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**Testimony
Before the Committee on Resources
United States House of Representatives**

Hearing on the Benefits of Offshore Oil and Natural Gas Development

August 13, 2005

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Louisiana Department of Natural Resources
Scott A. Angelle, Secretary

Submission to U.S. House of Representatives Resources Committee
Port Fourchon, Louisiana Field Hearing
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Mr. Chairman, Mr. Ranking Member, and distinguished members of the House Committee on Resources, it is indeed my pleasure to welcome you to Louisiana — America's Energy Corridor. Louisiana is the epicenter for crude oil and natural gas exploration, production, refining, and distribution for the nation, as well as for imports of foreign crude oil and Liquefied Natural Gas. I make that statement with an immense sense of pride on behalf of the citizens of the State of Louisiana in reflection of the enormous contribution Louisiana makes to the energy supply of your constituents and to the rest of the citizens of this great nation.

It is imperative that we, as a nation, stop reacting to energy situations imposed on us by outside forces, and instead, proactively start shaping our energy future. One of the ways to do that is to develop the full potential of the nation's offshore energy resources and to assist those states that make that production possible off their coasts. This can be accomplished by sharing with those coastal producing states some of the offshore revenues generated off their coasts. This would encourage those states to pursue more development, and it would help offset infrastructure costs those states incur that are associated with that development.

Supplying the Nation: Louisiana – America's Energy Corridor

Where we are right now at Port Fourchon, is ground zero for the offshore petroleum supply of the nation. Louisiana has a long and distinguished history of oil and gas production, both on and offshore. Currently, approximately 34% of the nation's natural gas supply and almost 30% of the nation's crude oil supply is either produced in Louisiana, produced offshore Louisiana, or moves through the state and its coastal wetlands, some of which you are seeing on your visit here this week. Together with the infrastructure in the rest of the state, this production is connected to nearly 50% of the total refining capacity in the United States.

When it comes to developing the nation's offshore petroleum resources, there simply would not be much if it were not for Louisiana's leadership and participation. The offshore territory off Louisiana's coast is the most extensively developed offshore territory in the entire world. As most of you know, the offshore area beyond 3 miles from Louisiana's coast is federal territory called the Outer Continental Shelf, or OCS. Other than in a 3-mile transition zone, the federal government receives ALL of the mineral revenue from production in the OCS. Based on 2004 data, OCS production off Louisiana's coast constitutes 91% of oil and 75% of natural gas production from all U.S. OCS areas combined. Additionally, Louisiana OCS territory has produced 88.8% of the 14.9 billion barrels of crude oil and condensate and 82.3% of the 150 trillion cubic feet of natural gas ever extracted from all federal OCS territories since the beginning of time.

Offshore Energy Development and Economic Prosperity

This service that Louisiana provides to the nation is one of the largest contributing factors to America's strategic security and economic prosperity, which make possible the high standard of living that we all enjoy in this country. Let's look at just one example of how this translates to you. The pump price of gasoline has recently been hitting the \$2.50 per gallon range in many parts of the country. If it were not for Louisiana's role in the petroleum supply of the nation, you and your constituents would likely be paying in the range of \$4.00 per gallon for gasoline today, and that does not address how sky-high prices would be for electricity, food, and all of the other things fueled by, or made from, oil and natural gas.

Offshore petroleum production is not only good for the country, but it is essential to the well-being of the USA. Offshore production is also good for coastal producing states, and there are not many of us — coastal states, that is, that allow new production off our coasts. The list currently consists of only Alabama, Alaska, Mississippi, Louisiana, and Texas. Even without being able to share in the mineral revenue produced for the federal treasury off our coasts, offshore production produces economic prosperity for coastal states in the form of jobs for the service industries providing the logistics support for the offshore industry. This includes, among others: equipment and materials suppliers; food service; helicopter and boat transportation; communications services; engineers, geologists, boat and rig crews; other industry staff and employees; and many others. The offshore industry also supports many jobs far removed from the coastal states, including a multitude of employees who, because of the week on, week off type of schedules, commute up to 500 miles or more from places like Arkansas, Tennessee, and Georgia to work offshore in the Gulf.

Offshore Development Includes LNG

Stepping up to the plate to help the nation obtain new supplies of energy including LNG (liquefied natural gas), Louisiana is the home of the largest throughput facility (Southern Union in Lake Charles) of the four existing LNG import terminals in the U.S., and it is undergoing more than a doubling of capacity from 1 billion cubic feet per day to 2.5 billion cubic feet per day. While almost every state in the nation is trying to prevent the siting of any new LNG facilities, Louisiana is the site of the largest permitted LNG import terminal in the nation (Cheniere Energy's 2.6 billion cubic feet per day facility in Sabine Parish).

Louisiana is also the home LOOP (Louisiana Offshore Oil Port), the only deepwater offshore oil import terminal in the world.

Offshore Development and Preserving the Environment Are Compatible

I am also here to tell you, that oil and gas production is compatible with protecting and preserving the environment. Louisiana can look at experience and footnote that offshore development and the associated onshore infrastructure construction and operations are done in an environmentally responsible way today and are done so under the oversight of several state and federal regulatory agencies.

Louisiana has suffered some negative impacts in the past from offshore production. And, yes, we still have to deal with some of those legacies of the past, but that is because Louisiana pioneered offshore production in the days before modern technology, before the awakening of

America's environmental consciousness, and before the advent of environmental regulatory agencies and regulations.

Louisiana's first oil well was drilled in 1901. The first oil well over water in the world was in Louisiana in 1910 in Caddo Lake. The first well drilled off the coast of Louisiana was in 1938 near Creole, Louisiana. Louisiana was the site of the first well drilled out of sight of land in 1947. Things have changed dramatically since 1910, 1938, 1947, or even 1960, 1970, or 1980. Simply put, it was like the old Wild West out there. Just as in other industries in other parts of the country in other times, there was once a time, long, long ago, when almost anything in the name of progress was accepted. Everything is different now. That era and those practices have nothing more in common with modern exploration, production, and environmental techniques than transportation by horse and buggy in 1800's has in common with jet airliners flying overhead today.

Louisiana's Role as a Producing and Consuming State

Energy is the lifeblood of an industrialized nation and a key economic driver for the country. A reliable and affordable supply of energy is necessary for economic development, prosperity, and expansion. Although technological improvements and investments in energy efficiency have reduced this country's energy consumption per unit of Gross Domestic Product over the past 20 years, increased economic prosperity is still dependent on increased energy consumption. In the U.S., the availability of energy has generally been taken for granted, but recent blackouts in California and other parts of the country, the emergence of 60 plus dollar per barrel oil and \$7 to \$8 per million BTU natural gas, and the drive to build terminals to import foreign natural gas in the form of a cryogenic liquid, have highlighted the need for addressing energy supply.

I come to you representing a state to which energy is its middle name. The words Louisiana and energy are almost synonymous. Among the 50 states, Louisiana ranks (2004 Energy Information Administration - EIA data):

- 1st in crude oil production
- 2nd in natural gas production
- 2nd in total energy production from all sources

The importance of energy to Louisiana is further highlighted in the following rankings in which Louisiana is (2003 EIA data latest available):

- 2nd in petroleum refining capacity
- 2nd in primary petrochemical production
- 3rd in industrial energy consumption
- 3rd in natural gas consumption
- 5th in petroleum consumption
- 8th in total energy consumption
- but, only 22nd in residential energy consumption

Usually, when national energy issues are discussed, Louisiana is cast in the image of a rich producing state floating in a sea of oil and gas that is being inequitably shared with the consuming states. Often misunderstood or overlooked, is the fact that about two thirds of the production from the state is in the Louisiana federal OCS (Outer Continental Shelf) territory and,

hence, produces no revenue for the state, while at the same time incurring significant infrastructure support costs to the state, which I will discuss in more detail later.

Also often overlooked or not explained, is the fact that, though Louisiana is the 2nd highest energy producing state in the nation, Louisiana is also 8th highest in total energy consumption. Therefore, Louisiana is more of a consuming state than 42 other states! This story is never told, nor are Louisiana's difficulties as a key consuming state given much concern at the federal energy policy level. Thus, when Louisiana, the energy producing state speaks, it is also Louisiana, the energy consuming state speaking. Louisiana is inexorably tied into the issues of all states in the nation, whether considered producing states or consuming states. However goes the energy situation in Louisiana, so goes the energy situation in the United States of America.

Louisiana's Role as a Through-Processor of Hydrocarbons for the Nation

All of the preceding represents only the direct supply line of oil and natural gas. Additionally, Louisiana's 8th highest ranking among the states in energy consumption is attributable to the fact that Louisiana is consuming most of this energy as a through-processor of energy supplies for the rest of the nation, consuming colossal amounts of energy for their benefit. An example of how Louisiana is consuming energy resources for the primary benefit of other states is petroleum refining. The energy equivalent of 10% of Louisiana's entire petroleum product consumption is required just to fuel the processes that refine crude oil into gasoline, diesel fuel, jet fuel, heating oil and other products consumed out of state. The oil refining industry employs only about 10,400 workers in the state; whereas tens of millions of jobs throughout the country are dependent on the affordability and availability of the products from the continued operation of these refineries and associated petrochemical facilities in Louisiana.

Many other examples could be cited of the numerous energy intensive natural gas and oil derived chemical products Louisiana (and also Texas, Oklahoma, and California) through-processes for the rest of the U.S. Per unit of output, these industrial processes in Louisiana are characterized as capital (equipment), energy, raw material, and pollution discharge intensive, and low in labor requirements and dollar value added, essentially the opposite of the downstream industries in other states that upgrade these chemicals into ultimate end products. Much of the energy Louisiana technically consumes is really the transformation of oil and gas into primary chemical building blocks that are shipped to other states where the final products are made, whether it be plastic toys, pharmaceuticals, automobile dash boards, bumpers and upholstery, electronic components and cabinets, synthetic fibers, or thousands of other products dependent on this flow of energy and high energy content materials out of Louisiana.

OCS Infrastructure and Its Impacts and Needs

It is important to understand that there is no free lunch. Louisiana, like other coastal producing states, sustains impacts on coastal communities and bears the costs of onshore infrastructure required to support this production activity.

Saving Louisiana's Wetlands that Protect Offshore and Onshore Production Infrastructure

Louisiana's unique and fragile coastal wetlands introduce yet an additional issue: land loss. Louisiana loses more than 24 square miles of our coastal land each year. In fact, if what is happening today in coastal Louisiana were happening in our nation's capital, the Potomac River would be washing away the steps of the Capitol today, the White House next year, and the Pentagon soon after that. In fact, during the course of this morning alone, Louisiana will lose a football field wide area from the Capitol Building to the Washington Monument.

There are many causes of this coastal erosion in Louisiana, including what may be the most significant factor: building levees and channeling the Mississippi River. Whatever the cause of its demise, the health and restoration of Louisiana's coastal wetlands are vital to protecting the offshore and onshore infrastructure that is essential for the continuation, as well as the expansion, of offshore energy production in the Gulf of Mexico.

Once the State realized the magnitude of the coastal erosion problem, we got serious about doing something about it. In 1980, the coastal restoration permitting program was moved to the Department of Natural Resources (DNR). In 1981, \$40 million of state oil and gas revenue was set aside in a legislative trust fund for coastal restoration projects. The State has a dedicated revenue stream of up to \$25 million per year, depending on the level of revenue collections from oil and gas production within the state, to replenish the fund. In the past few years, that replenishment stream has been at the \$25 million level. In 1989, the Office of Coastal Restoration and Management was created in DNR, and the magnitude of the program was greatly expanded.

The War Against the Elements

Let me emphasize something extremely important to this nation's energy supply. Here along the coast, WE ARE AT WAR. It is a war in which the enemy is the elements of nature. It is an enemy with names like Andrew, Ivan, and Dennis — hurricanes. It is an enemy with names like wave erosion, storm surges, sedimentary subsidence, soil consolidation, salt water intrusion, and leveeing of the Mississippi River.

We are part of a team called the USA, but it often seems like Team USA expects Louisiana and a few other coastal states to have supernatural power to go out, wage war against the elements and bring back the victory prize of oil and gas supplies and mineral revenue for the whole country armed only with a slingshot, like the Biblical David, when the enemy is a Goliath throwing 50-foot waves, 25-foot storm surges, and 150 mile per hour winds against the fragile wetlands that protect and make possible America's offshore production infrastructure.

If you see something wrong with that picture, you are right. As you sit here at Port Fourchon on the pulse of the nation's vulnerable energy heart, I hope you will recognize the need to do more to help us, the coastal producing states, keep the energy pulse of the nation beating strongly for the benefit of you and your constituents.

Extent of Louisiana Infrastructure Supporting OCS Production

The total value of the Louisiana OCS infrastructure and the onshore infrastructure supporting it is difficult to ascertain. The estimated depreciated investment in offshore production facilities is

over \$85 billion, depreciated offshore pipeline infrastructure is over \$10 billion, and public coastal port facilities is \$2 billion, for a total of approximately \$100 billion, depreciated, and not counting highways, sewer, water, fire and police protection, schools, and other public works structures that also have ongoing operation and maintenance costs. The replacement of all of this would be several times the \$100 billion depreciated figure. It also does not count the onshore coastal infrastructure of pipelines, storage facilities, pumping stations, processing facilities, etc.

This infrastructure is vulnerable if not protected by the State's barrier islands and marshes. As these erode and disappear, infrastructure is exposed to the open sea and all of its fury. As the coast recedes, near shore facilities become further offshore and subject to greater forces of nature, including subsidence, currents, and mudslides. Erosion in the coastal zone is already beginning to expose pipelines that were once buried.

A Wake-up Call from Hurricane Ivan

To bring home the point of infrastructure vulnerability, we need only look back to this past Summer. Hurricane Ivan was not even a direct hit on Louisiana's offshore and coastal oil and gas infrastructure, striking two states away; yet, its effects on the nation's supply of oil and gas were significant, even many months after it hit. Most of the damage occurred along pipeline routes rather than actual structural damage to the producing platforms. As of February 14, 2005, when the Minerals Management Service (MMS) released its final impact report on Ivan, 7.42% of daily oil production and 1.19% of daily gas production in the Gulf of Mexico was still shut-in. The cumulative shut-in production through February 14 was 43.8 million barrels or 7.25% of annual Gulf of Mexico OCS production and 172.3 billion cubic feet of natural gas or 3.9% of annual Gulf of Mexico OCS gas production.

As more of the protection from Louisiana's barrier islands and coastal wetlands wash away, increasingly more of this offshore production will be damaged or destroyed by even less powerful storms than Ivan, and particularly by storms whose paths more directly pass through the producing areas off of Louisiana's coast. Direct hits to the prime production area by hurricanes and tropical storms will cause incalculable damage to this production infrastructure, as well as to the onshore support infrastructure.

How to Increase Offshore Energy Production

Share Offshore Revenue with the States that Allow Offshore Production

The most effective way to help is to assist those states that make offshore energy production possible off their coasts. This can be accomplished by sharing with those coastal producing states some of the offshore revenues generated off their coasts. This would encourage those states to pursue more development, and it would help offset infrastructure costs those states incur that is associated with that development. Louisiana, like other coastal producing states, sustains impacts on coastal communities and bears the costs of onshore infrastructure to support this production activity.

When states like Wyoming, New Mexico, Colorado, and others host drilling on federal lands onshore, they receive 50% of those revenues in direct payments, and consequently have the

financial resources to support that infrastructure. In Fiscal Year 2004, Wyoming and New Mexico together received about \$928 million from those revenues, which IS an appropriate revenue sharing procedure.

In contrast, for example in 2001, of the \$7.5 BILLION in revenues produced in the federal OCS area, only a fraction of one percent came back to those coastal states. The inequity is truly profound.

We are pleased this committee is investigating ways to increase offshore energy production. The need to sustain the existing supply that Louisiana provides must simultaneously be addressed. The most effective answer to both issues is to share offshore revenues with the coastal producing states that make that production possible. It is critical that coastal producing states receive a fair share of revenues to build and maintain onshore infrastructure and, in Louisiana's case, to help stem our dramatic land loss, which is occurring at a rate believed to be the fastest on the planet.

Production off Louisiana shores alone contributes an average of \$5 BILLION dollars a year to the federal treasury, its second largest source of revenue. And, that was when oil was less than half of the \$60 plus per barrel price it is selling for today.

Does it not make sense to encourage the coastal producing states which provide that revenue for the benefit of the rest of the nation? Does it not make sense, that when so many, like the U.S. Ocean Commission, are targeting offshore OCS revenues to pay for worthwhile preservation of natural resources, that this nation first protect those who make these resources possible?

Already, in Louisiana's coastal zone, many of the pipelines and other infrastructure that our wetlands have historically protected are now exposed to open Gulf of Mexico conditions. I shudder to think of the production infrastructure damage and the economic impacts to this nation, had Ivan gone a relatively few miles further west with a direct hit on the infrastructure off Louisiana's shore. According to analysts, oil prices would realistically have hit \$75 dollars a barrel. Since oil prices have risen since then, the price rise would be even higher now.

Maintaining any ongoing operation requires reinvestment to maintain, repair, and replace worn out or outdated equipment and facilities. As any farmer can tell you, you cannot just take from the land forever without putting something back into the operation. Out of the harvest of crops, the farmer has to set aside a portion as seed to plant for the next harvest. He has to fertilize the land to replace depleted nutrients, plow and till the soil, rotate crops, control runoff and erosion, irrigate, apply pesticides and herbicides, buy and repair machinery. Likewise, to maintain, much less increase, production from off our coasts, we must reinvest in the infrastructure that makes all of the activity possible, whether it be port facilities, roads to transport equipment and supplies, erosion control, or barrier island and wetlands storm protection.

Assistance from the Energy Policy Act of 2005

The Coastal Impact Assistance Money provided in the Energy Policy Act of 2005 that you just helped pass is tremendously good news for the state's coastal restoration efforts. Yet, the \$540 million provided over four years for coastal restoration is only a drop in the bucket compared to the total of \$14 billion needed over 20 to 30 years for Louisiana's unique coastal restoration needs.

Enact Legislation to Extend Section 29 Tax Credits to Deep and Ultra-Deep Production in States Allowing Offshore Production and to Immediately Share with the States 50% of the Royalties from Deep Drilling in the Shallow Waters of the Gulf:

Section 29 of the Internal Revenue Service (IRS) Code granted a tax credit for the production of natural gas from unconventional resources (coal bed methane and tight sands gas). The effect of the application to coal bed methane gas production was astounding in those areas of the country that have significant deposits of this kind, which is not along the Gulf Coast. Natural gas reserves from coal bed methane rose from 6.3% of U. S. reserves at the end of 1993 to 9.9% at the end of 2003. Annual natural gas production from coal bed methane rose from 4.2% of U. S. dry gas production in 1993 to 8.2% by the end of 2003.

Deep natural gas reserves (15,000-24,999 feet sub-surface) and ultra-deep gas reserves (greater than 25,000 feet sub-surface) are the next most immediate resources for meeting the supply and deliverability needs of the U. S. market. These resources should be granted the same tax credit as was granted to coal bed methane producers. The resulting stimulus to production should be at least equal to the coal bed methane results, and would very likely far exceed it in time as capital is brought to bear on this drilling domain. The federal Minerals Management Service (MMS) has recently instituted significant deep shelf royalty incentives for the shallow federal waters of the Gulf of Mexico shelf. This does no good for the adjacent state waters and onshore areas. The Section 29 credits need to be instituted for state waters and onshore areas, at least in those states allowing federal offshore production.

Another thing that is needed immediately, is to share with coastal producing states 50% of the royalties from new deep drilling in the shallow federal waters on the shelf. The MMS royalty deep shelf suspension program is a good program, but it is draining investment from our parishes by shifting drilling across the boundary line into federal waters, causing loss of investment and tax revenue from lost drilling in state territory. Louisiana should receive 50% of royalties from deep drilling on the shelf immediately.

Encourage New Energy Sources and Technology

Recent studies show that the Gulf of Mexico has a significant wind energy potential. Although wind power does not have the energy density of petroleum, it is an inexhaustible, renewable source of clean energy. Again, much to my consternation, it appears that there are many parts of the country that use a lot of energy and want it at low prices, but do not want production of any kind, anywhere near them, including wind energy. Again, Louisiana is stepping up to help encourage this clean energy source. The State of Louisiana is currently working with private sector investors who are interested in developing wind farms in state and federal waters off Louisiana's coasts. My office submitted wind power legislation which the Louisiana Legislature passed earlier this year to facilitate offshore wind power development in Louisiana's State offshore waters.

Natural gas hydrates probably offer the greatest untapped energy resource the nation has. *The Oil and Gas Journal* recently reported that the U.S. Geological Survey estimates that methane hydrate deposits are greater than all other forms of fossil fuels combined. Large deposits of gas hydrates are believed to lie below the offshore waters of the U.S. Unfortunately, technology to

tap these resources needs to be developed. Once the technology is available, the first areas to be developed will be the areas adjacent to the existing offshore producing areas where the infrastructure is in place to get it to shore and into the nation's pipeline distribution system. The federal government needs to fund meaningful research into developing the technology to produce gas hydrates, assessing the resource base, and delivering it.

In Conclusion

It is vital to the nation's security and prosperity that new energy sources be developed. The federal government has proven that it has the ability to steer investment, as in the case of deep water drilling in the Gulf and coal seam gas. In addition to its significance in producing 30% of oil and 23% of natural gas produced domestically, which is mostly off Louisiana, the OCS is probably the single most promising area for the U.S. to obtain significant new energy supplies. These supplies, whether conventional oil and gas, imported oil, imported LNG, wind and ocean energy, or gas hydrates, need the support of coastal states to cooperate and to supply and maintain critical production and support infrastructure.

LNG facilities are being built where the existing U.S. pipeline infrastructure exists (essentially Louisiana and Texas) in order to get the gas from the coast into the delivery system to supply the nation. The same will be true when the technology is developed to commercialize methane hydrate production off the coasts. This Louisiana and Texas infrastructure will also be used when deep and ultra-deep shelf production comes on stream. This is another reason why offshore revenue should be shared with the coastal producing states and why the extension of Section 29 tax credits should be extended to deep gas exploration at least in the states that are allowing onshore and offshore drilling and allowing the siting of LNG facilities to make energy available to the rest of the country.

With effective policies and incentives, the federal government can steer investment into the offshore areas, and by receiving an equitable share of revenue generated offshore, the coastal producing states can be in a position to ensure that this production will be made available to the rest of the nation. As the granddaddy of all producing states, literally and figuratively, Louisiana desperately needs immediate revenue sharing financial assistance from a source not subject to annual appropriations, to continue to maintain existing, and to develop future energy supplies for the nation.

It would be a travesty for the Congress to enact national energy legislation without substantial OCS revenue sharing in the form of direct payments to the coastal producing states from the revenue derived from offshore production, similar to the automatic payments for drilling on federal lands onshore, and before any other dispersal of those monies.

Thank you for coming to Louisiana and for this opportunity to appear before you.

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