America's Energy Corridor
LOUISIANA Serving the Nation's Energy Needs

LOUISIANA DEPARTMENT OF NATURAL RESOURCES
SECRETARY SCOTT A. ANGELLE

A state agency report on the economic impacts of the network of energy facilities and energy supply of America's Wetland.
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CONTENTS

INTRODUCTION

Louisiana is in a critical fight to save its land, homes, livelihood, marine life, plant and animal habitat, and the very resources that make it uniquely---Louisiana. These resources are essential and doing away with them is not an option.

Science and engineering can be applied to this vast problem of coastal wetland restoration and sustainability in Louisiana. Years of effective work have recorded scores of successful projects constructed under the Coastal Wetlands Planning, Protection and Restoration Act (Breaux Act).

Now after thirteen years of a coastal restoration program nurtured by state and federal partners, Louisiana has moved into a new level of strategic planning for an aggressive restoration program known as the Louisiana Coastal Area plan.

In 2002, the state adopted a new name, ***America's Wetland*** and embarked on a call to protect America's Wetland. The campaign is meant to establish the values and significance of this world ecological region and show that economic and energy security are at risk to the entire nation by the loss of these vital resources.

In this report, an energy economist provides a look at the extremely important economic processes that weight in and support the need for federal funding and saving America's Wetland.

The America's Wetland: Energy Corridor to the Nation was first produced in a monthly, seven-part series for the Louisiana Department of Natural Resources' Louisiana Energy Facts publication. This report has been re-released to inform and educate the public on the importance of coastal Louisiana to our national energy security.

FACT SHEET

- America's WETLAND is the seventh largest delta on earth and is the heart of an intricate ecosystem on the verge of collapse.

- A lead gift to develop the America's WETLAND education campaign as a "World Sponsor" was provided by Shell Oil Company Foundation. Additional "National Sponsors" and "State Sponsors" have joined the campaign which began in August 2002.

- This valuable landscape extending along Louisiana's coast is disappearing at a rate of approximately 25 square miles per year, the equivalent to losing over 21,000 football fields.

- In the past 50 years, more than 1,900 square miles of coastal Louisiana have been lost; By the year 2050, another 700 square miles will be lost if nothing is done to save it.

- Home to 40% of the nation's wetlands, an alarming 80% of all coastal wetland loss in the continental United States occurs in Louisiana.

- Louisiana's coastal wetlands provide storm protection for ports that carry nearly 500 million tons of waterborne commerce annually. That accounts for 21% of all waterborne commerce in the United States each year. Five of the top fifteen largest ports in the United States are located in Louisiana.

- Louisiana's wetlands are the wintering habitat for millions of waterfowl and migratory birds whose habitat is lost as the wetlands disappear.

- More than 30% of the nation's fisheries catch comes from offshore Louisiana.

- Over 2 million people reside and work in Louisiana's coastal zone.

- Coastal Louisiana's infrastructure is of the highest national significance, with LA Highway 1recoginzed for its importance to the nation's energy security.

- The expected cost for a coastal Louisiana restoration plan is $14 billion over 30 years, as compared to the cost of a B1 Bomber at $1 billion, the Everglades at $8 billion, the Denver Airport at $10 billion, and the Boston Metro Extension at $40 billion.

- Restoring coastal Louisiana will cost upwards of $14 billion, while it is estimated that the cost of inaction will amount to more than $100 billion in infrastructure alone.

LOUISIANA ENERGY STATISTICS

2003 figures among the 50 states:
Louisiana's rankings in

PRIMARY ENERGY PRODUCTION

Including the Outer Continental Shelf

- 1st in crude oil
- 2nd in natural gas
- 2nd in total energy

PRIMARY ENERGY PRODUCTION

Excluding the Outer Continental Shelf

- 5th in natural gas
- 4th in crude oil
- 8th in total energy

REFINING AND PETROCHEMICALS

- 2nd in refining capacity
- 2nd in primary petrochemical production

ENERGY CONSUMPTION (2001)

- 3rd in industrial energy
- 2nd in per capita energy
- 3rd in natural gas
- 5th in petroleum
- 7th in total energy
- 22nd in residential energy

AMERICA'S WETLAND: ENERGY CORRIDOR TO THE NATION

Part 1: A Proud History of Service to America's Energy Needs

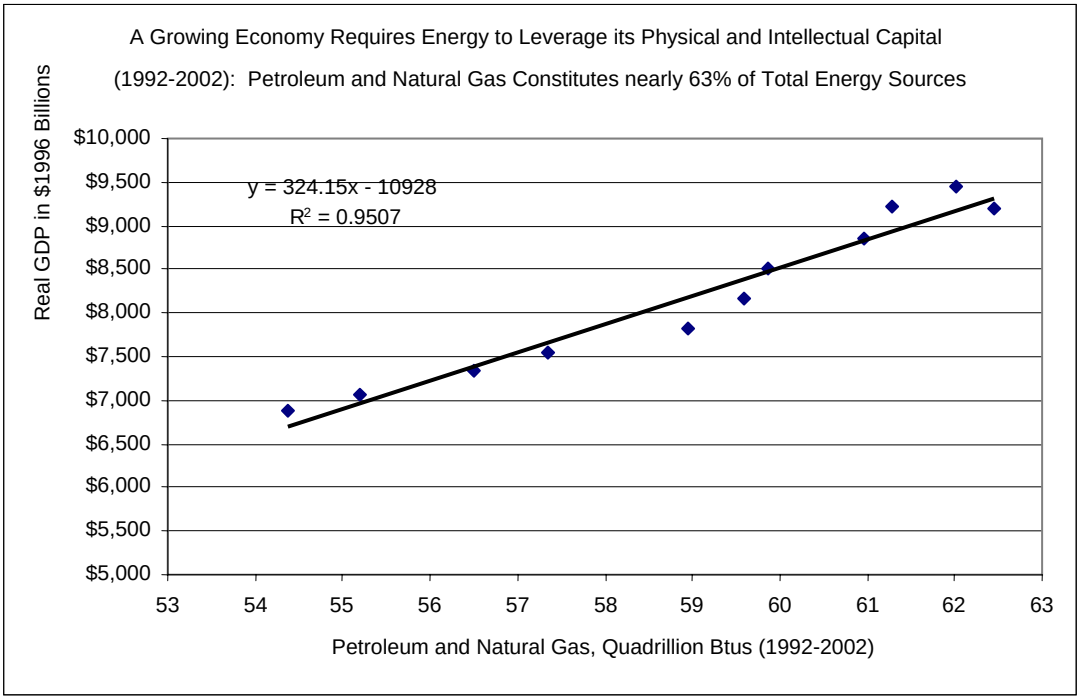
Louisiana's coastline measures just under 400 miles from the Texas border to the Mississippi line. This represents less than 6% of the contiguous lower 48 states' coastline. From this coastline up to Interstate 10, which traverses the state east to west, lies about 5,300 square miles (or 3.4 million acres) of coastal wetlands (America's Wetlands).

Within, and across, this wetlands area are:

(1) oil and natural gas drilling slips and production facilities,
(2) natural gas and crude oil pipelines, both onshore and from the state and federal offshore,
(3) the intersections of oil and natural gas intrastate and interstate pipeline networks, from both onshore and offshore, which serve as the reference for Wall Street's Commodity Futures markets such as the Henry Hub for natural gas, the St. James Louisiana Light Sweet Crude Oil, and the Mars Sour Crude Oil contracts,
(4) subsurface salt domes which store a significant portion of the nation's Strategic Petroleum Reserve (SPR),
(5) the St. James oil terminal on the Lower Mississippi River, capable of offloading ocean going oil tankers, or loading barges for further inland shipment, and the origination of Shell Oil Company's CAPLINE pipeline network transporting oil and petroleum products north into the nation's heartland,
(6) the Louisiana Offshore Oil Port (LOOP), the nation's major import terminal for foreign oil, the associated east-west LOCAP pipeline network, and onshore salt dome storage facilities,
(7) an LNG (liquefied natural gas) terminal, site of one of the nation's major import facilities for natural gas and, now,
(8) Port Fourchon, near the termination of Louisiana Highway 1 at Leeville, Louisiana, located directly on the Gulf Coast, the oil field services and supply port supporting the deepwater offshore exploration and production efforts, the only growing source of domestic crude oil production in the United States.

This compact coastal geographic area of the United States and its network of energy facilities, in the aggregate, accommodate the movement of over 26% of the nation's natural gas supply, as well as, over 26% of the nation's crude oil supply. Together with the facilities in the rest of the state, nearly 34% of the nation's natural gas supply, and over 30% of the nation's crude oil supply, moves through the state of Louisiana and is connected to nearly 50% of U. S. refining capacity. Not considering other value, this volume of crude oil and natural gas flowing through Louisiana's Energy Corridor represents, approximately, $150 billion in annual energy value, equivalent to about $50,000 per acre of wetlands (about $30,000,000 per square mile). **No other similar sized geographic area of the United States impacts the nation's aggregate economy like this vital Wetlands Energy Corridor.**

U. S. Citizens use Energy to Leverage their Physical and Intellectual Capital and to raise Living Standards. Crude Oil and Natural Gas are the primary sources of that energy.



Louisiana's Proud Energy Heritage

Col. Edwin L. Drake is widely credited with drilling the first successful oil well in the United States, near Titusville, Pennsylvania in 1859. This is acknowledged in history as the beginning of the oil industry in America.

But Louisiana has been a vital participant in this nation's proud energy history for over 130 years, spanning parts of the 19th, 20th and 21st Century.

An Historical Timeline of Louisiana's Wetlands Resources as America's Energy Corridor

Year	Event
1868	Louisiana's first well, an exploratory well near Bayou Choupique, Hackberry, LA was a dry hole.
1901	The No. 1 Jules Clement, 5 miles northeast of Jennings, completed as a producer Sept. 21, 1901.
1906	First North Louisiana well (natural gas) completed March 26, 1906 in Caddo Parish.
1906	First interstate natural gas pipeline system from Caddo Field to Marshall, TX.
1909	First processing at Baton Rouge refinery, September 1909.
1910	First interstate oil pipeline from Oklahoma through Caddo Lake area to Baton Rouge.
1910	Gulf Oil completes the first oil well over water in Caddo Lake, 1910.
1933	First well drilled on state offshore lands, 3,000 ft. from the beach near Creole, LA, in 12 ft of water.
1937	First offshore field production in 26 ft. of water, 1.5 miles off the beach, Creole, LA.
1947	First offshore well drilled out of sight of land by Kerr McGee in Ship Shoal Block 32.
1976	Shell Oil announces discovery of first deepwater field, called Cognac, in 1,025 ft. of water at Mississippi Canyon 194.
1977	DOE SPR initiative completes St. James terminal and salt dome storage facility at Bayou Choctaw.
1979	A consortium of private companies completes the Louisiana Offshore Oil Port, salt dome storage, and LOCAP pipeline.
1981	Panhandle Eastern Pipeline company completes its LNG terminal at Lake Charles, LA.
1991	State of Louisiana organizes the Louisiana Oil Spill Coordinators Office to pro-actively manage spill threats to Wetlands Resources.
1997	Port Fourchon, the nation's only port serving the deepwater oil and natural gas infrastructure, expands operationally.
2001	Thunder Horse, largest deepwater reservoir yet discovered (in 5,640 ft. of water) is announced by owners BP and Exxon.
2002	Marathon and TotalFinaElf set water depth record for natural gas pipeline tie in (7,209 ft. water depth).
2002	MMS implements Presidential Directive to fill SPR with Royalty in Kind Oil, rate reaches 100,000 BOPD in October 2002.
2002	ChevronTexaco files first LNG proposal under the Deepwater Ports Act with the USGS on December 3, 2002 (Port Pelican).

In 1868, 9 years after Col. Drake drilled his first discovery, a dry exploration well was drilled near Hackberry, LA. Instead of oil, sulfur was discovered. (Source: Morning Advocate, October 10, 1956, "Oil Progress Week Begins, History of Oil is Related")

Louisiana's first oil discovery was on September 9, 1901 near Jennings, LA, about 9 months after the discovery of the legendary Spindletop field near Beaumont, TX. (Source: Morning Advocate, October 10, 1956)

In 1906, the first gas well was completed in Caddo Parish by a group of Chicago businessmen in the synthetic gas business. (Source: *Natural Gas, The Gulf South's Symbol of Progress* by Norris Cochran McGowen, member of the Newcomen Society, President of United Gas Corporation, 1951)

Later that same year (1906), the first interstate natural gas pipeline was laid from the Caddo field to Marshall, Texas. (Source: Natural Gas, McGowen)

In 1909, oil refining started in Baton Rouge at, what is today, the site of the giant Baton Rouge refinery. (Source: Morning Advocate, October 10, 1956)

In 1910, the first interstate oil pipeline was completed from Oklahoma to Baton Rouge, running through Caddo Parish and incorporating the oil production from the Caddo field. (Source: *Louisiana Oil and Gas Facts*, Mid-Continent Oil and Gas Association, 30th Edition).

Also in 1910, Gulf Oil completed the first well drilled over water in Caddo Lake. (Source: Louisiana Department of Natural Resources, Office of Conservation web site, Centennial Slide Show, "First 100 Years")

In 1933, the first well drilled on state offshore lands was drilled at Creole, LA, approximately, 3,000 ft. off the beach in 12 ft. of water. (Source: Jim Lavin, Louisiana Department of Natural Resources, Office of Mineral Resources [OMR], Petroleum Lands)

In 1937, the first offshore field was placed on production at Creole, LA, about 1.5 miles offshore in 26 ft. of water. (Source: Jim Lavin, Louisiana Department of Natural Resources, Louisiana Department of Natural Resources, OMR)

In 1947, the first offshore well, out of sight of land, was drilled by Kerr-McGee Oil Company at Ship Shoal Block 32. (Source: Jim Lavin, Louisiana Department of Natural Resources, OMR)

In 1976, Shell Oil Company announced the first deepwater discovery at their Cognac platform in Mississippi Canyon Block 194 in 1,025 ft. of water. (Source: Minerals Management Services, MMS, Milestones, Directors' page web site)

In 1977, the Department of Energy opened its St. James docking and terminal facilities and its Bayou Choctaw Strategic Petroleum Reserve (SPR) salt dome storage site to commercial operation. (Source: Department of Energy, DOE, Fossil Fuels web site)

Two years later, in 1979, a consortium of private energy firms opened the Louisiana Offshore Oil Port (LOOP) for commercial operations, including underground salt dome storage and the LOCAP pipeline connecting with the already operational CAPLINE complex, and extending east-west to refineries within Louisiana, and across the borders to Texas and Mississippi. (LOOP web site)

In 1981, Panhandle Eastern Pipeline Company completed its Liquefied Natural Gas (LNG) Storage and Regasification facilities at Lake Charles, importing LNG from Algeria by specially constructed LNG tankers for resale to the Midwest natural gas markets. (Source: *Louisiana Contractor*

magazine, July 1980, “Liquefied Natural Gas Has A Role in the Energy Crisis and a Base in Louisiana”)

With Congressional passage of the Oil Pollution Act of 1990 (in response to the Exxon Valdez oil spill off the coast of Alaska), the Louisiana State Legislature created the Louisiana Oil Spill Coordinators Office (LOSCO) in 1991 to pro-actively manage the state’s environmental exposure to spills from the myriad pipeline, shipping, drilling, and producing locations, particularly in, and near, the environmentally sensitive coastal wetlands areas. (Source: Louisiana Oil Spill Coordinators Office brochure, Office of the Governor, State of Louisiana)

As the deepwater discoveries increased in numbers, the nation’s only port serving the exclusive needs of the deepwater oil and natural gas exploration and production sector, Port Fourchon, near Leeville and Grand Isle, Louisiana expanded its land based facilities to meet the escalating needs of deepwater operators and American consumers.

In 2001, BP and Exxon announced the largest deepwater oil discovery to date in the Gulf of Mexico, located in 5,640 ft. of water, called Thunder Horse. (Source: MMS Milestones)

In 2002, Marathon and TotalFinaElf marked another milestone for deepwater operations by successfully installing a natural gas pipeline tie in 7,209 ft. of water. (Source: MMS Milestones)

In October 2002, the Minerals Management Service (MMS) implemented a Presidential Directive to fill the Strategic Petroleum Reserve (SPR) by taking Federal Government royalties “in kind”, achieving a fill rate of 100,000 barrels oil per day (BOPD). (Source: MMS Milestones)

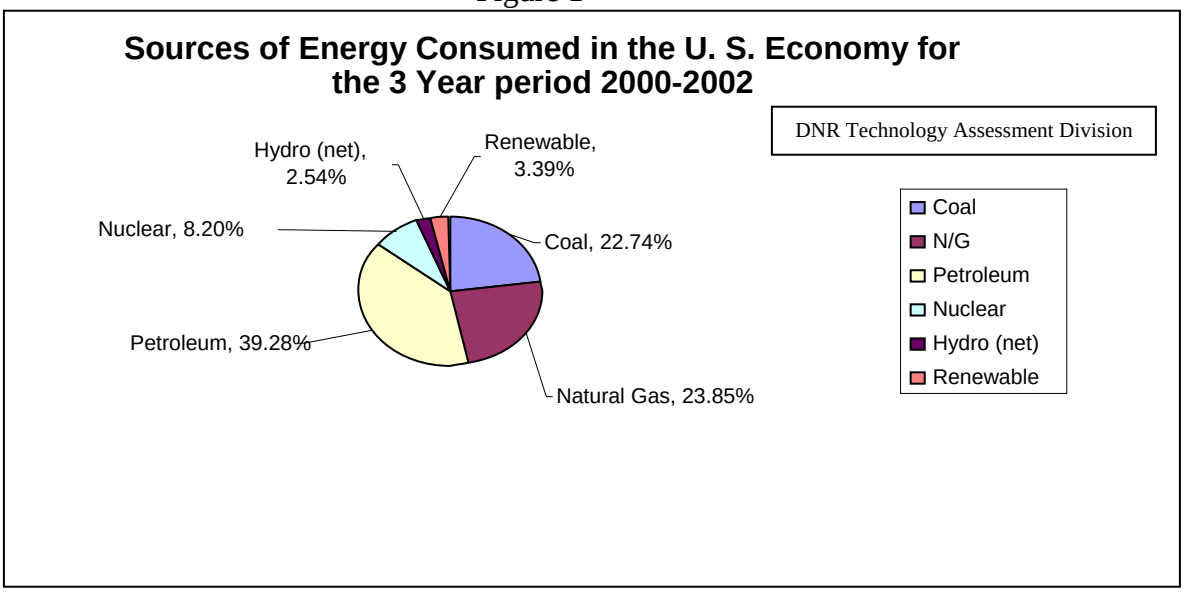
In December 2002, ChevronTexaco filed the first application for permit under the Federal Deepwater Ports Act for an LNG terminalling facility in the Gulf of Mexico, initially to be known as “Port Pelican.” (Source: MMS Milestones)

Subsequent to the Chevron filing, natural gas supply and pricing has received much public attention, largely because of the special testimony of Federal Reserve Board Chairman Alan Greenspan to Congressional panels on the critical role of natural gas in the Nation’s economy.

Part 2: The Department of Energy's (DOE) Strategic Petroleum Reserve (SPR)

The U. S. uses energy to leverage its physical and intellectual capabilities to raise living standards. Nearly 63% of that energy comes from crude oil and natural gas. These two fossil fuels, especially crude oil, have dominated the energy supply equation for the U. S. economy, not only in the past 100 years, but likely into the foreseeable future.

Figure 1



The importance of crude oil imports to the U. S. economy becomes quite clear from the American Petroleum Institute (API) data tracing historical crude oil production and imports (Figure 2). Over 56% of America's supply of crude oil now comes from foreign imports. With this magnitude of import reliance, the need for a strategic reserve of crude oil supply as a hedge against supply disruptions which could destabilize the U. S. economy is readily apparent.

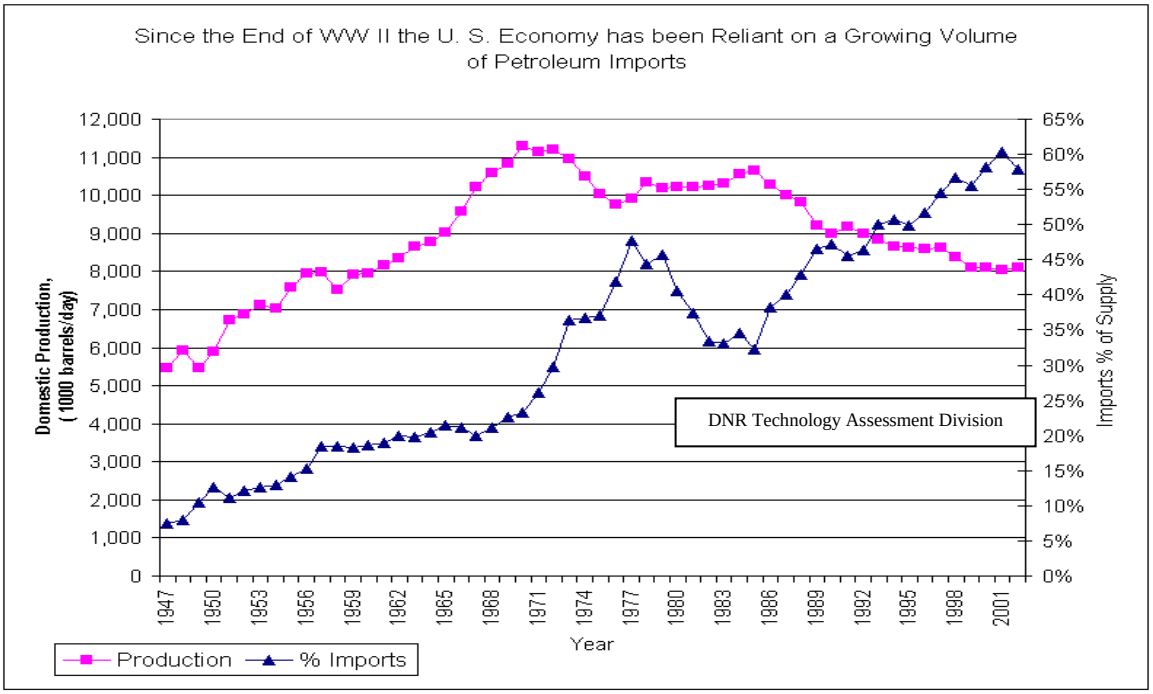
History of Strategic Oil Reserve Policy Discussions

The DOE web site, *Fossil.Energy.gov*, details the history of policy discussions within Administrations since 1944 and is the primary source for a wealth of knowledge about the SPR.

> "Secretary of the Interior Harold Ickes advocated the stockpiling of emergency crude oil in 1944. President Truman's Minerals Policy Commission proposed a strategic oil supply in 1952. President Eisenhower suggested an oil reserve after the 1956 Suez Crisis. The Cabinet Task Force on Oil Import Control recommended a similar reserve in 1970."

But the Arab oil embargo of 1973-74 triggered action. President Ford signed the Energy Policy and Conservation Act (EPCA) on December 22, 1975. This legislation declared it to be the policy of the United States to establish a reserve of up to 1 billion barrels of petroleum.

Figure 2



Louisiana's Wetlands Energy Resources

Because of the existence of a concentration of refineries and distribution points for tankers, barges, and pipelines along the Gulf of Mexico it was logical to look for storage in this geographic area. A large number of subsurface salt domes were identified across Louisiana, Texas, and Mississippi. The subsurface storage of crude oil in salt caverns offered the best security for the Strategic Petroleum Reserve (SPR), low environmental risk, and also the least costly storage mechanism, as salt dome storage is considered about one-tenth the cost of surface storage of crude oil.

Storage locations along the Gulf Coast in Louisiana and Texas were selected because they provided the most flexible means for connecting the SPR storage sites to the existing commercial pipeline and waterways network, subsequently reaching over 50% of the nation's refineries.

In April 1977, the government acquired several existing salt caverns to serve as the first storage sites. Sites were acquired at 3 locations: Bayou Choctaw, near St. James, Louisiana; West Hackberry, near Hackberry, Louisiana; and Bryan Mound, near Freeport, Texas. In 1982, a fourth complex was added, the Big Hill Storage site near Nederland, Texas. Surface facility construction at Bayou Choctaw and St. James, Louisiana began in June 1977. On July 21, 1977, the first oil was delivered to the SPR, a shipment of Saudi Light crude.

The SPR, currently, has 62 caverns for storage of the SPR crude oil reserve. These salt caverns range between 6 and 30 million barrels in capacity. A typical cavern contains 10 million barrels, is cylindrical in shape, has a diameter of about 200 feet, and a height of about 2,000 feet. The caverns are created by drilling into the salt dome, then circulating fresh water to dissolve the desired cylindrical shape.

President Bush has authorized filling the reserve up to its current capacity of 700 million barrels. The SPR is currently receiving oil and will reach that storage capacity by the 4th Quarter of calendar year 2005. Currently, there are 618.4 million barrels of crude oil in SPR inventory. The priority in managing the SPR, under the direction of the Office of Fossil Fuels, is to maintain the readiness of the oil stockpile for emergency use at the President's direction. The current maximum draw down rate is 4.35 million barrels per day.

The St. James, Louisiana Marine Terminal
Surface facilities for oil cargo handling were also needed to sustain the ongoing operation of the subsurface salt dome storage facilities. DOE constructed a marine terminal site in St. James, Louisiana, St. James Parish at mile marker 158.3 on the Mississippi River, approximately, 45 miles west of New Orleans and 30 miles southeast of Baton Rouge, Louisiana. Marine site construction began in 1978 and was completed in 1980. The facilities comprise 2 main sites: "a main terminal occupying, approximately, 105 acres of land, and 2 marine docks occupying, approximately, 48 acres of land."

"The main terminal consists of 6 surface storage tanks totaling 2,000,000 barrels of capacity, crude oil pumping stations, metering stations, and control and maintenance facilities.

Each marine dock is capable of berthing up to 123,000 Dead Weight Ton (DWT) vessels. Vessel loading or unloading is at the rate of 40,000 barrels per hour at pressures from 50-150 pounds per square inch gauge (psig). Oil Barges may also be loaded at Dock 1 at rates ranging from 3,000 barrels per hour to an 8,000 barrel per hour rate.

These surface facilities also have their own award winning, trained fire fighting crews and fire protection system. Likewise, each of the dock platforms has been designed to contain a 666-barrel oil spill before overflowing. Additional containment equipment stored at the terminal includes, approximately, 2,000 feet of containment boom, and several boats for immediate spill boom deployment and oil spill containment.

SPR: From Louisiana's Wetlands to Wall Street
The Strategic Petroleum Reserve (SPR) is now 25 years old (1978 - 2003). Current capital improvements will extend the operating life to the year 2025.

SPR staff benchmark their operation against similar international facilities. The SPR is the lowest cost operation of its kind in the world.

Cost Categories	Cost Range
Storage Development Cost	$4.50 - $5.00/barrel (bbl)
Operating Costs	$0.205/bbl
Drawdown Costs	$0.15/bbl

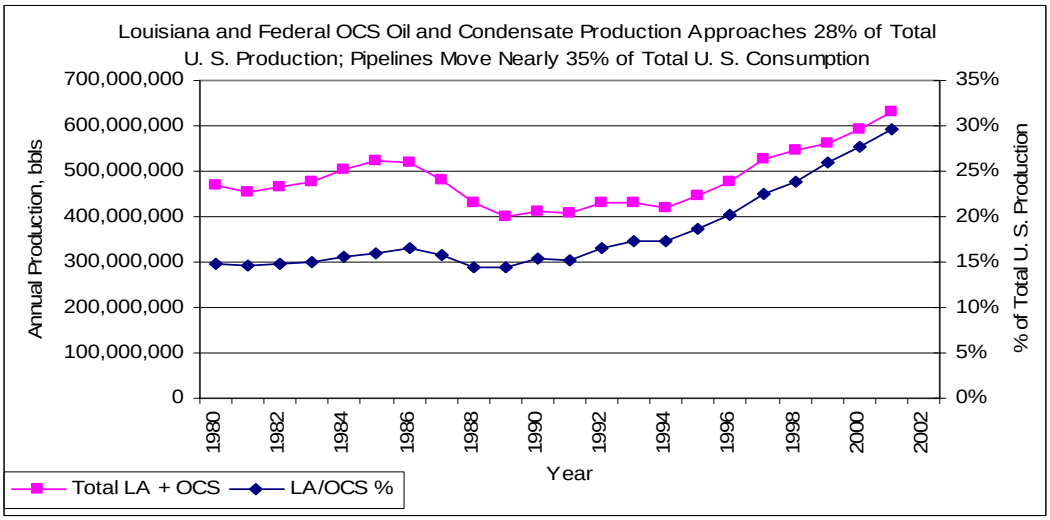
Not only does the Department of Energy (DOE) SPR staff maintain efficient economic operations, but their environmental record has earned award winning performance. Each site has an emergency response team equipped to respond should an emergency situation develop. DOE's SPR is a responsible operator in Louisiana's Wetlands. This is yet another example of the successful coexistence of oil and gas operations within a sensitive environmental setting while complying with State laws and regulations.

This successful coexistence then facilitates a crucial consumer service: a price discovery mechanism for Wall Street which further facilitates least cost delivery of energy products to America's Consumers. A most important role for the St. James terminal location, and associated pipeline intersections, is in representing the standards for two forms of Futures contracts in crude oil: (1) St. James Light Sweet Crude Oil, and (2) Mars Sour Crude Oil. Both of these are reference contracts on the New York Mercantile Exchange (NYMEX).

The current SPR inventory by type of crude oil, as of September 8, 2003, was: Sweet crude, 233.8 million barrels; Sour crude, 384.6 million barrels; Total, 618.4 million barrels.

Part 3: The Louisiana Offshore Oil Port (LOOP) and Connected Interstate Delivery Network

As the nation's reliance on imports has grown, so too has the domestic reliance on increased deepwater production, much of it flowing through the LOOP offshore facility to shore.



History of LOOP

In 1972, just as U. S. production peaked and oil import growth accelerated (see graph in Part 2 of this 7 part series), several major oil companies with growing reliance on imported oil to fuel their own refineries organized a company for the purpose of constructing and operating an oil import terminal. The new maritime construction and shipping technology of ultra large crude oil carriers (ULCC), and very large crude carriers (VLCC), was changing the economics of oil transport. LOOP's license to construct and operate the deepwater port was issued in 1977.

As with the Strategic Petroleum Reserve (SPR), the most likely location for such a terminal was along the Gulf Coast within the arc of the bulk of the nation's refining capacity in Louisiana and its east-west bordering states, Texas and Mississippi, and where access to salt dome storage would safely lower the capital and operating costs of large inventories of crude oil.

Since bringing these ULCCs and VLCCs into an onshore port was both risky, as well as politically sensitive, and offloading their cargo into smaller tankers in deeper water was inefficient and expensive, it was logical to think in terms of an offshore location away from land. These ULCC and VLCC ocean going vessels can carry as much as 4.2 million barrels of crude oil, draw an 85 foot draft, range in length up to 1,500 feet and 280 feet in width. The location selected was in the Gulf of Mexico about 18 miles south of Leeville and Grand Isle, Louisiana in 110 feet of water, and already the site of considerable drilling and production activity at Bay Marchand.

Construction began in 1978. LOOP became operational in 1981. LOOP operates under both a Federal and a State of Louisiana regulatory regime. The Coast Guard coordinates all federal agency activity relative to deepwater ports, and the Louisiana Offshore Terminal Authority (LOTA) performs the same on behalf of the State of Louisiana.

LOOP's environmental record has been exemplary. There has been no major oil spill since operations began in 1981. The LOOP Environmental Monitoring Program is conducted on a routine basis to insure there are no adverse environmental impacts resulting from the operation of the facility.

The current owners of LOOP are Ashland Inc., Marathon Ashland Pipe Line LLC, Murphy Oil Corporation (a major refiner of crude oil), Shell Pipeline Company LP and Shell Oil Company (a major international oil company), and the American unit of Royal Dutch Shell of the Hague, Netherlands.

Louisiana's Wetland Resources Ideal for LOOP Facilities

LOOP's offshore facilities comprise the Marine Terminal (two platforms; one pumping, the other control and living quarters), and three single point mooring buoys (SPM). Tankers from around the world including, but not limited to, the Middle East, West Africa, the North Sea, Columbia, South America, Mexico and Russia deliver crude oil to LOOP. These tankers tie up to the SPM buoys and are able to operate in, virtually, all weather and current conditions.

The Marine Terminal has four 7,000 horsepower (HP) pumps available for offloading tankers. The Marine terminal can accommodate 100,000 barrels per hour flow rates. Approximately, 365,000,000 barrels per year of imported oil flow through this offshore terminal. Oil flows to shore through a 48" pipeline. A booster station is located at Fourchon, the point where the 48" line comes ashore (near Leeville, Louisiana on the Gulf of Mexico). The Fourchon booster station is powered by four 6,000 HP pumps. Fourchon also has the facilities to pump diesel through a 4" line out to the Marine terminal for fuel supply.

Oil flows 25 miles inland from the Fourchon station to the Clovelly terminal through a 48" pipeline. LOOP has over 48,000,000 barrels of subsurface salt dome storage capacity at the Clovelly Dome Storage Terminal.

The subsurface storage capacity is contained in eight subsurface caverns, each with more than 5,000,000 barrels capacity. There is a 25,000,000 barrel surface brine storage reservoir at the Clovelly terminal. Brine is pumped into the caverns to displace the oil from them for transport through the connecting pipeline system to other pipelines and on to refineries. When oil is pumped into storage, brine is displaced into the brine reservoir. The brine storage reservoir covers 220 acres.

All of this flow is controlled by Oil Movement Controllers (OMCs), stationed at LOOP's control center located in Galliano, Louisiana. Like the Marine terminal, the control center is manned 24 hours per day.

LOOP also operates a 53 mile, 48" pipeline system connecting the Clovelly site to the St. James, Louisiana terminal. Through these interconnections, and four other pipeline connections onshore, LOOP handled crude oil can reach nearly 50% of the nation's refining capacity, from within Louisiana, to the Texas City area to the west, and to the Midwest and Upper Midwestern part of the United States through the 40" Capline system. LOOP can, also, access three of four SPR sites. (Note: When the SPR is included, flow reaches nearly 50% of the nation's refining capacity.)

The Deepwater Connection

Shell Oil Company has made several discoveries in the Mississippi Canyon area of the deepwater Gulf. Shell's production from Ursa, Mensa, and Mars platforms commingles with production from the Amberjack pipeline volumes to make up the MARS Blend sour crude oil ("sour" referring to sulfur content).

The MARS pipeline system takes its production from these deepwater offshore platforms to LOOP's Clovelly terminal and, subsequently, flows on to the refineries just as the imported oil is handled.

British Petroleum (BP) operates the Thunderhorse discovery in the deepwater Gulf. Thunderhorse is the largest oil discovery to date in the deepwater. Thunderhorse oil will be pumped to the LOOP Clovelly terminal then, subsequently, on to refineries as MARS and the imported oils are handled.

The NYMEX Connection

Producers of commodity type products use a Commodities Futures Market to better manage their price and volume risk as they sell and buy products with various counterparties—counterparties are the other parties to the transaction, be it buying or selling. To become a reference point for crude oil on the Futures Exchanges, such as the New York Mercantile Exchange (NYMEX), the facilities to handle a large volume of oil product of a consistent grade and to transport said product to many points, is essential. This is what the LOOP and St. James terminal locations offer. St. James is a major crude oil gathering, trading, storage, and distribution hub for, approximately, 2,000,000 barrels per day of crude oil. The St. James hub is one of the worlds premier trading hubs.

The contracts are referenced at St. James: (1) the Louisiana Light Sweet Crude Oil (LLS), and (2) MARS Blend Sour Crude Oil (MARS) is referenced at LOOP. The LLS crude is a high quality premium crude oil, low in sulfur content. The MARS Blend is a medium sour blend crude and serves as a price reference with Kuwaiti Medium, Arab Medium, and Latin American sour crude oils, linking it to the world market. Both types of crude oil flow at a rate of about 400,000 barrels per day through the St. James hub.

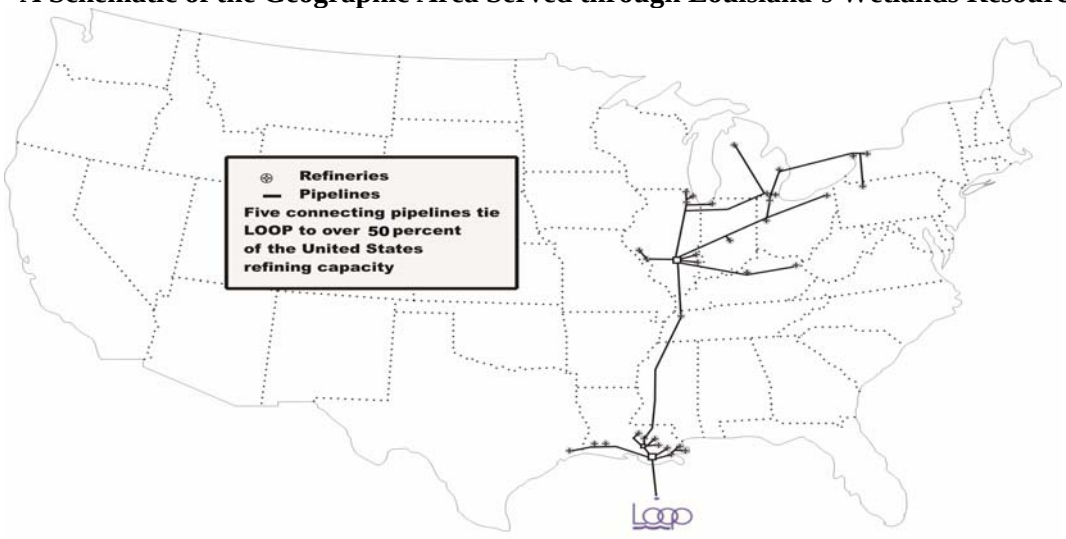
Capline

Several major pipelines transport crude oil out of Louisiana in north, east, west, northwest, and northeast directions. But of these entire pipeline delivery systems, one of the most important is the Capline system, operated by Shell Pipeline Company. Capline delivers crude oil to the important consumption areas of the Midwestern markets, serving refineries near Memphis, St. Louis, Chicago, Detroit, Toledo, Cleveland, Canton and Ashland (Kentucky). Capline has a flow capacity in excess of 1,100,000 barrels per day from the St. James terminal hub.

America's Wetlands: Energy Corridor to the Nation

Taken together, LOOP, LOCAP, SPR, Bayou Choctaw, St. James, Capline and the NYMEX financial market connections, the Louisiana Wetlands Resources play an extraordinarily prominent role in the daily life and financial stability of America's consumers, corporations, and the nation's energy security.

A Schematic of the Geographic Area Served through Louisiana's Wetlands Resources

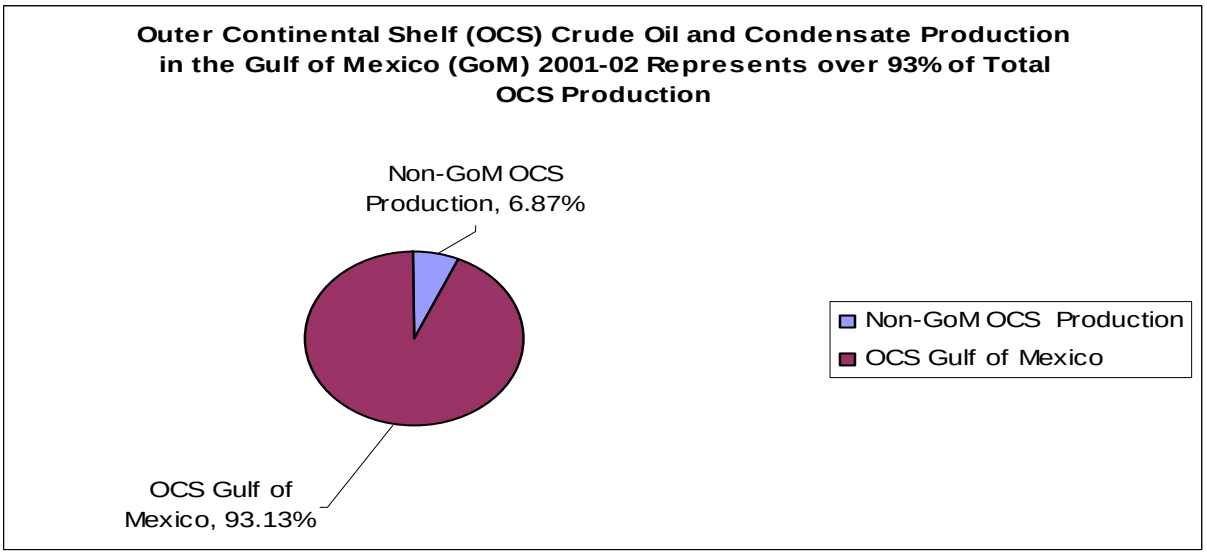


Part 4: The Louisiana Oil Spill Coordinator's Office (LOSCO): A Responsible Steward of Wetland Resources

Federal Oil Pollution Act of 1990

The year 1989 was a year filled with international events of global impact, the Exxon Valdez oil spill off the Alaskan coast was one such event. The spill triggered passage of the Federal Oil Pollution Act of 1990 (OPA) (33 USC 2701 *et seq*) which incorporated into OPA the requirement for a national contingency plan for cleanup of oil spills and discharges. The Act includes provisions relating to the responsibilities of state agencies designated as natural resources trustees.

Production of oil and condensate in the Gulf of Mexico Outer Continental Shelf (OCS), off of the Louisiana Coast, exceeds 93% of total OCS production in years 2001-2002



Louisiana Recognizes it's Environmental and Energy Challenges and Responsibilities

In working with the energy industry, Louisiana has learned that it is possible to live in harmony with the twin goals of environmental protection, and energy exploration and production.

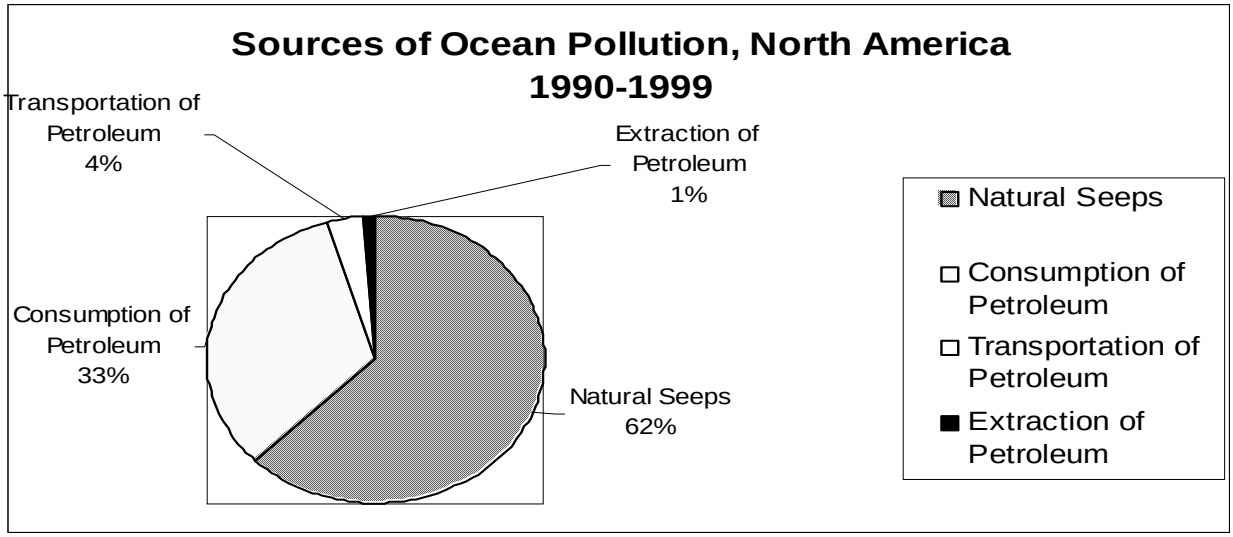
The National Academies Ocean Studies Board Report "Oil in the Seas III", Copyright 2002, noted " …improved production technology and safety training of personnel have dramatically reduced both blowouts and daily operational spills. Today, accidental spills from platforms represent about one percent of petroleum inputs in North American waters and about three percent worldwide."

Petroleum Released to the Marine Waters by Source, 1990-1999 in Thousands of Tonnes

	Best Estimates North America	%	Best Estimates Worldwide	
Natural Seeps	160	62.5%	600	47.3%
Consumption of Petroleum	84	32.8%	480	37.9%
Transportation of Petroleum	9.1	3.6%	150	11.8%
Extraction of Petroleum	3	1.2%	38	3.0%
Total	253.1		1230	

Source: National Academies Oceans Studies Board Report "Oil in the Seas III" Copyright 2002

Drilling for and production of Oil and Natural Gas are responsible for only 1% of ocean pollution in North America



Over the years, and at the direction of the legislature, Louisiana regulatory agencies responsible for oil and natural gas exploration and production (notably the Department of Natural Resources, Office of Conservation, with assistance from the state's universities) have cooperated with, and assisted, the oil and natural gas sectors in the development of techniques and best practices and in implementation of new technologies in order to achieve the significant capability of co-existing safely. Much of the know-how developed here in Louisiana has been transferred around the world as offshore oil and natural gas exploration has proliferated globally.

State Oil Spill Prevention and Response Act of 1991

The Louisiana legislature passed the Louisiana Oil Spill Prevention and Response Act of 1991 (OSPRA), La. Rev. Stat. 30:2451 *et seq.*, in response to the state's exposure to a major oil spill. The legislature found that, "This exposure, coupled with the limited adequate highway access to the coast …for rapid transportation of oil spill equipment… creates great potential for a major oil spill and its consequences in a state which has 26% of the nation's commercial fisheries, has the nation's highest marine recreational fishery catches, leads the nation in fur production and the world in alligator production, and has more over-wintering waterfowl than any other state."

The Louisiana legislature declared its intent "…to support and complement the Oil Pollution Act of 1990 (33 USC 2701 *et seq.*) and other federal laws, specifically those provisions relating to the national contingency plan for clean up of oil spills and discharges, including provisions relating to the responsibilities of state agencies designated as natural resources trustees."

One role for the national trustees "…is to restore natural resources held in public trust which have been injured by the release, or threat of release, of oil, thereby, compensating the public for the lost resources and/or services resulting from the incident…."

Protecting the Nation's Energy Corridor

With passage of OSPRA, the Louisiana legislature continued to accept accountability for its national environmental protection and energy production responsibilities by creating the Louisiana Oil Spill Coordinator's Office (LOSCO) within the Office of the Governor. LOSCO was made part of the Governor's Office so that it could serve as the single point of contact for all programs related to oil spills in Louisiana. LOSCO is funded by a two-cent per barrel tax on all oil transported to or from vessels at Louisiana marine terminals. Currently, the legislatively mandated cap on this fund is $7,000,000.

LOSCO's primary function is to ensure effective coordination and representation of the state's interests in all matters related to spill response and prevention. **LOSCO's principal goals are to: (1) minimize unauthorized discharges of oil; (2) provide for an effective spill response; (3) compensate the public for damages to the state's natural resources; and (4) assist the public through education, service, and public outreach.**

Minimize Unauthorized Discharges

Louisiana's natural resources are susceptible to oil spill injury from a variety of sources. The primary objective of LOSCO's Prevention Program is to prevent the occurrence of unauthorized discharges of oil that impact Louisiana's resources. In the past several years, a large component of LOSCO's Prevention Program has focused on identifying potential oil spill locations and assessing the risks associated with these sites. To directly enhance prevention and eliminate the threat of unauthorized discharges, LOSCO has also initiated the Abandoned Barge and Abandoned Facilities Programs.

An inventory of the abandoned vessels/barges in the state's coastal waters was finalized in 1996 and identified approximately 800 abandoned vessels/barges of which roughly 200 were characterized as posing a potential pollution problem. Several barges have been removed through a cooperative federal/state partnership and many owners have removed vessels on a voluntary basis.

A total of, approximately, 25,000 abandoned facilities, pits, sumps, or reservoirs in the Louisiana coastal area have been inventoried and evaluated. The majority of the abandoned sites consisted of wells (60%), facilities (15%), and tank batteries (8%). The remaining sites were classified as manifold headers, metering stations, docks, rigs, and pits. LOSCO established a partnership with the Louisiana Department of Natural Resources/Office of Conservation to plug abandoned wells that pose a high risk for unauthorized discharge of oil, and eliminate the threat of a potential discharge from these sites. This joint venture, funded by industry, has resulted in the plugging and abandonment of numerous wells to date.

Spill Response

LOSCO coordinates the state agencies that are involved in cleanups. A LOSCO staff member is on call 24-hours a day as the State On-Scene Coordinator (SOSC) should the need arise. The response program has one goal – to insure that the state is ready to respond quickly and efficiently to any oil spill emergency and makes every effort to minimize adverse impacts from oil spills**.** LOSCO and its partners in state government operate under a State Contingency Plan that describes how Louisiana agencies will respond during oil spills. LOSCO and the oil sector operators regularly participate in oil spill drills.

LOSCO has compiled an Environmental Baseline Inventory as the basis for the State Oil Spill Contingency Plan. The statewide inventory incorporates data such as protected areas, sensitive environments, transportation systems, potential oil spill locations, ocean currents, historical hurricane tracks, remedial action facilities, spill locations, and many other features needed for oil spill response and contingency planning.

Public Compensation

When oil spills injure natural resources such as waterways, vegetation, or wildlife, LOSCO and its Trustee partners seek compensation for the public from the responsible party. To guide their efforts they use a process called a Natural Resource Damage Assessment (NRDA).

To assist the natural resource trustees in carrying out their NRDA responsibilities for discharges or substantial threats of discharges of oil, Louisiana trustees have developed a statewide Louisiana Regional Restoration Planning Program (RRP). The goals of this statewide program are to: (1) expedite and reduce the cost of the NRDA process; (2) provide for consistency and

predictability; and (3) increase restoration of lost natural resources and services. Attainment of these goals serves to make the NRDA process, as a whole, more efficient in Louisiana.

Research

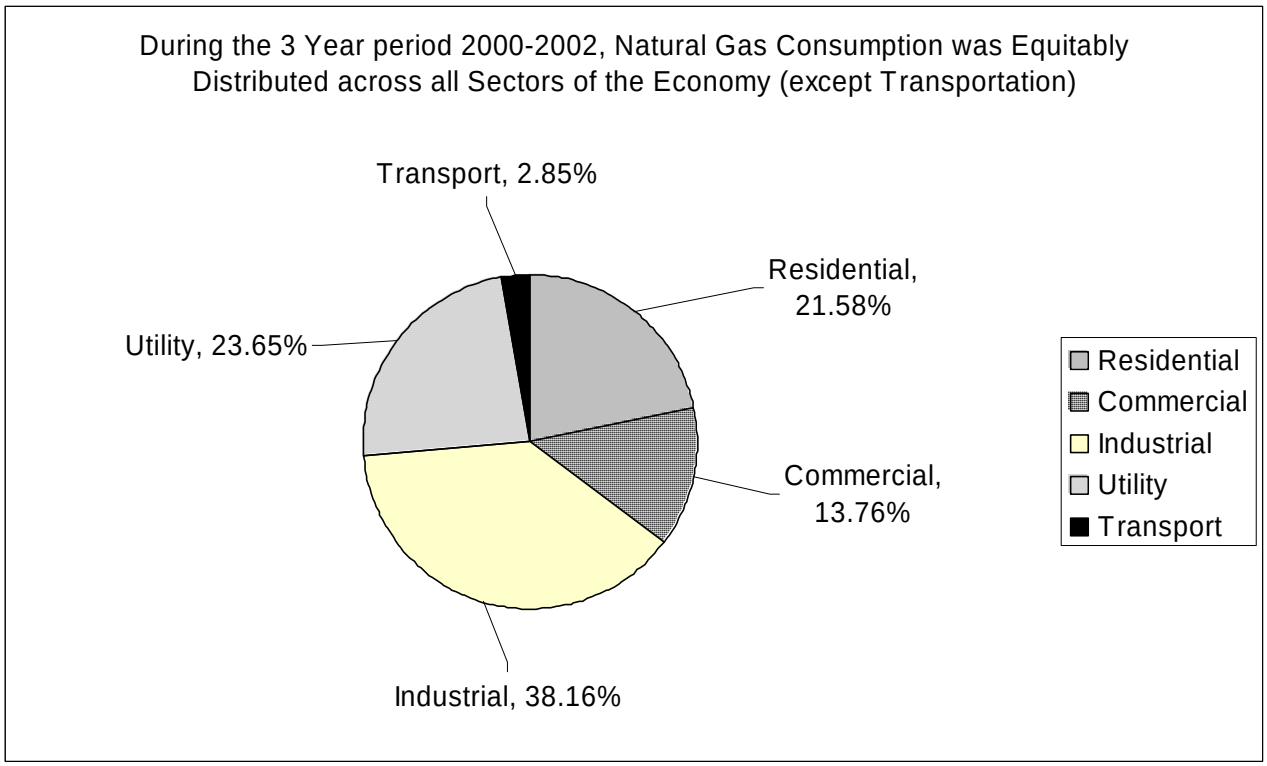
Cutting edge oil spill research helps to protect Louisiana's uplands, coast, and every habitat in between. Since 1993, the Louisiana Applied and Educational Oil Spill Research and Development Program (OSRADP), LOSCO's research office located at Louisiana State University, has funded 119 subcontracts/letter agreements in support of 85 projects – 34 were funded for two years. These projects have examined response techniques, created new teaching tools, and developed more comprehensive data about spill risks.

Through these accomplishments of LOSCO and its state partners, the Department of Natural Resources, Office of Conservation, and the state's universities, it is possible to understand why the state of Louisiana leads the world in building sound and constructive working relationships with the oil and natural gas exploration, production, transportation, refining and processing sectors, for the ultimate economic benefit of America's consumers—and has been instrumental in transferring this "best practices" safety, and environmentally responsible knowledge, know how, and technology around the globe.

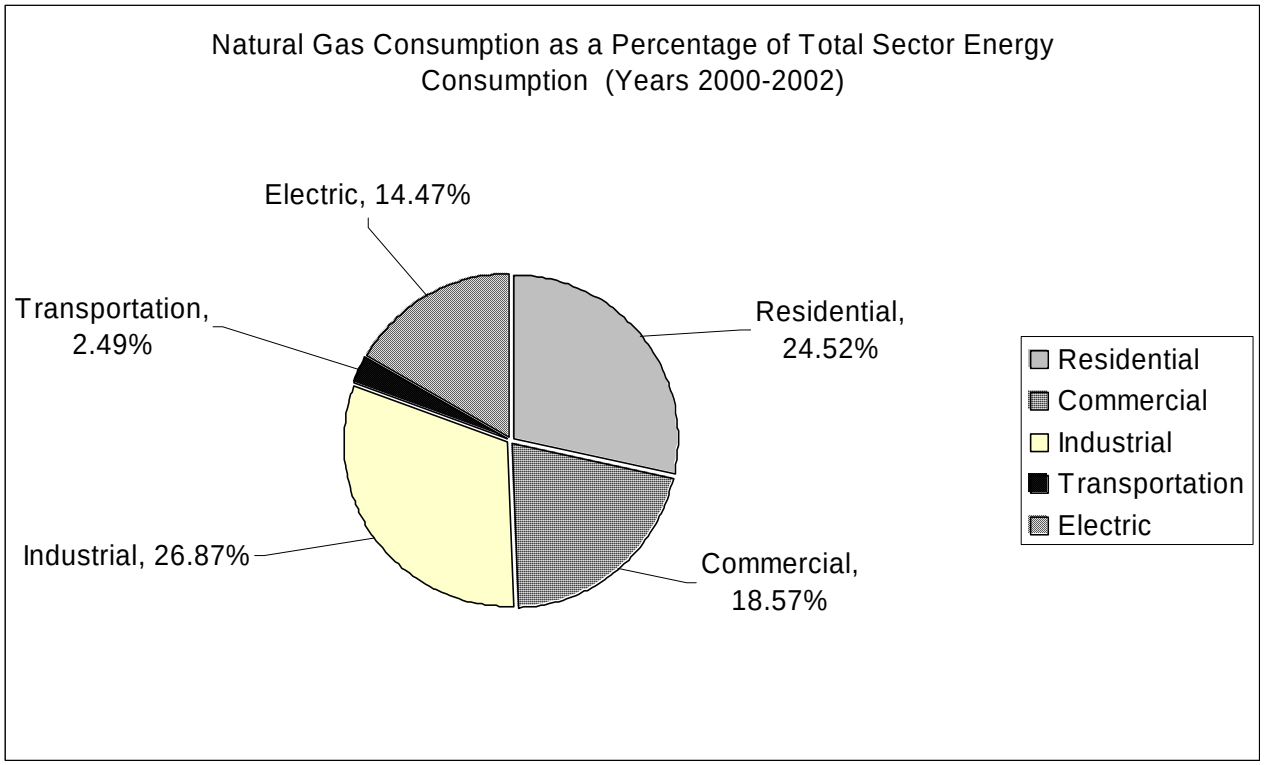
Part 5: Located in Louisiana's Wetlands Resources, the Henry Hub is America's Natural Gas Energy Portal

The Chairman of the Board of Governors of the Federal Reserve System, Dr. Alan Greenspan, recently provided high visibility testimony regarding the critical importance of a dependable supply of natural gas for the nation's economy before the Congress of the United States. Natural Gas provided close to 24% of the nation's energy sources over the 3 year period 2000-2002 (see Part 2 of this 7 part series).

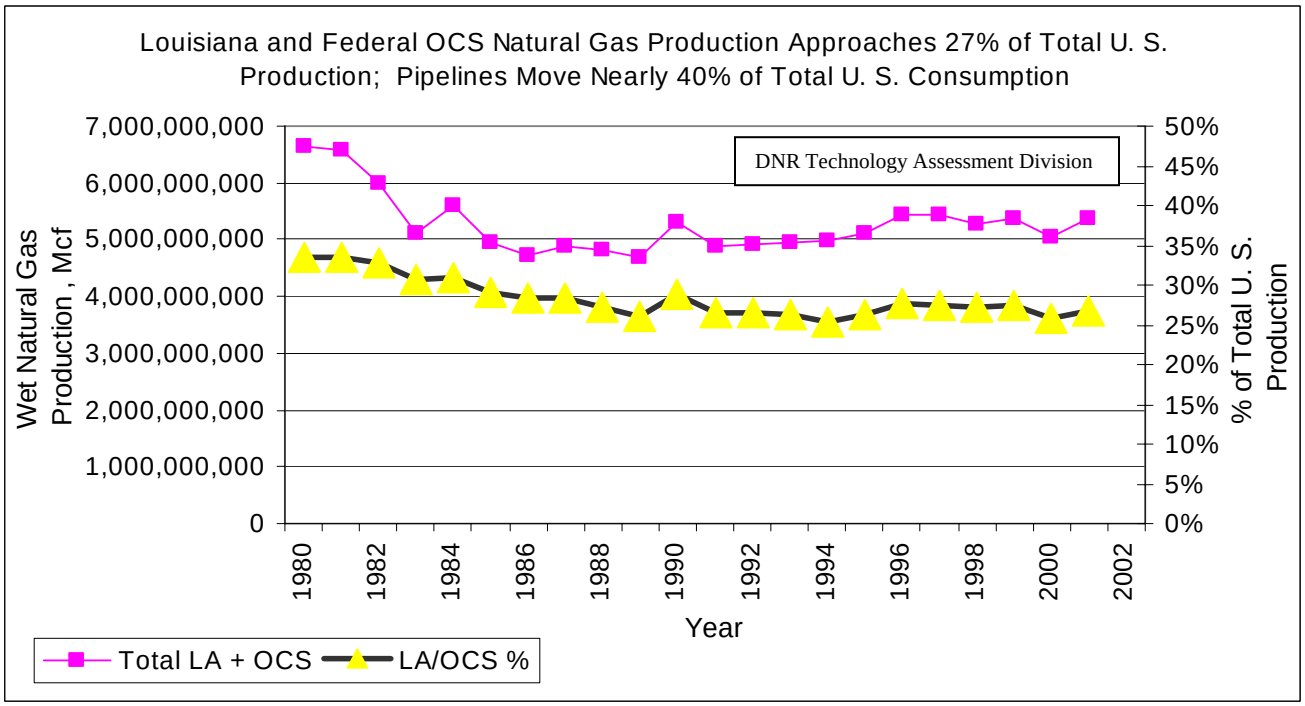
Natural Gas Is Used As A Source Of Energy In All Sectors Of The Economy



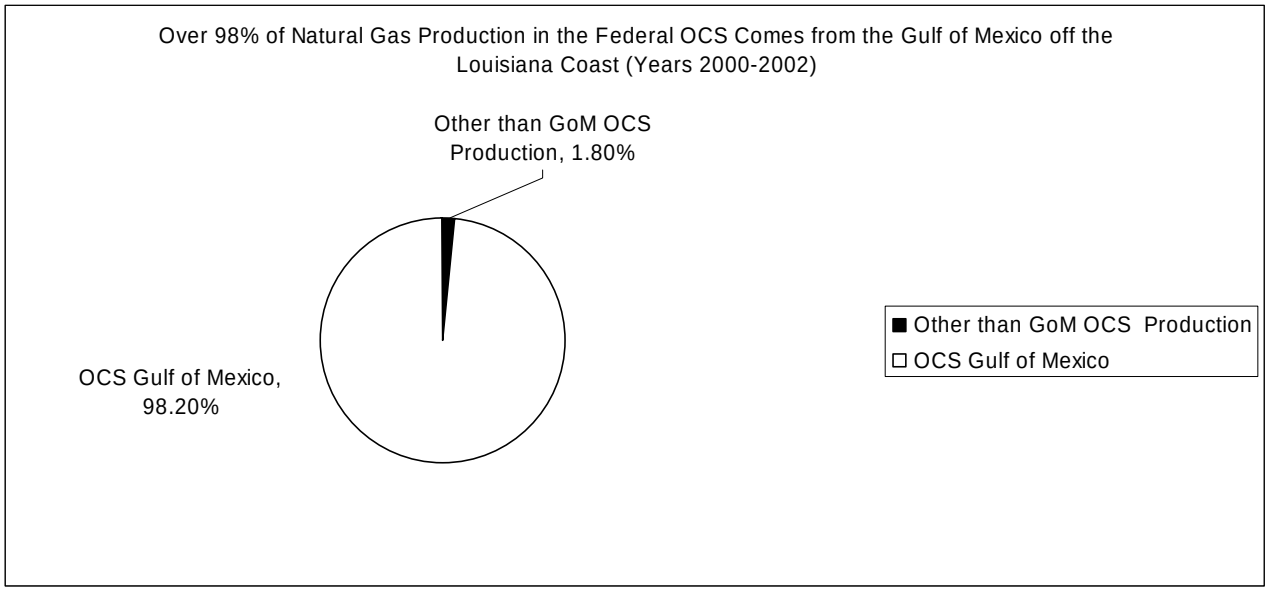
In Each Of These Sectors, Natural Gas Is A Material Source Of Energy (Except For Transportation)



America's Louisiana Wetland Resources Again Provide An Important Energy Portal For Serving The Needs Of The Nation's Citizens And Industry



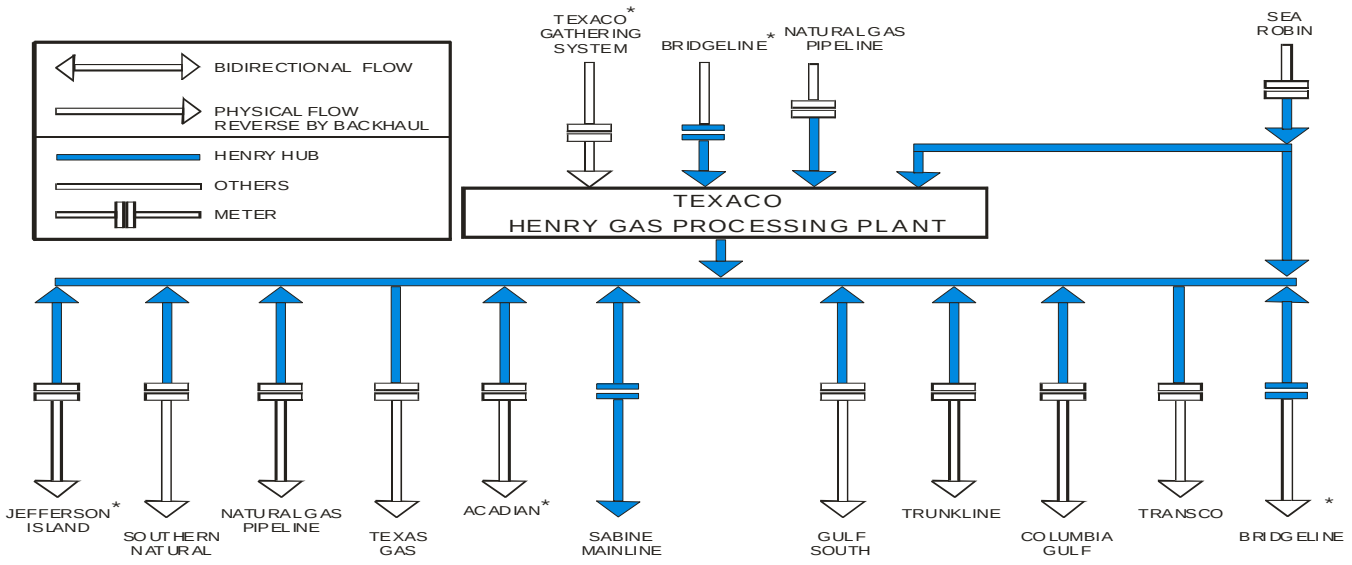
From The Federal Outer Continental Shelf (OCS) In The Gulf Of Mexico Off The Louisiana Coast, Natural Gas Flows Through The State's Wetlands To The Rest Of The United States



America's Wetlands and The Henry Hub

The Henry Hub, owned and operated by Sabine Pipeline LLC, a subsidiary of ChevronTexaco, is located near Erath, Louisiana, in Vermillion Parish. The Henry Hub is the nexus of 13 natural gas pipeline systems that draw supplies from prolific offshore and onshore gas fields in Louisiana and Federal OCS waters. These crucial supplies are then shipped to markets along the East Coast as far North as the New England area, east and west across the Gulf Coast, north into the Midwest, and even up to the Canadian border.

A Schematic Drawing of the Henry Hub



SOURCE: Sabine Pipeline Rev. 4 / 01

* - Intrastate pipeline

These 13 pipeline systems include 9 interstate and 4 intrastate lines. Flow capacity through the Henry Hub is approximately 2 billion cubic feet per day (2,000,000 Mcf/day). Completing this nexus is a natural gas processing plant for stripping liquids from the natural gas stream, and 10 billion cubic feet of salt dome cavern storage capacity operated by Bridgeline Holdings L.P., a wholly owned subsidiary of ChevronTexaco. This combination of facilities, direction of flow throughout the nation, and pure physical volume make the Henry Hub the most vigorous trading point in the North American natural gas market.

America's Wetlands Resources and the New York Mercantile Exchange (NYMEX)

Following a sustained period of years of gradual deregulation, the wellhead price of natural gas became completely deregulated as of January 1, 1993. Market prices for commodities are volatile over time, and natural gas is no different. Therefore, the NYMEX recognized the need for the service of price discovery for producers and consumers of natural gas, a product that is fungible, i.e., interchangeable for purposes of storage and shipment, has a very large number of suppliers and consumers, and experiences a price volatility as demand and supply fluctuate over time, often hourly in response to variations in weather conditions.

In April 1990 NYMEX began offering a standardized contract for trading natural gas futures. A Futures contract is a firm commitment to make or accept delivery of a specified quantity and quality of natural gas during a specific month in the future, at a price agreed upon at the time of the commitment. Traders generally offset their futures contract before contracts mature. In this way, both buyer and seller can lock in their profit/cost from the transaction (i.e., manage their financial risk exposure in a volatile price market). This is done through an Exchange of Futures in Physicals (EFP).

The futures market allows industry participants flexibility in forward planning. This flexibility was further enhanced by the introduction of a natural gas options market in October 1992. The major appeal of an options contract is that the holder of the option is afforded price protection, but still has the ability to participate in favorable market moves (i.e., upward price movements, if a producer for example, above the contracted price of the commodity). The buyer of an option contract does not have any obligation to deliver the commodity. His only up front financial exposure is the cost of the option. Should the market move against the position the only cost incurred is the cost of the option. However, should the price move in the option holders favor, the option has unlimited upside potential.

Futures vs. Options

	Futures	Options
Risk	Unlimited risk on long and short positions	Defined and limited on purchase of puts and calls; unlimited on sale
Price Protection	Establishes fixed price	Establishes floor or ceiling price protection
Margin	Required on long and short positions	Futures style margins for sellers, margin contained in cost of premium for buyers
Hedging	Long, short, spread	Multiple hedging strategies

Source: http://www.nymex.com/jsp/education/option_info.jsp

Taken together, prolific natural gas production both onshore and offshore in Louisiana, multiple pipeline systems delivering natural gas, the large natural gas processing plant for extraction of liquids, and the salt cavern storage facility connected to the site renders the Henry Hub the most viable of major natural gas delivery points in North America and, hence, plays an extraordinarily prominent role in the daily life and financial stability of America's consumers, corporations, and the nation's energy security.

Part 6: Port Fourchon: Serving the Nation's Energy Needs in the 21st Century

Few people recognize that, as expansive as Coastal Louisiana is, there are only three corridors that provide road access to the Gulf of Mexico: Highway 23 through Plaquemines Parish in Southeastern Louisiana, the Lafourche Corridor to Leeville-Grand Isle down the more central portion of the State, and another in extreme Southwest Louisiana in the Cameron-Holly Beach area.

The Early Years

In the early years of exploration and development in the State and Federal Offshore waters the towns of Venice, Empire, and Buras were household names for the oil and natural gas sector. Fields such as Main Pass, South Pass, Southwest Pass, West Bay, and East Bay were all the sites of intense drilling, and subsequently production, by such familiar companies as The California Company (now ChevronTexaco), Shell Oil, Exxon (now ExxonMobil), and Conoco (now ConocoPhillips).

The 2 lane Highway 23 through Plaquemine Parish was a nightmare for many weary travelers. Fortunately, Highway 23 has now been expanded to a classy 4 lane highway greatly facilitating transit to and from such oil field service center logistics depots as Harvey, Gretna, Marrero, Algiers, and New Orleans.

Empire Bridge, 2004 courtesy of Andrew MacInnes, GIS Director, Plaquemine Parish.

The Emergence of Port Fourchon

But as exploration and development activities extended across the Central and Western Gulf, this limited highway connectivity to the Gulf, and proximity to this nation's major offshore oil and gas fields, has resulted in unprecedented development of Port Fourchon into the premiere intermodal base for support of an increasingly significant amount of this nation's hydrocarbon supply.

Thanks to the foresight of the Louisiana Legislature and members of the Greater Lafourche Port Commission, Port Fourchon strives to continue serving America's energy needs into the 21st Century. When combining Port Fourchon's role as a domestic energy support base with its role in supporting Louisiana Offshore Oil Port (LOOP), this key energy hub is a vital component for nearly 16% - 18% of our nation's oil and gas supply coming just from foreign imports, as well as, current deepwater production in the Gulf of Mexico.

Aerial view of Port Fourchon, America's Energy Port

History of Port Fourchon

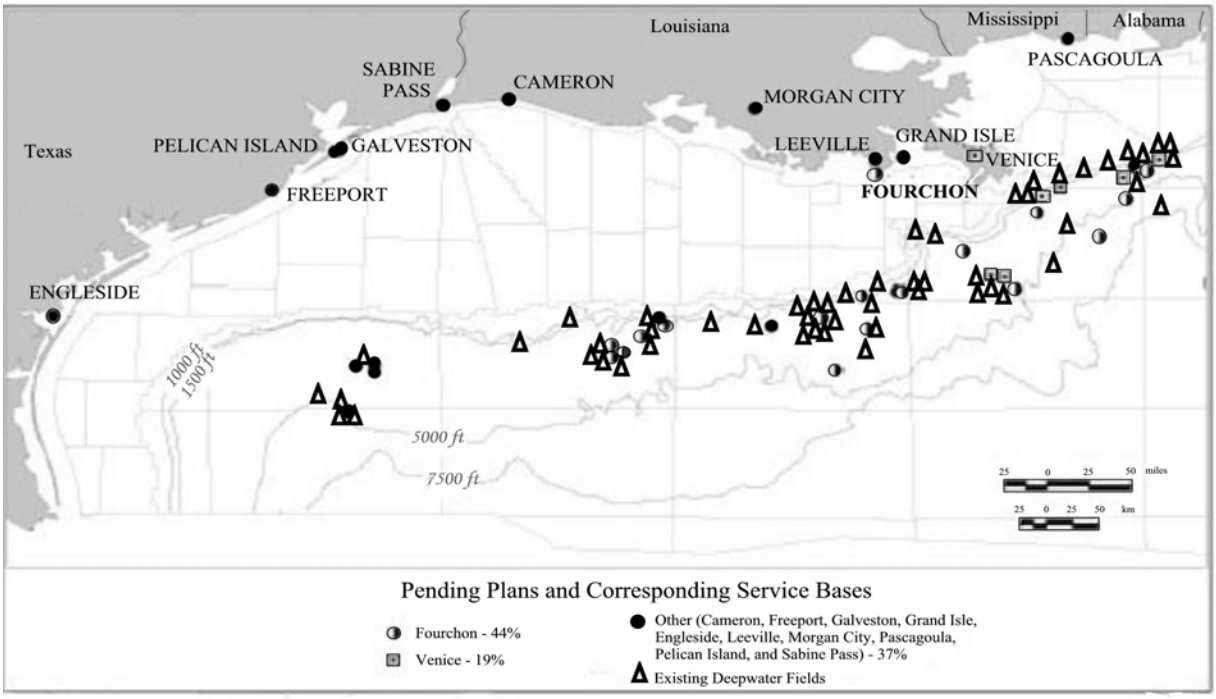
The Greater Lafourche Port Commission was created by Act 222 of the Louisiana Legislature in 1960. The Commission is an elected nine member governing body serving six year terms. Its area of jurisdiction includes the 10th Ward of Lafourche Parish. The Commission has the authority to, (1) regulate commerce and traffic, (2) maintain proper water depths, (3) provide police protection, (4) enact ordinances, (5) levy taxes, (6) issue bonds, and (7) expropriate property.

Through the years, the Commission has pursued an aggressive strategy of expansion to serve the needs of the oil and natural gas exploration, drilling, and production sectors. The expansion of Port Fourchon over the past 40 years has caused it to run out of elevated land area. The Commission built new land by elevating low lands, even open water, with dredge materials. By using this technique, over 700 acres have been developed, with an additional 1,500 acres remaining to be developed.

Located on the Gulf, Port Fourchon serves as the land base for support of LOOP and serves as the intermodal base for support of 75% of the Gulf's domestic deepwater oil and gas production.

In 1995, technological advances in exploration and production, and the passage of the Deepwater Royalty Relief Act (DWRRA) by Congress, resulted in the unleashing of a new frontier in waters greater than 1000 feet deep in the Gulf. This phenomenon has enabled this nation to identify, and

begin producing, what has proven to be the largest domestic oil and gas finds ever with reserves estimated at 71 billion barrels. These huge reserves have sparked an unprecedented surge in Federal leasing and lease holder activity. As the industry geared up to harvest these federal resources, it became evident that there was no better place geographically, economically, or environmentally to support this swell of activity than Port Fourchon, Louisiana's southernmost port.



Adapted from MMS: "Deepwater Gulf: America's Expanding Frontier" 2002

Since the passage of DWRRA, the Port has more than tripled in size and activity. Now, Port Fourchon has over 600 acres in operation and another 700 acres in development. Over 150 companies operate out of the port, and intermodal tonnage now exceeds 15 million tons. Over 1000 trucks bring cargo in and out of this key support facility each day.

In the few years since deepwater production began, it has surpassed the Outer Continental Shelf (OCS) in production. Since 1995, deepwater oil production has experienced a 500% increase, and gas a 550% increase. This surge in activity has initiated the evolution of Port Fourchon into the premiere energy intermodal support facility in the Gulf. State of the art deepwater shore base support capabilities, not present anywhere else in the world, exist at Port Fourchon. These capabilities, which allow industry to efficiently support deepwater activity, have played a key role in the success of this nation's domestic production which positively impacts the national balance of trade, growth of our Gross Domestic Product (GDP), and helps provide energy security to consumers.

The U.S Minerals Management Service (MMS) projects that there will be 10-to-21 billion barrels of oil and 40-to-60 trillion cubic feet of natural gas discovered on just the federal leases licensed for development over the next 5 years. That is enough energy to fuel every commercial and private vehicle in America for two-to-five years and heat, cool and run appliances in every home in America for two-to-three years. In order to meet these energy milestones, key energy infrastructure will have to be sustained, and even upgraded.

Leeville Bridge the "weakest link" in the supply chain to Port Fourchon.

LA 1 and Leeville after a minimal Tropical Storm.

America's Energy Corridor Highway: Louisiana Highway 1

The "weakest link" in Port Fourchon's ability to fulfill the demands placed upon it is Louisiana Highway One (LA Hwy. 1), Fourchon's only connection to land. This 17-mile stretch of LA Hwy. 1 is a barely-above-sea-level, two-lane roadway that runs through the most rapidly deteriorating estuary system in the world. It provides the ***only*** means of land access to Port Fourchon and Grand Isle, Louisiana's only inhabited barrier island. LA Hwy. 1 is the lifeline of support for the backbone of the nation's oil and gas supply. It transports a quarter of Louisiana's seafood production and is the only means of hurricane evacuation for 7,500 oilfield workers and several thousand residents. LA Hwy. 1's vulnerability to destruction is increasing daily as wetlands erode. Studies have proven that a substantial part of LA Hwy. 1 could be below sea level within 8 years. Additionally, LA Hwy. 1 will continue to deteriorate under heavy truck traffic to Port Fourchon unless new construction and upgrades are quickly implemented.

Efforts are underway to build an elevated four-lane highway from Golden Meadow to Port Fourchon. Environmental clearances have been obtained and engineering is underway, but Federal funding has not been committed. This deteriorating highway system has been used as a glaring example of the huge inequity that exists in offshore revenue sharing between the federal government and the states supporting offshore development.

Currently, the Federal Government shares 50% of its onshore mineral revenues with the state within which the production occurs. Revenue from production beyond 3 miles offshore from a state's boundary is not shared with the state. Without a similar mechanism in place to share offshore revenues with the adjacent states, the ability of key coastal energy infrastructure to sustain the level of support activity being demanded of it is threatened.

In 2001, the federal government collected over $5 Billion in oil and gas revenues from offshore Louisiana and shared less than one-half of one-percent with Louisiana. This crucial highway system has been acknowledged as "vital" by the Department of Interior, Minerals Management Service. LA Hwy. 1, now recognized as a critical path in "America's Energy Corridor", has been designated by Congress as one of only 44 High Priority Corridors in the nation.

Port Fourchon: Truly the Nexus of America's Energy Corridor

It took Federal Reserve Board Chairman, Alan Greenspan, to command the attention of our nation's political leadership on the critical importance of an adequate natural gas deliverability capacity for a vibrant economy. Two (2) new sources of natural gas will now command priority consideration: (1) imported Liquefied Natural Gas (LNG); and (2) deep and ultra deep drilling to

depths of up to 35,000 feet sub-sea (or below the seabed as contrasted with deepwater drilling) in the shallower waters of the OCS in the Gulf of Mexico.

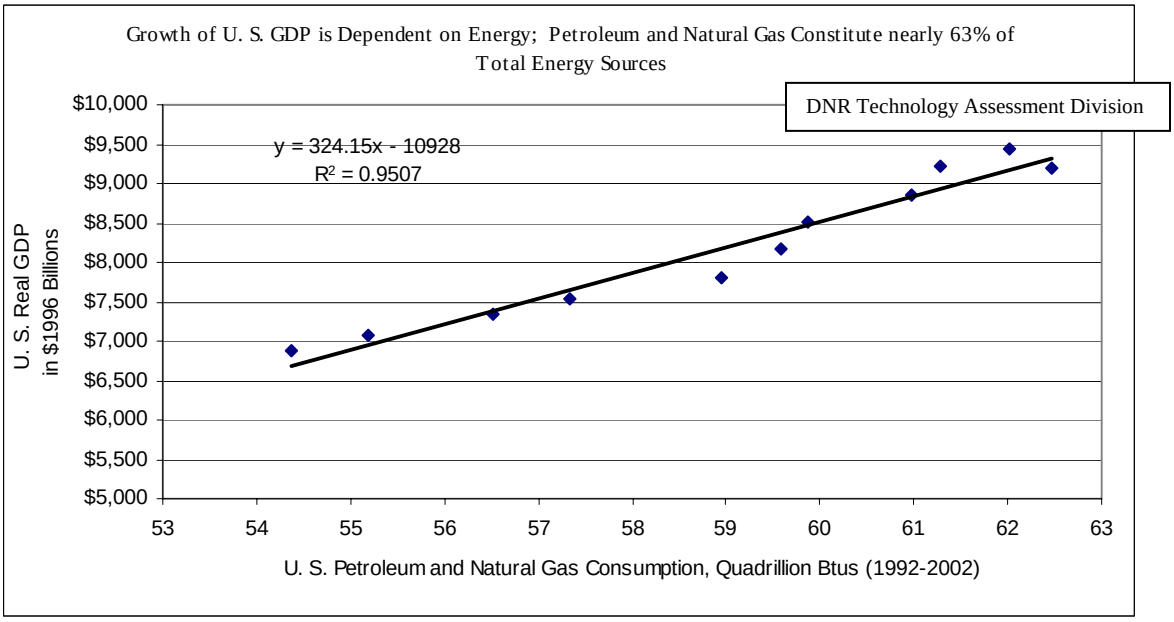
In late 2002, ChevronTexaco filed an application with the Coast Guard for an offshore LNG (Liquefied Natural Gas) terminal to be known as "Port Pelican." Since this announcement, other firms have come forward with announcements for preliminary engineering studies on the location of LNG terminals in the Gulf of Mexico, namely Shell and Freeport McMoran. Port Fourchon's central location will, again, figure prominently in servicing these LNG terminals and ultra deep drilling on the OCS, and the critical role each will play in meeting the Nation's energy needs in the 21st Century.

Challenges for America's Wetlands Port

It is obvious that Port Fourchon and LA Hwy. 1 play a critical role in supplying this nation with a substantial share of its total energy needs. It is projected that Port Fourchon will continue to play an increasingly significant role in supplying the fuel that runs this country for decades into the future. At the same time, it is very clear that the demands placed upon this coastal port strain the existing highway infrastructure, and Mother Nature further exacerbates the problem with rising waters and disappearing wetlands. **There is much at stake for this entire nation if Coastal Louisiana succumbs to the forces of nature.** If we are to meet the challenges of the 21st Century in providing an adequate level of national energy security, and ensure our ability to fuel this country for generations to come, this nation will have to develop a process by which states adjacent to offshore production can sustain and upgrade critical energy infrastructure.

Part 7: Closing: The Financial Well-Being of America's Consumers

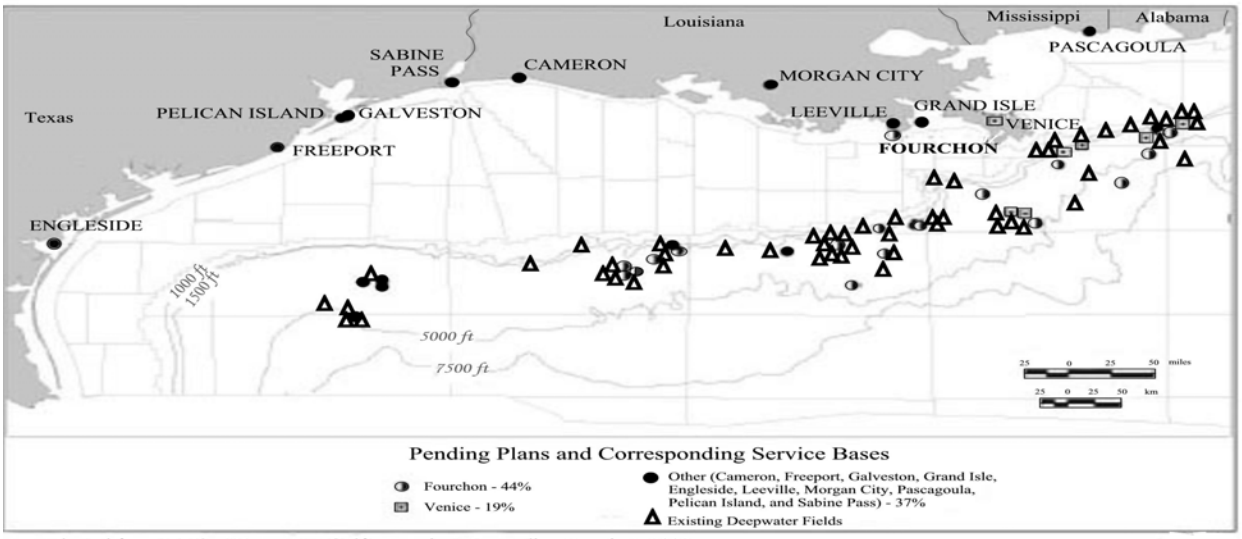
Energy is the lifeblood of the American economy, and America's Wetlands are the main artery. America's economic growth, and, therefore, the economic well-being of America's consumers, depends on access to a stable, secure, and dependable source of energy. America's Wetlands provide such access for nearly 34% of the U. S. natural gas supply and nearly 29% of the U. S. oil supply. Think of the catastrophic economic consequences to the American consumer, and the nation's Gross Domestic Product (GDP), should this volume of energy supply be interrupted!



The Louisiana legislature has worked diligently to ensure the adequacy of the Wetlands oil and natural gas infrastructure. One key element of that infrastructure is Port Fourchon. Port Fourchon services domestic offshore exploration and production on both the Outer Continental Shelf (OCS), in the Deepwater Gulf, and also, the Louisiana Offshore Oil Port (LOOP), the nation's only deepwater oil import terminal.

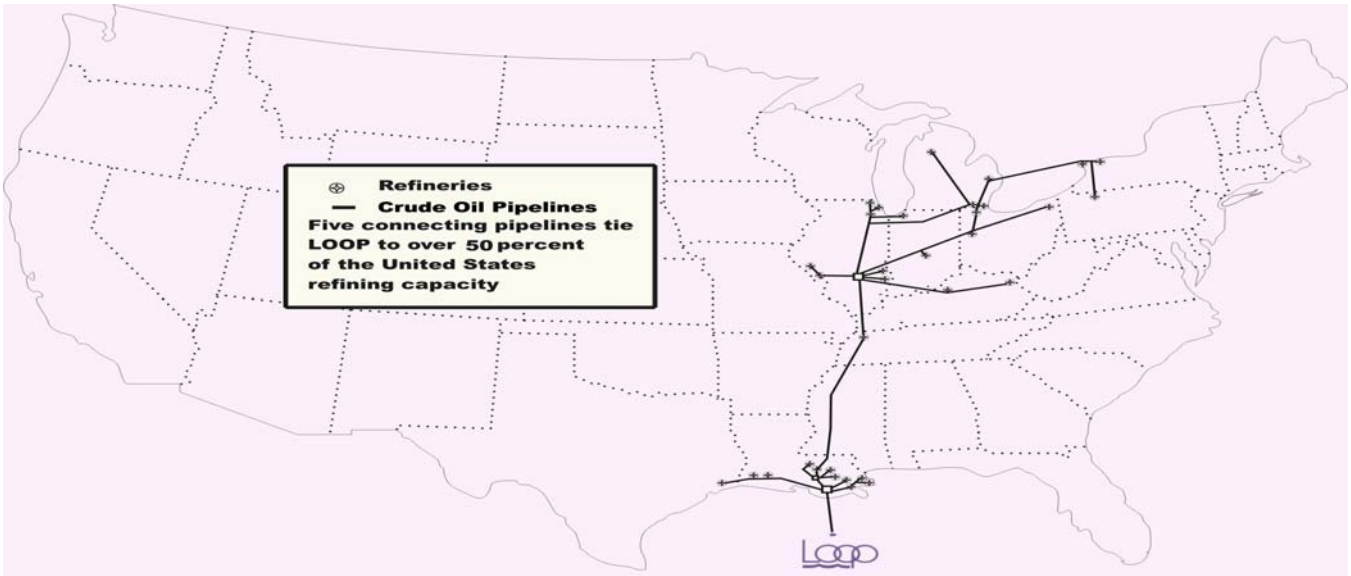
Aerial view of Port Fourchon, America's Energy Port

Louisiana Highway 1 is the only land access to Port Fourchon. LA Hwy. 1, now recognized as a critical path in "America's Energy Corridor," has been designated by Congress as one of only 44 High Priority Corridors in the nation. LA Hwy. 1 is in desperate need of Federal funds for construction of a 17 mile stretch of elevated highway over a vulnerable length of Wetlands to sustain service at America's Energy Port.



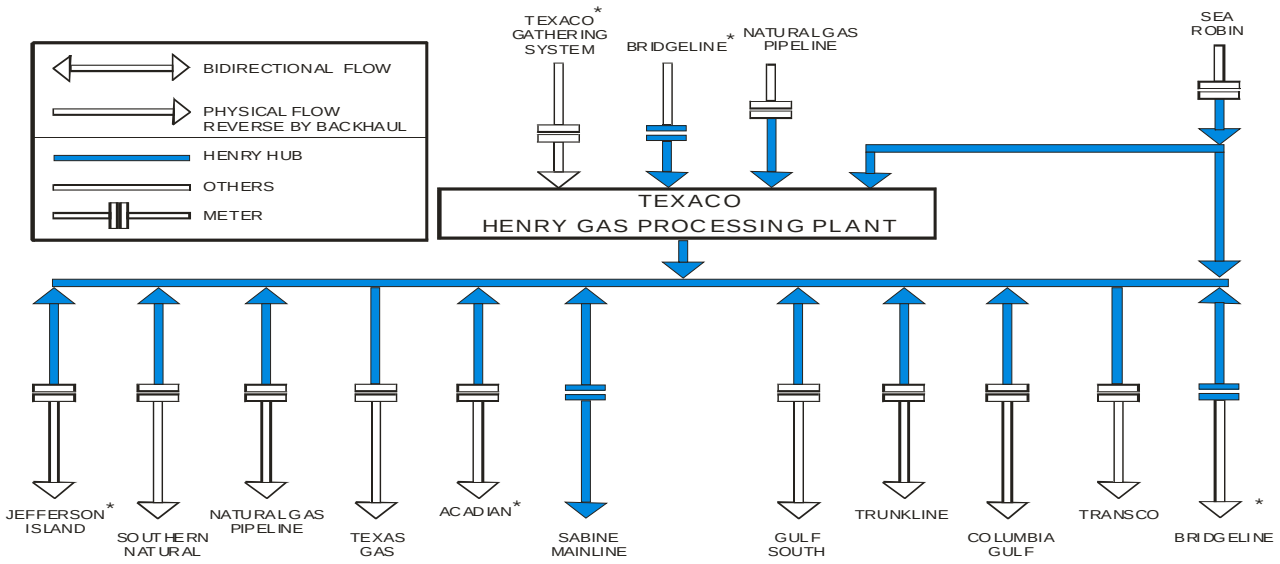
Adapted from MMS: "Deepwater Gulf: America's Expanding Frontier" 2002

The crude oil that flows through the offshore pipelines and LOOP terminal ends up as gasoline in the tanks of consumer automobiles, as home heating oil products, as jet fuel, and as power plant fuel for electric power generation throughout the South, Midwest and Eastern United States.



America's Wetlands are the Petroleum Corridor to the Nation

A large portion of the natural gas that flows from Louisiana fields and the Federal Gulf of Mexico to homes, malls, and power plants around the nation, flows through the vital Henry Hub at Erath, Louisiana. ChevronTexaco's proposed LNG import terminal in the Gulf of Mexico will flow through the Henry Hub.



SOURCE: Sabine Pipeline Rev. 4 / 01

* - Intrastate pipeline

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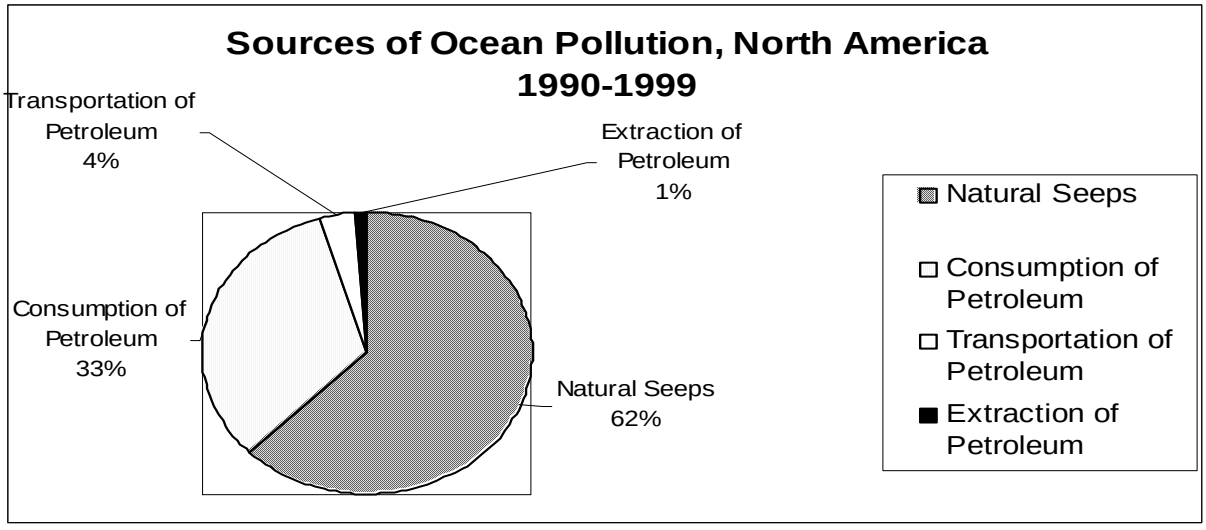


Consumer Well-being

Economists use a general equation to express a nation's total output, i.e., Gross Domestic Product (GDP).

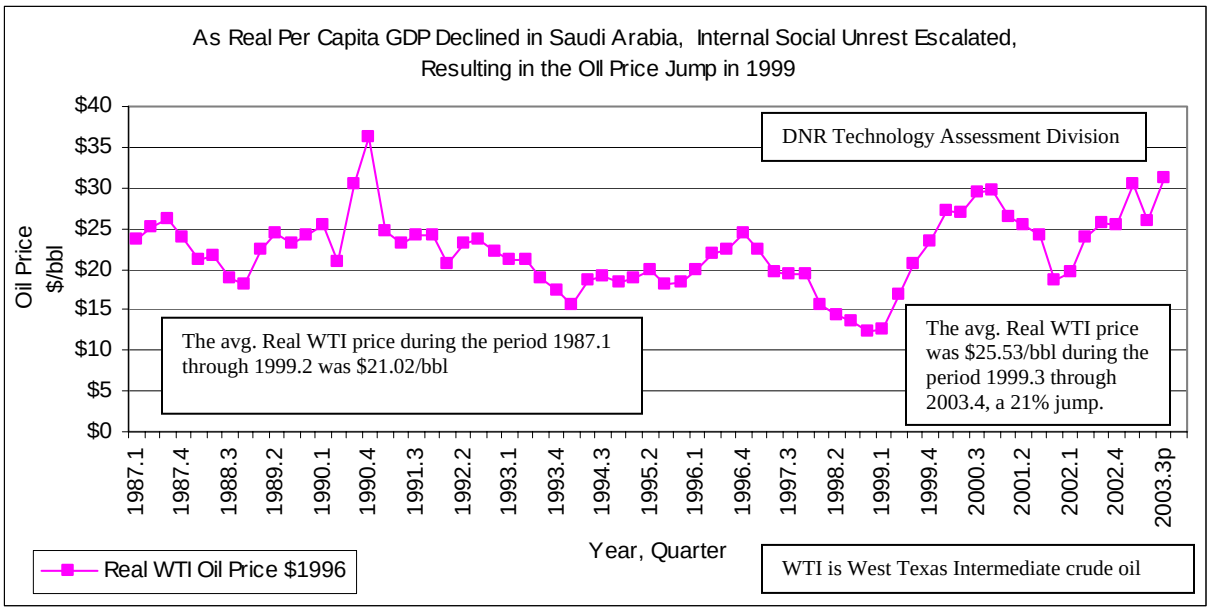
GDP = C + I + G +/- Y

Where C = Consumption
I = Investment
G = Government Expenditures
Y = Exports and/or Imports, net

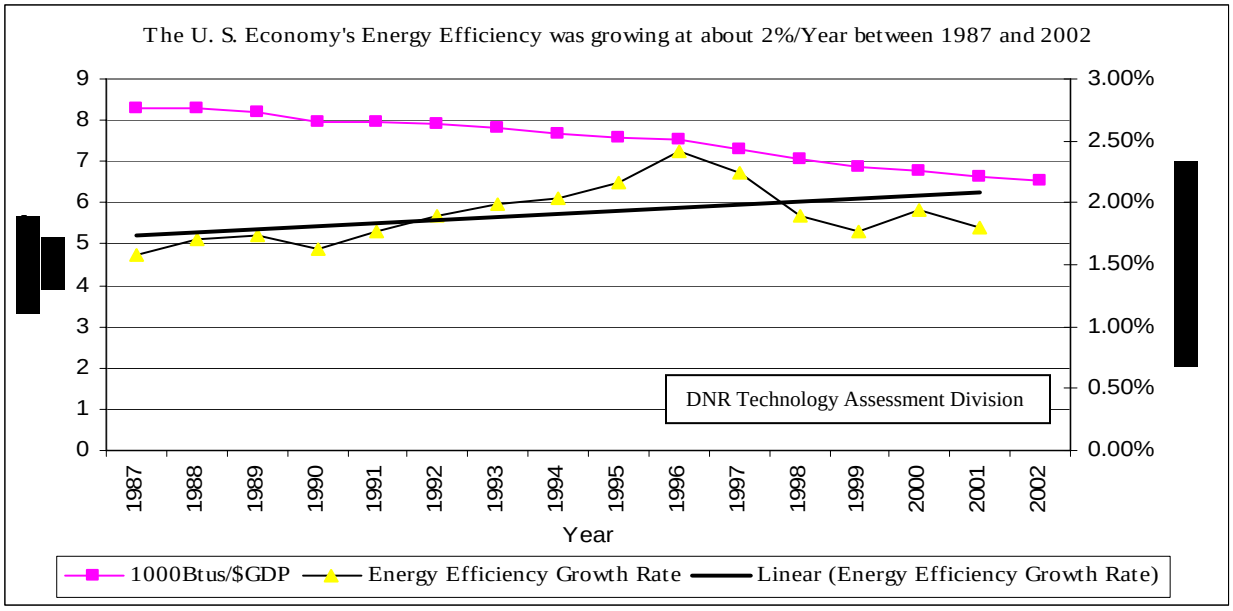
America's Wetlands serve to sustain the stable, secure, and dependable source of crude oil and natural gas supply that enables America's economy, and America's consumers, to leverage their physical and intellectual capabilities. Through this physical and intellectual leverage, America's GDP can grow, and Americans are able to aspire to rising standards of living.

The price of energy in the economy has a direct effect on the rates of growth of the economy and consumer well-being. Without the supply capability from America's Wetlands, the price of energy would be even higher than consumers and the economy currently experience.

As early as 1999, internal unrest throughout the Middle East, particularly in Saudi Arabia, resulted in OPEC's agreement to manage oil prices within a range, suggested as $22-28/barrel (bbl).

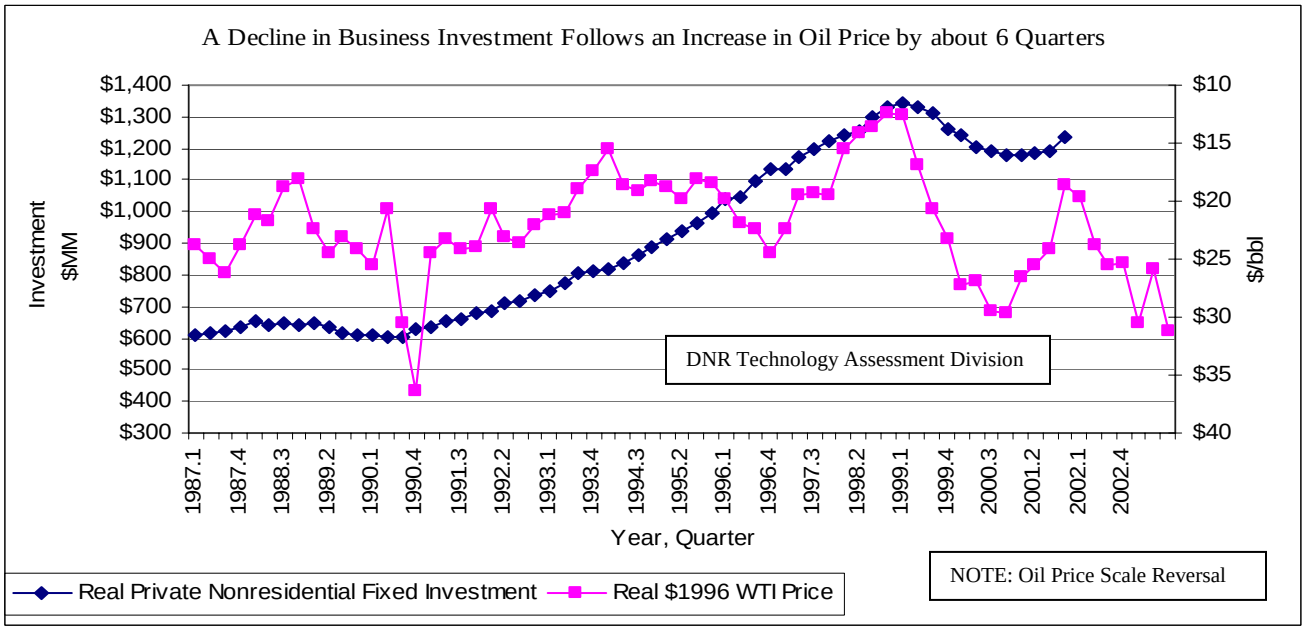


This almost overnight jump of 21% in oil (energy) prices overwhelmed the energy efficiency of existing plant and equipment. The result: higher operating costs and lower operating profits which cannot be immediately offset without the cash flow for new capital spending on more energy efficient plant, equipment, or energy saving components.

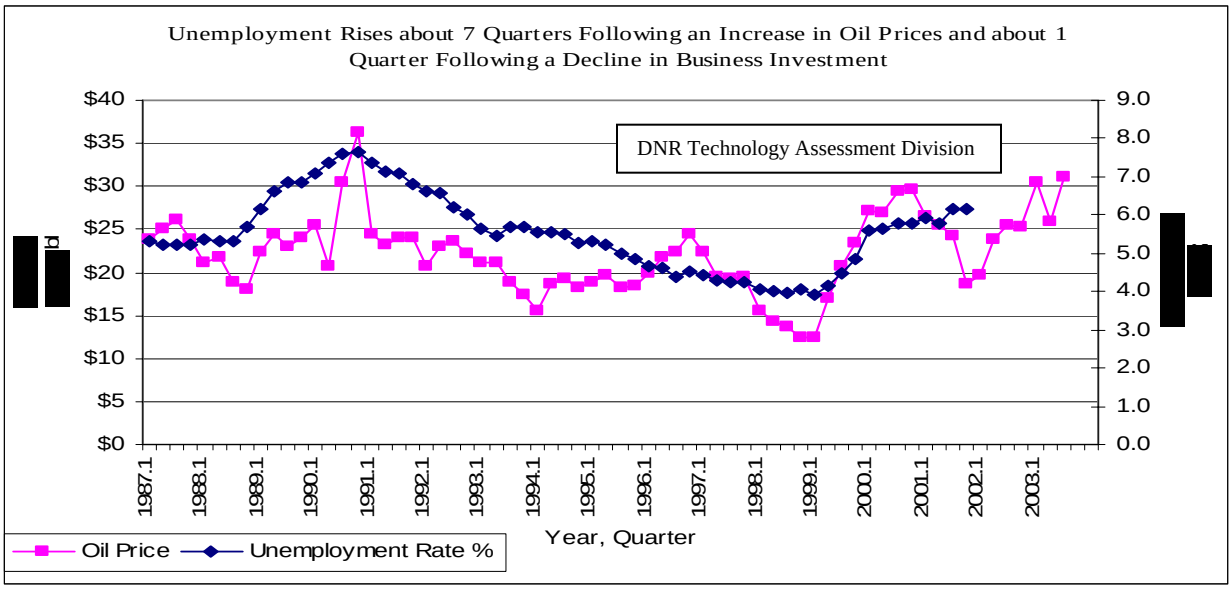


Through America's Wetlands, however, the nation has a supply source flexibility that does not exist elsewhere. Producers, other than OPEC members, have affordable access to the American consumer through America's Wetlands, the Nation's Energy Corridor. The subsequent price jump, as a result of OPEC decisions, would have had an even greater impact on the American economy and America's consumer had not America's Wetlands provided such access for the nation's energy supply.

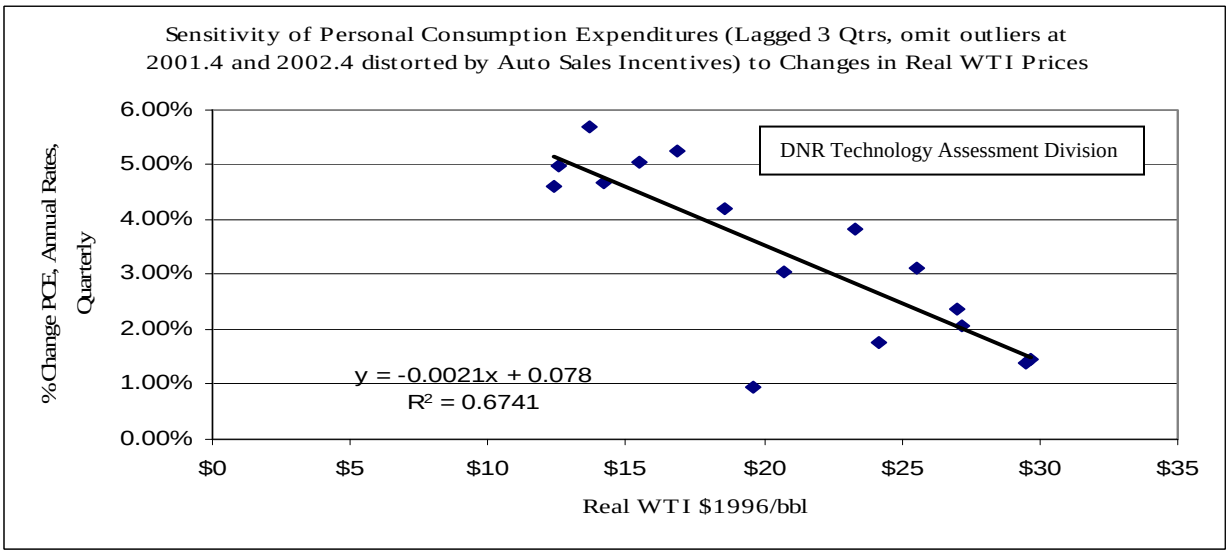
As it was, the sharp jump in oil prices (using oil as a proxy for energy costs) worked its way through the economy, subsequently slowing the rate of growth of business investment.



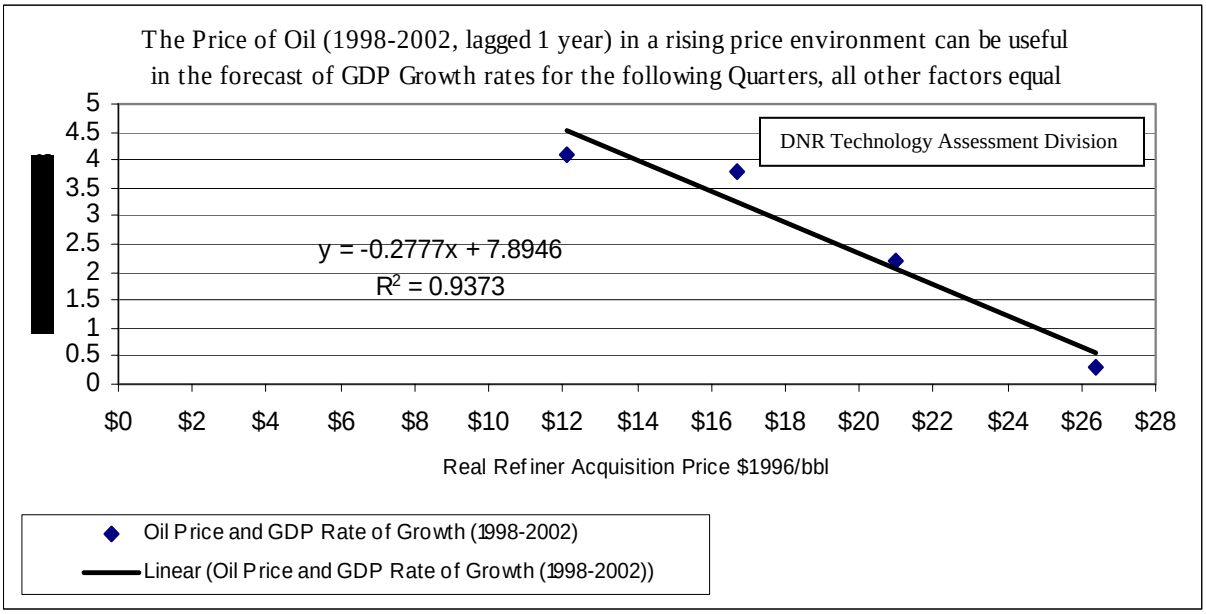
And when business investment fell, the employment levels also declined—resulting in an increase in the unemployment rate.



As the oil price rise affects business conditions, it also impacts the consumer pocketbook. Consumer expenditures begin to decline following an oil price rise.



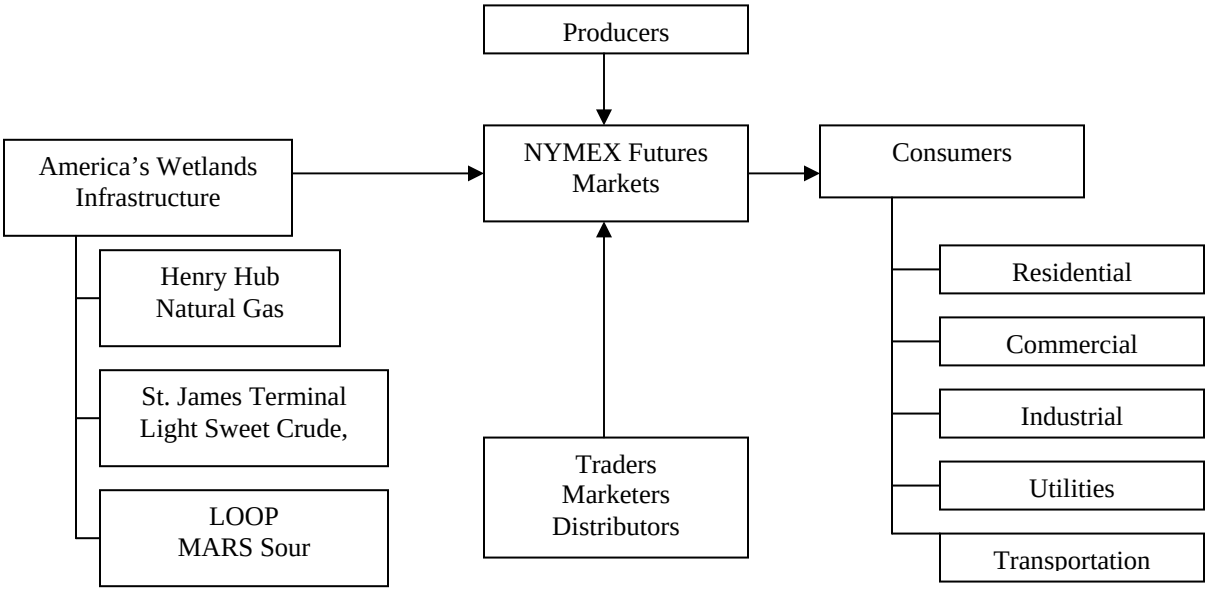
The result of the oil (energy) price rise, and its impact on the factors in the GDP equation, is a decline in the rate of growth of the nation's GDP, all other things being equal, affecting the economic outlook for America's consumers. To offset this slowdown, federal spending expanded sharply along with deficits. These deficits have stimulated GDP growth rates.



All Americans have a love/hate relationship with Wall Street. We love it when our stock investments rise in value; we hate it when we see evidence of runaway greed at the expense of our pension plan portfolio. However, Wall Street and the New York Mercantile Exchange (NYMEX) love America's Wetlands.

The NYMEX is an integral part of the America's Wetlands infrastructure. Commodity markets base a substantial portion of their futures operations on the Wetlands' oil and natural gas infrastructure creating the price discovery mechanism which ensures the balance between demand and supply, and helps stabilize energy prices for consumers over the longer term.

America's Wetlands Infrastructure to Consumer Flow Chart



Each of the "big name" investment banks on Wall Street has in-house commodities trading platforms. The average daily trading volume of Henry Hub futures approached $3 billion dollars in 2002. The average daily trading volume of Light Sweet crude oil approached $6 billion dollars in 2002. The combined economic value related to the 3 commodities (light sweet, MARS sour, and Henry Hub natural gas) approaches or exceeds an average of $10 billion dollars per day.

America's Consumers have an ownership interest in America's Wetlands. The oil and natural gas infrastructure supported by America's Wetlands sustains the economic wellbeing of American Consumers. A significant part of that infrastructure is the financial and trading markets of Wall Street. That too is at risk if the "ownership interests" should fail to sustain America's Wetlands.

America's Wetlands now need federal financial help to continue their role in securing the economic well-being of the American Consumer. America's Wetlands need Federal Government funding to stabilize the environmental losses of an encroaching Gulf of Mexico—losses which threaten the stability, security, and dependability of the Nation's Energy Corridor.

All citizens of Louisiana ask for the help of America's Consumers in the need to secure a multi-billion dollar restoration effort to save coastal Louisiana. Our federal legislators have funded efforts to save Florida's Everglades and the Iraqi Wetlands. It is our fervent hope that America's Consumers will urgently speak out in their best interest and help Louisiana continue to serve the energy needs of the nation, securely, dependably, and stably.

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