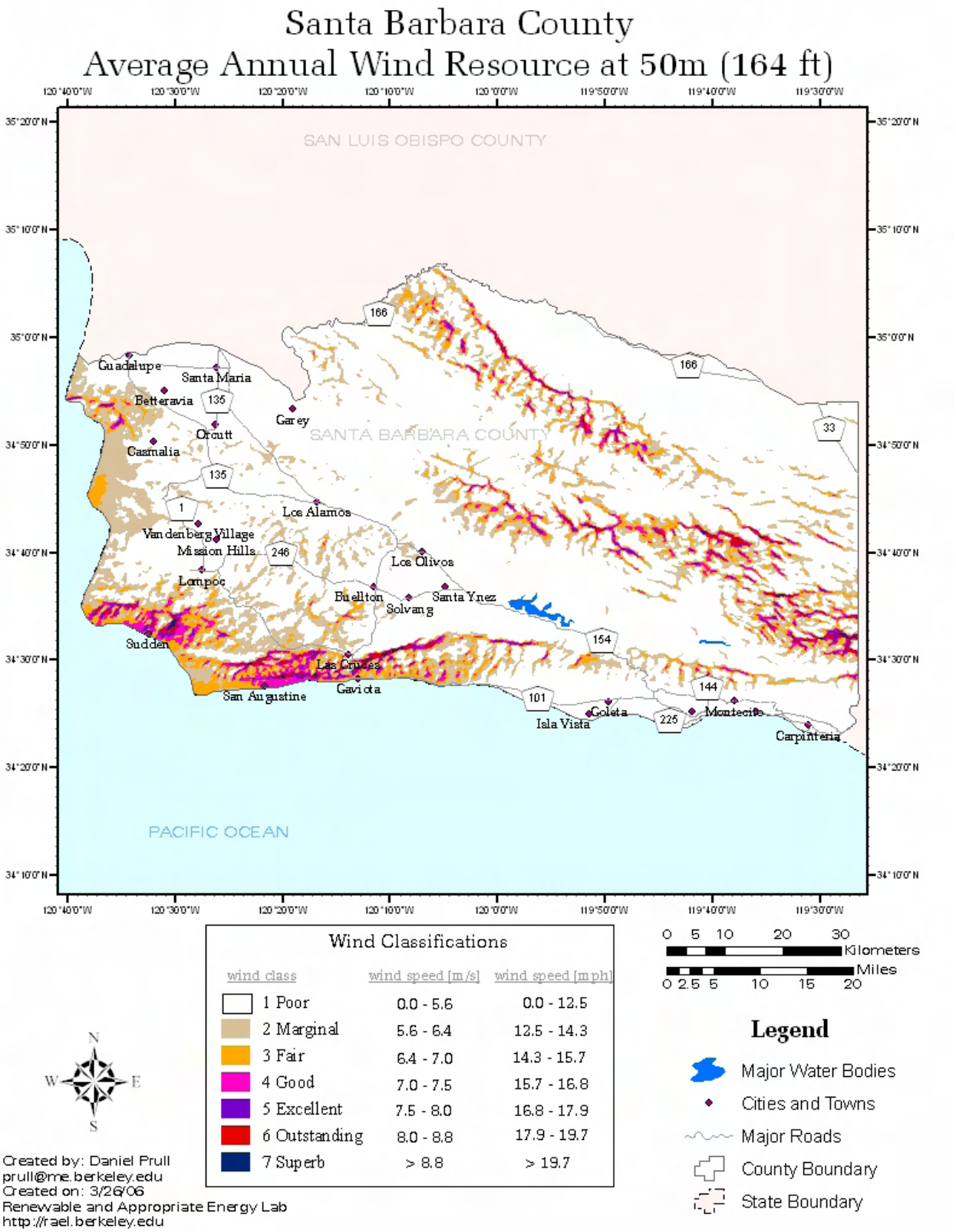
Conversion of waste to energy is the first renewable source for commercial-scale development in the County. Currently, the County has a joint capital venture with a vendor who has constructed a small waste conversion facility at the Tajiguas landfill. It collects landfill gas (methane), which is then converted to about 2.5 megawatts of electricity daily. A proposal to increase this conversion to 5-12 megawatts daily is under consideration.

Renewable Energy Production – Wind Energy

Wind energy is the second renewable source of electricity that is being proposed for commercial-scale development in Santa Barbara County. The Energy Division is processing an application Pacific Renewable Energy Generation, LLC, to install a 65-turbine wind farm approximately five miles southwest of Lompoc, on the ridgelines abutting Vandenberg Air Force Base (VAFB). This proposed project, known as the Lompoc Wind Energy Project, would provide up 97.5 megawatts (rated maximum capacity); average annual production of electricity is estimated at 285 million kilowatt hours, enough to power between 40,000 and 50,000 households. Two other potential projects may come forward, if meteorological tests prove candidate locations to have adequate wind. One would propose a site just north of the Lompoc Wind Energy site, and the other would propose a site in the Casmalia Hills.

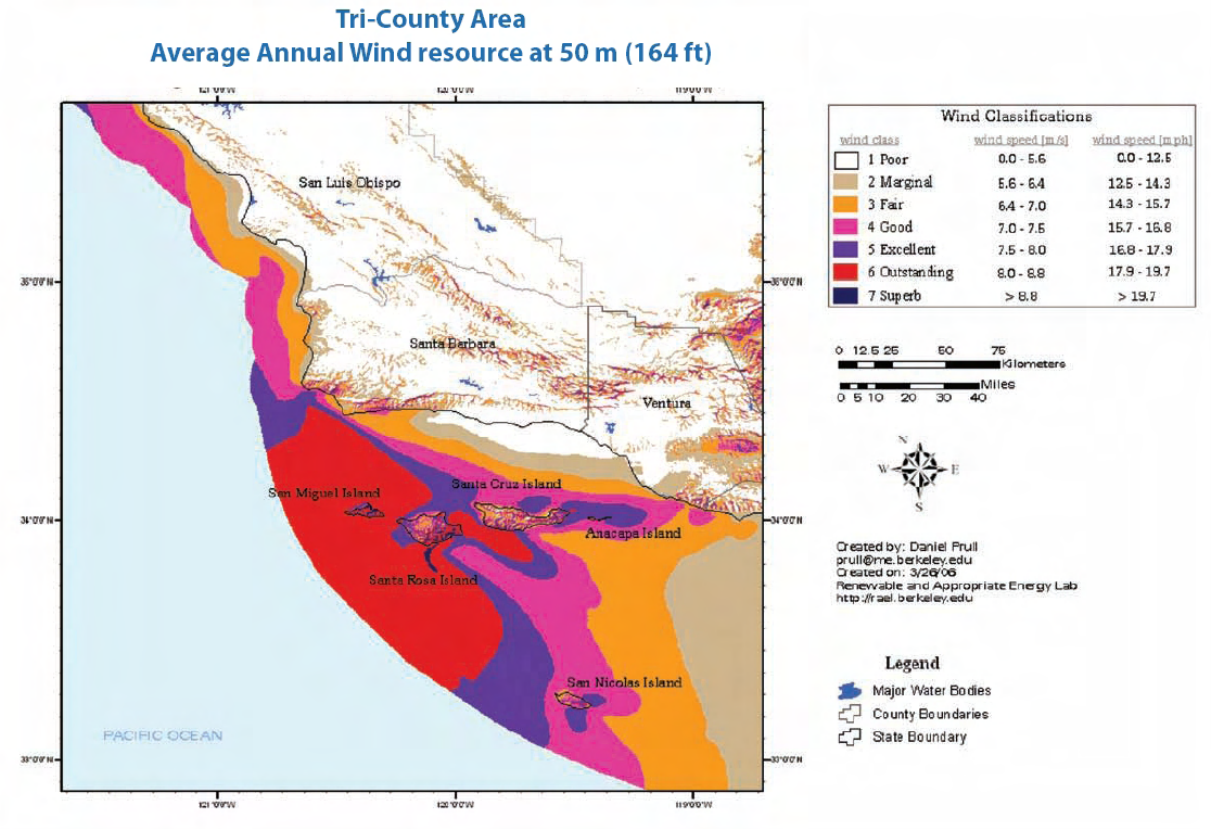
Other potential locations in the County for commercial-scale wind energy include Gaviota Coast (between Gaviota and Point Arguello), locations on and adjacent to VAFB, the ridge-crest of the coastal range east of Gaviota, remote mountains in Los Padres National Forest, and Santa Cruz Island, as illustrated on the following maps. We understand that VAFB is considering wind energy production on base, and a pilot project is currently underway with two small turbines. Potential offshore locations for commercial-scale wind production include shallow shelf offshore VAFB and areas offshore the Channel Islands, all of which would be longer-term options.

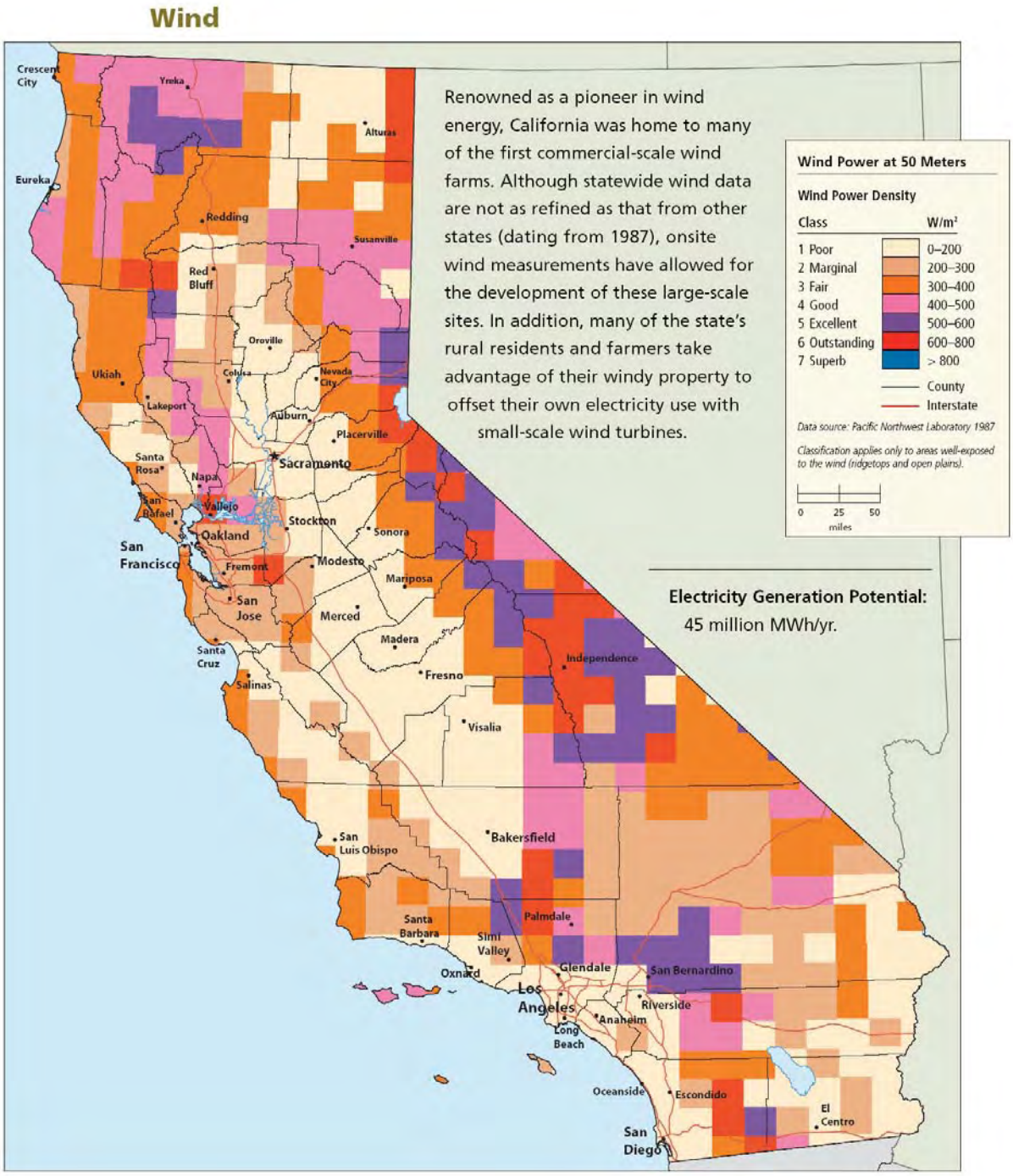
[12] SB 959 (Hart, 1985), AB 1431 (Firestone, 1996).
[13] Non-8(g) leases encompass those OCS leases not subject to the revenue-sharing provisions of Section 8(g) either because they were leased prior to 1978 or because they are located further than 3 miles from state waters.



Source: Community Environmental Council.

Fig. 3-4. Wind power potential in the Tri-Counties.





Source: California Energy Commission

Notwithstanding, Santa Barbara County's wind potential is relatively modest compared to some other locations in California, as illustrated in the following maps. Moreover, the county resides at the end of the grid, which would constrain large-scale wind energy production for export. Other constraints experienced in any location include availability of sites that minimizes aesthetic and avian impacts, while being sufficiently close to the grid to make the project economical.

There is also potential for smaller scale, non-commercial wind energy production. Such projects could be of interest to landowners with sufficient property to development them. The California Assembly is currently considering a bill (AB 2789) that would require local jurisdictions to permit small-scale projects, subject to reasonable standards.

This November, California voters will consider a initiative that would shift permitting jurisdiction of commercial-scale wind farms (50 or more megawatts) from local jurisdictions to the California Energy Commission.

Renewable Energy Production – Solar Energy

Solar energy—that is conversion of sunlight into electricity or hot water—has long been a supplemental source of non-commercial energy for some households and businesses. Individual solar systems are good for heating water in swimming pools and heating household water. Some households have employed photovoltaic systems that generate electricity for household use with excess sold off to the electric grid. Several improvements have been made to these systems since the 1970s for greater efficiencies, lower costs, better aesthetic appearance, and more adaptable design options.

There are two broad categories of commercial-scale solar technologies that convert sunlight to electricity: concentrating and non-concentrating solar power systems. Concentrating systems (CSP) convert sunlight into steam or thermal energy that, in turn, is used to generate electricity. Non-concentrating systems (PV) primarily employ photovoltaic systems capable of converting sunlight directly into electricity. Santa Barbara County ranks 12th and 14th amongst California counties for estimated CSP and PV solar potential, respectively (see following maps).

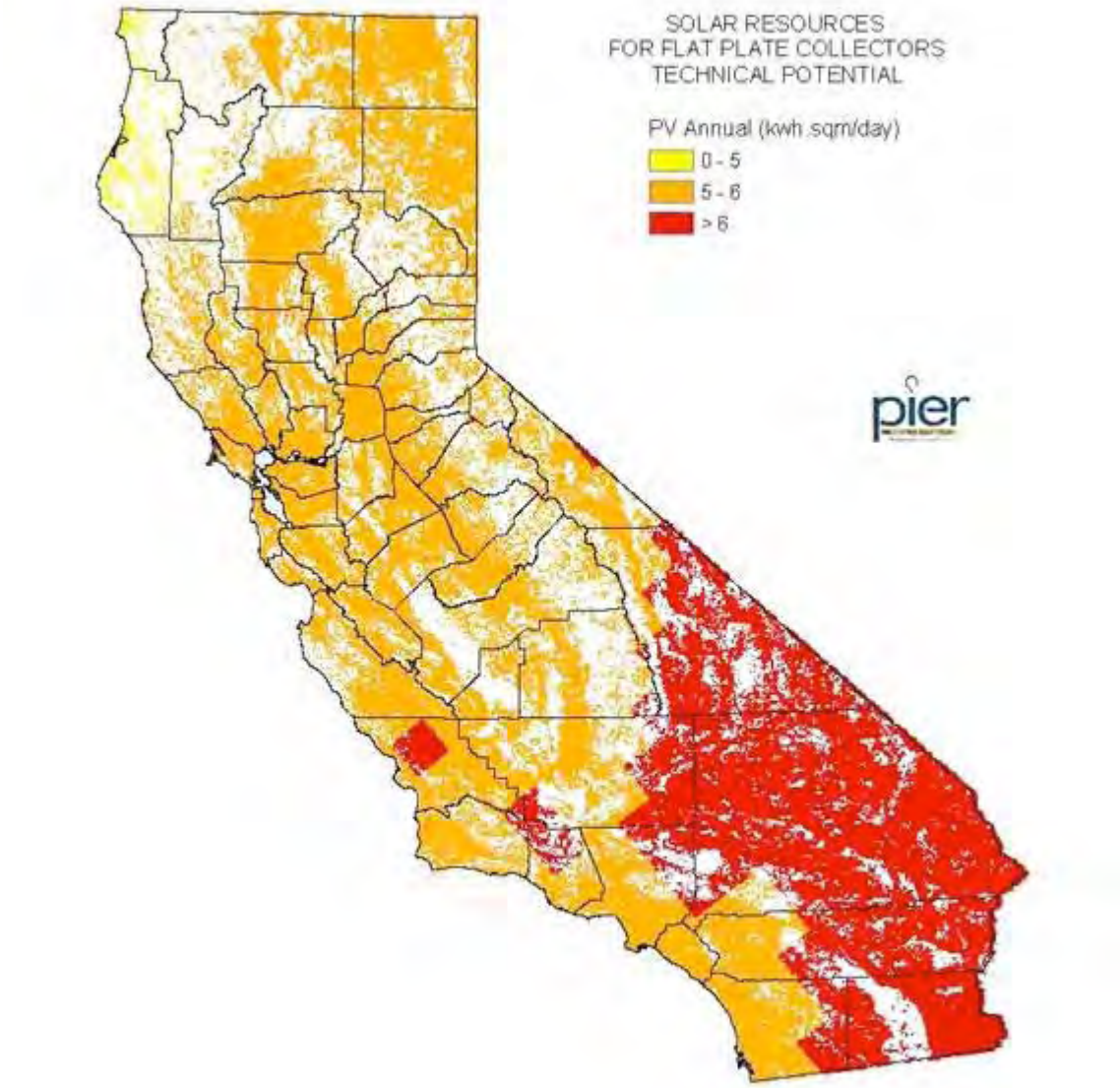
No commercial-scale solar facilities currently operate in the County. Three commercial-scale facilities have been proposed at locations in the Carrizo Plains in the southeastern portion of San Luis Obispo County, one which employs CSP technology and two that would use photovoltaic technology. One potential commercial-scale photovoltaic solar-energy developer has expressed initial interest in building a photovoltaic project in Santa Barbara County's Cuyama Valley.

Renewable Energy Production – Wave Energy

Wave energy is said to be at least 10-20 years behind wind in evolution as a commercially viable source of electricity. Ocean waters offshore Santa Barbara County's west coast have potential to produce commercial quantities of energy. Potential environmental effects to address include potential interference with marine mammals and fish, visual impacts, conflicts with other uses.

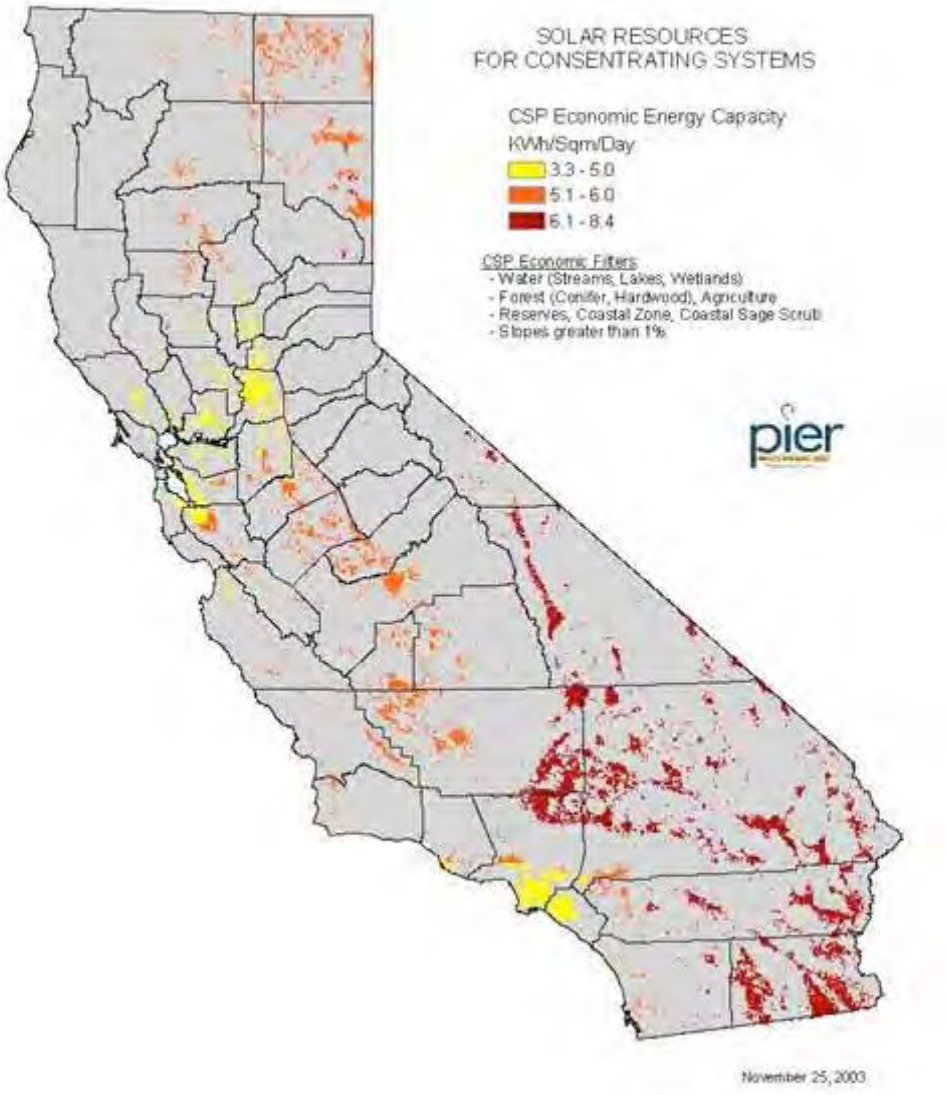
Estimated Photovoltaic Potential (Technical)

Source: California Energy Commission, *California Solar Resources, 2005*



Estimated Concentrated Solar Systems Potential (Technical)

Source: California Energy Commission, *California Solar Resources, 2005*



August 26, 2008

The Honorable Arnold Schwarzenegger
Governor, State of California
State Capitol, First Floor
Sacramento, CA 95814

Dear Governor,

As you are well aware, the policy of Santa Barbara County, in the past, has been to limit oil exploration and extraction. Currently, new facts and considerations have caused the County Board of Supervisors to review this policy, and we are forwarding these considerations to you along with our recommendation.

Since the traumatic oil spill in 1969, significant technological improvements on methods of extraction have been made which should appreciably mitigate such spills from happening in the future. Indeed, there have been no significant oil spills in offshore production in the almost forty years since that spill.

Studies have been conducted on the offshore natural seeps that conclude that oil extraction actually mitigates the natural seepage. Extraction reduces the pressure that creates seeps to occur, thereby reducing the amount of oil and gas that is introduced into the water and air.

The international oil market has placed an unfortunate burden on our economy and population. An indication that we are pursuing increased oil extraction would immediately have a depressing effect on the international price of oil, to the benefit of our country. A change in policy and the cooperation of state and local permitting considerations could increase oil supplies in the near future, reducing the economic burden of our dependence on international oil supplies.

Our county will be dealing with a severe financial shortfall next year that could well limit our ability to supply basic county services, and the State is also experiencing similar financial difficulties. An increase in oil extraction would have an important beneficial effect on our state and local budgetary crisis.

Our county is experiencing the initial effects of an increase in unemployment as the various fallouts of the national and local sectors begin to affect our economy. It would seem logical to allow the economic stimulus of employment in the oil industry to benefit our working family population.

Lastly, our county has long been concerned about the possibility of a national fuel emergency, brought on by an international crisis that would cause our federal government to preempt local and state policy for the needs of our national population and economy. If that were to occur, the County would have less authority in environmental safeguards, oversight and economic benefits. A better policy would be to allow a gradual and intelligent expansion of oil exploration and extraction, rather than to accomplish the same under emergency conditions.

For all the above reasons, the population and leadership of Santa Barbara County are suggesting that the State consider a change in policy that would allow expanded oil exploration and extraction in our county. We further suggest that, in keeping with past practices, such expansion would continue the best environmental, aesthetic and economic policies to maximize the benefits and minimize the possible problems for our community.

The Board of Supervisors