House Natural Resources Committee

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Written Testimony

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My name is Lamar McKay and I am the Chairman and President of BP America.

BP appreciates the opportunity to appear before this panel and present our views on exploring for potential new sources of oil and natural gas in areas of the federal Outer Continental Shelf (OCS). The needs of our country require that we explore for new domestic sources of energy that are secure and reliable in good times and in tough times.

I represent the 33,000 employees at BP working in the United States. We are not only the largest oil and gas producer in the United States, but also the company that invests in the most diverse energy portfolio in the industry. Since 2004, we have invested more than $34 billion in the US to increase existing energy sources, extend energy supplies and develop new low-carbon technologies.

BP's investments stretch from the Gulf of Mexico to the North Slope of Alaska and from the East Coast to the Midwest and the West Coast. Our over 13,000 service stations – most of them locally owned and operated – are a familiar part of the American landscape.

The company's major spending programs also touch every major segment of the energy industry, from exploration and production of oil and natural gas through refining and distribution of fuel products, as well as renewables.

By heavily investing in a diverse range of energy sources – from traditional oil and natural gas production to renewable energy including biofuels, solar, wind and hydrogen power – BP is helping meet America's energy needs today while moving towards a more secure energy future.

In 2008, BP's US production of liquid hydrocarbons was 538,000 bpd, about 10 percent of US domestic production and the largest of any single producer. Our gas production was over 2 Bcfd.

BP's solar business has been in operation for over 30 years and last year had sales of 162 MW globally. This represents an increase of 29% over 2007 and expectations are there will be significant growth through 2009.

We are major investors in wind generation and have amassed a land portfolio capable of potentially supporting up to 20,000 megawatts (MW) of wind generation, one of the largest positions in the country. As of year-end 2008, BP and its partners had 1,000 MW of wind generation on-line and expect to have an installed capacity of approximately 2,000 MW of wind power by the end of 2010.

We are one of the largest blenders and marketers of biofuels in the nation. Last year, BP blended over 1 billion gallons of ethanol with gasoline. We are underwriting cutting-edge research — investing more than $500 million over the next 10 years — in the search for a new generation of biofuels. We believe these will contain more energy, have less impact on the environment, and will not reduce the supply or increase the cost of food.

Overall, we support an energy policy that promotes the development of both traditional and non-traditional sources of energy, as well as conservation and efficiency. At the same time, our approach has been shaped by some stark realities about America's energy outlook.

Stark Realities

The relatively low oil and gasoline prices American consumers are now enjoying masks the fact that our country faces tremendous energy challenges. Years of contradictory public policies, poor market dynamics and company decisions have combined to limit access to resources, discourage development and constrain new investment. No company or industry on its own is large enough or powerful enough to change the conditions that brought us here. But energy companies, policymakers and consumers together have roles to play in creating a new energy future for our country.

This relationship must be shaped by the recognition that the US economy needs both to better conserve energy and to produce more energy of every type to meet future growth. We need to invest in conventional oil and gas. We also need to invest in renewables to begin the transition to a lower-carbon future. However, we must all understand that this future is many years away and that these new energy sources will not make a large contribution to total US energy supply for many years.

This view is reflected in a 2007 study issued by The National Petroleum Council — Facing the Hard Truths About Energy. I have integrated its observations and conclusions below and added emphasis as necessary:

> *There is no single, easy solution to the global challenges ahead. Given the massive scale of the global energy system and the long lead-times necessary to make material changes, actions must be initiated now and sustained over the long term. Over the next 25 years, the US and the world face hard truths about the global energy future:*
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> - ***Coal, oil, and natural gas will remain indispensable to meeting total projected energy demand growth****.*
> - *The world is not running out of energy resources, but there are accumulating risks to continuing expansion of oil and natural gas production from the conventional sources relied upon historically. These risks create significant challenges to meeting projected total energy demand.*
> - *To mitigate these risks,* ***expansion of all economic energy sources will be required, including coal, nuclear, biomass, other renewables, and unconventional oil and natural gas****. Each of these*

sources faces significant challenges including safety, environmental, political, or economic hurdles, and imposes infrastructure requirements for development and delivery.

The benign energy environment we are now experiencing may not last. Growth in the demand for energy will resume when our economy starts growing again. The US Energy Information Administration (EIA) projects that energy demand will increase 11 percent by 2030. If anticipated US needs are combined with those of the rest of the world, at growth rates of three percent, EIA projects that a 35 percent expansion in global oil production will be needed. That equates to an additional 30 million barrels of oil every day.

Finding that oil will be neither simple nor cheap. The era of “easy oil” may be over. New supplies are harder to find, more difficult and more expensive to extract, and are often located in politically unstable parts of the world. Wherever they come from, bringing new supplies to fuel our homes, businesses and transportation needs will require the investment of hundreds of billions of dollars.

Let me take the opportunity to put to rest a major energy myth, namely that there is no more energy to be found here in the US.

In fact, the United States is a sleeping giant when it comes to energy.

- We have a 100-year supply of coal. There is little doubt that, with “clean coal” and carbon capture technology, we could be using a lot more coal in the coming decades to heat our homes and recharge our electric cars.

- We have huge deposits of oil shale in many of our Western states.

- We have the potential to generate much more safe, clean, reliable electricity via nuclear energy than we are doing today.

But until technologies such as clean coal, carbon capture and renewable sources can come on line in a major way, far and away the greatest potential source of new domestic energy supply is the oil and natural gas that lies off our shores.

Here in the US, we have deliberately constrained our own supply by limiting access to promising areas for leasing, exploration and development. American domestic oil production has fallen by around 4 million barrels per day since 1985. At the same time, demand has risen by roughly similar amounts, so the gap must be filled by imports.

And when world demand rises — as it did recently, particularly in China and India — it makes those imports more expensive. That accounts in part for the dramatic rise in oil prices we experienced last summer.

A more secure and reliable source of energy closer to home is also essential to our country's long-term economic and energy well-being. As we have seen repeatedly since the first oil shock in 1973, wildly spiking and plunging oil prices kill jobs. Energy drives economic growth but few businesses – as we are seeing now -- are willing to make investments in an atmosphere of great uncertainty.

The slowing of investment — the number of operating US oil rigs has fallen to 1399, the lowest number since July 2005 — presents a real risk to our economy. Prices could rise once again when the recovery occurs because investment may not be sufficient to offset the natural decline in the resource base. The challenge for all of us is to not allow this cyclical decline to create a structural loss in capacity. We must continue to invest in new technology and infrastructure development at the bottom of the cycle to provide continued access to supplies.

Areas of the OCS that have historically been off-limits to exploration can and should play a substantial role in closing this supply gap as well as securing our economic future. It is not the entire answer to the energy challenge we face, by any means, but the US can't fashion an answer to its energy challenge without it.

A Department of the Interior study estimates the amount of oil to be found in areas that have been off-limits to exploration at 17.8 billion barrels. That's equal to 30 years of US imports from Saudi Arabia. The same study put natural gas reserves at 76 trillion cubic feet, or enough to meet America's requirements for over 10 years.

These are DOI estimates. There could be more. There could also be less. We can't know unless we are given the opportunity to lease and explore.

The journey from access to production is a long one. A tremendous amount of preparation as well as infrastructure, both onshore and offshore, is required for successful development.

That's why we support a thoughtful and deliberate approach to this issue. As a first step, we propose the acquisition of new regional 2D seismic data in the OCS in order to identify the most prospective regions. From there, closely spaced 2D or 3D seismic data can be acquired to identify the best prospects in each area. Such surveys are costly and complex to plan and implement, but vastly increase the information content. This "virtual drilling" protects the environment by providing greater accuracy in mapping deposits and reduces the need for drilling exploratory wells.

BP In the Gulf of Mexico

The track record of BP and the industry generally in the Western and Central Gulf of Mexico (GOM) demonstrates that when areas are opened, they can be leased, explored and developed to the highest environmental and operational standards in the world.

Our investments in the Gulf of Mexico are a remarkable American success story. Since 1985, oil production from the deepwater Gulf has increased 15-fold, from 58,000 to 870,000 barrels per day, or more than one in six barrels of oil produced in the US. It's also more than all the oil the US imported on an average day from Angola, Indonesia, Kuwait, Libya, and Russia combined in 2007.[1]

We operate in water depths that exceed 1 1/2 miles — more than six Empire State Buildings stacked one on top of another — and well depths as great as 30,000 ft — the normal cruising altitude of a commercial passenger jet.

[1] EIA, "US Imports By Country of Origin," Annual Thousand Barrels per Day.

Further, we have had to cope with operating temperatures and pressures greater than any we have ever experienced. For example, a typical military fighter jet is capable of operating in an 8 G environment, while oil and gas drilling tools regularly experience forces in excess of 200 Gs. Despite these challenges, industry responded to government encouragement to invest, explore and develop the deepwater resource base.

The dramatic rise in deep-water production in the GOM also demonstrates an elemental truth about our business: the more we know, the more we can produce. As knowledge and technology advances, deposits once thought to be beyond reach or uneconomical to extract eventually become viable.

Diligent Development of Leases

I'd like to address an issue that has received a great deal of attention by some in Washington. The notion that the industry does not diligently develop the oil and gas leases it currently holds. For BP, this misperception is troubling as the leases we hold represent the future potential for oil and gas production — that is our business.

Companies spend millions to acquire leases with very little knowledge of their resource potential. I wish it were not so, but every lease does not contain oil and natural gas in commercial quantities. But, in order to determine that, we undertake extensive geologic evaluations that extend over many years. It is through this process that we develop the understanding, confidence and technology to drill and develop a resource. The chart on page 18 graphically displays this lease maturation process overlaid by a typical development timeline.

The dollars we invest in this process are similar to venture capital for our company. We have an obligation to not only our shareholders but also to the US to spend them wisely.

I am sure you would agree that all agricultural lands are not created equal – that is the expectation you can get the same yield of corn in the Arizona desert as you can in the heartland of the Midwest. So it goes with oil and gas leases. As the U.S. Department of Interior points out, a lease does not guarantee the discovery of oil and gas.

Well success rates for onshore leases are about 10% for new areas. While success rates on deepwater offshore leases are about 20%.

The industry has had great success in the 15% of the OCS that is currently available for development. Since 1995, more than 750 new exploration wells have been drilled, yielding over 100 announced discoveries, much of which used technologies only dreamed of as little as two decades ago. As a result of these efforts, 7 of the top 20 US oil fields are in the deep water of the Federal OCS. Since 1995, natural gas and oil produced from the deepwater have expanded by 620 and 535 percent, respectively.

By evaluating the potential of the remaining 85% and undertaking responsible development, we believe this success can be replicated.

The Role of Technology

The energy industry isn't usually classified as a high-tech business, but it truly is. This technology has been instrumental in protecting the environment. Today's offshore oil drilling technology bears about as much resemblance to what was available in the 1960s as a rotary dial telephone does to an iPhone.

I have already mentioned improved seismic imaging, which allows us to locate and map deep oil and gas deposits with vastly greater accuracy and less environmental disturbance per barrel of oil produced. But there is much more.

For example:

— With directional and extended reach drilling, we can connect multiple wells to a single platform located miles offshore, thus reducing or even eliminating the visual "footprint" of permanent energy operations;

— All offshore wells have downhole flow control valves that shut down the well automatically if damage to the surface valves is detected;

— Blowout preventer (BOP) technology has improved tremendously since early offshore drilling in the 1960's, and includes redundant systems and controls.

— New and improved well control techniques maintain constant control of the fluids in the well. Sensors continually monitor the subsurface and sea bed conditions for sudden changes in well pressure.

— We run emergency drills regularly, and all of our platforms have contingency plans that identify procedures, response equipment and key personnel needed for coping with oil outside containment. Also, since Congress passed the Oil Pollution Act of 1990, vastly greater resources are now in place to cope with "worst case" discharges.

The amount of oil introduced into the marine environment by oil and gas operations has fallen dramatically since the early 1970s. In fact, between 1991 and 1999, 35 times more oil was introduced into North American waters by recreational boaters than by offshore oil operations.[2]

A study by the National Academy of Sciences found that, worldwide, the amount of oil introduced into the marine environment had fallen by 80 percent. Offshore oil production accounted for just four percent of that total, even as such production increased 204 percent in the same period.

Looking specifically at the OCS, around 1.4 million barrels of oil per day are pumped from the OCS. According to MMS data, since 1980, less than .001 percent, or one one-thousandth of one percent, has escaped containment.

Loss of oil from tankers has also become far less likely than in earlier decades, thanks to the advent of double-hulls and other safety measures. Nevertheless, between 1971 and 2000, more oil was released into US waters as a result of tanker operations (45 percent) than from OCS drilling (two percent). In the absence of increased

[2] *Oil in the Sea III*, Committee on Oil in the Sea: Inputs, Fates, and Effects, National Research Council; Table 2-2 Average, Annual Releases (1990-1999) of Petroleum by Source (in thousands of tonne).

domestic production, the US will have little choice but to increase the amount of oil it receives from other sources via tankers.

For those who continue to question the safety of offshore energy operations, I can only point to our record in the GOM. Hurricanes Katrina, Rita, Ike and Gustav caused serious damage to oil rigs and pipelines throughout the area and shut many of them down for a time. But our personnel and safety systems were up to the challenge. There were no instances of significant oil leakage or spills.

Our technology will only improve as we go forward. At the same time, it makes strategic sense to diversify our offshore production activities away from areas subject to regular severe weather events such as the GOM. When domestic supply comes from a variety of areas, geographically speaking, those vulnerabilities can be minimized or reduced significantly.

The Role of Policy

As we look to the future, the US investment climate remains challenging. Government policy can both be a vital enabler of new development or an unfortunate impediment to much needed investment. Over the last several years, numerous efforts have unnecessarily burdened viable and critical infrastructure projects; promising development areas remain out of reach; existing manufacturing operations have been challenged in their efforts to upgrade and expand; and new taxes have been proposed that will discourage future energy resource development. Furthermore, these stumbling blocks exist across the energy profile, and are not just confined to oil and gas activities.

Support for Renewables

Emblematic of these gaps are policy discussions concerning how to support and fund the development of new energy resources like wind, solar and biofuels. Not surprisingly, policymakers and consumers generally support efforts that promote the development of renewable energy. As reflected in our investment portfolio, BP concurs with this sentiment. However, there is significant divergence of opinion

regarding the question of how to fund the necessary financial incentives.

BP supports transitional incentives for wind, solar, and biofuels. They are an important part of why the US has been so successful in developing its renewable energy sector, but we cannot support taxes that discourage efforts to bring on other much needed energy sources (oil and gas production). This is not a recipe for increasing America's total energy production.

Biofuels

Similar policy concerns exist in the area of biofuels. EISA of 2007 created significant opportunities to develop and grow the contribution of biofuels to the transportation fuels market. BP believes that biofuels may be able to attain penetration rates of 20% or more by 2030 thus playing a significant role in meeting future transportation needs. However, the legislation has created challenges that could in the end create market distortions, supply disruptions and higher consumer prices if not adequately addressed.

The implementation timetable of the RFS program is very aggressive, creating a risk to delivery of fuel in sufficient quantities to the markets where it is needed. Congress, while mandating biofuels blending, did not adequately assess whether the market was prepared to accommodate the huge storage, transportation and delivery infrastructure requirements necessary to get the product to the consumer. In addition, given the recent economic downturn and reduction in gasoline demand, mandated blending levels are expected to outstrip the ability of the market to absorb the volumes as early as 2010, potentially threatening the integrity of the program.

BP supports accelerating research to test, evaluate and approve the use of higher biofuel blends. Further, we support efforts to transition incentives away from first generation biofuels to support the research, development and deployment of advanced non-food feedstocks, conversion technologies and fuel molecules. Similarly, policymakers should explore how trade policy can be improved to stimulate greater worldwide biofuels production and supply options for the US.

Climate policy

Our nation faces difficult choices as we take steps to foster economic growth, ensure our nation's energy security and protect the environment. Chief among these environmental concerns is that of global climate change.

BP has long advocated for the creation of a single, mandatory US greenhouse gas emissions registry and a market- based price for carbon. Market-based programs deliver the greatest and fastest reductions at the least cost. Just as important, they create a level playing field, meaning that everyone must be part of the solution and first movers aren't placed at competitive disadvantage.

The fact that Congress has not yet addressed national climate policy has not deterred some from trying to impose requirements as if a national policy existed.

During the last Congress, legislation was adopted to discourage development of Canadian oil sands - the single largest oil resource base outside of Saudi Arabia. Additionally, a bill was introduced to prevent the US from utilizing its world leading resource position in coal for power generation. Similarly, efforts continue to either allow or encourage state or local jurisdictions to try and impose CO2 reduction targets on individual projects in order to make them uncompetitive and further discourage resource development.

Why do I mention these examples? They clearly represent efforts to limit energy development opportunities that would enhance US energy security, economic development and environmental protection. And, in the absence of a national climate policy, these approaches will proliferate and likely result in a piecemeal regulatory approach that will stifle investment of all kinds.

We believe Congress needs to adopt a national climate policy that establishes a price for carbon. This policy mechanism will allow companies to make better investment decisions and consumers more informed behavioral choices. To do otherwise stifles the very technology breakthroughs and developments Congress supports.

Energy Security

Over the years, US policy has, in effect, encouraged oil and gas providers to look beyond the US border to meet growing US energy demands, yet policymakers often question our reliance on foreign oil imports. Policymakers have also implored OPEC to produce and develop its own oil resources in order to reduce crude oil prices in the US.
The US should strive to more fully develop its own resource base — to make a greater contribution to world oil supply — otherwise we will increasingly rely on imported energy to meet the needs of our growing economy.

The US experience in the deepwater Gulf of Mexico is instructive in evaluating the role of policy. The development of the deepwater GOM was no accident or coincidence. Positive federal policies, including the Deepwater Royalty Relief Act of 1995, were instrumental in bringing the deepwater GOM online. Since its passage, GOM deepwater production has increased 15-fold to nearly 900,000 barrels/day.

Federal and State Governments Will Benefit

Increasing access to the OCS represents a potential highlight on the energy horizon — enabling job creation, generating much needed revenues for local, state and federal governments, improving the nation's energy security, reducing the transfer of wealth and expanding the manufacturing sector.

Our industry directly employs 1.8 million Americans, with at least another four million indirect jobs supporting the industry. And these are good-paying jobs. Oil and natural gas exploration and production wages in 2006 were more than double the national average.[3] These employees are covered by comprehensive health care for which the industry pays billions. America lost nearly 600,000 jobs last month alone. We can and need to keep America's energy industry working to deliver energy security for all of us.

[3] Numbers drawn from *Energizing America: Facts for Addressing Energy Policy*, p. 30; API, 1/18/09.

Royalties paid to the federal government by our industry are among its largest single sources of revenue. In FY 2008, the Interior Department disbursed to the federal government, state treasuries and American Indian tribes a record $23.4 billion from both onshore and offshore energy production, including over $10 billion in bonus bids alone to acquire leases. These revenues, of course, benefit all Americans.

On the state level, BP believes that a revenue sharing program, similar to that which is now in place under the Gulf of Mexico Energy Security Act of 2006 for Louisiana and other Gulf Coast energy producing states, is fundamental to the success of a long term OCS leasing and development program.

Last November, the MMS announced it was disbursing $2.59 billion to 35 states as their share of federal revenues collected from energy production within their borders, including oil and gas drilling off their shores. Alabama received $15.8 million; Texas $21.6 million; Louisiana $49.5 million, and California $103.4 million.

Virginia, by contrast, received just $227,154.44; Florida and South Carolina did far less well than that, receiving just $6,298 and $277.50 respectively. North Carolina received nothing. At a time when states are facing record budget shortfalls, these are revenues that could be augmented significantly under an expanded OCS access program.[4]

We believe that coastal economies at the local, state and regional level will see significant, positive benefits from increased OCS access. While it is impossible to know with precision, we can examine the experience of other states. In Louisiana, for instance, 21,000 jobs with an estimated payroll of $1.2 billion depend directly on oil and gas production on the OCS.[5]

An appropriately structured revenue sharing program designed to benefit coastal communities should provide funds to help mitigate any real or perceived impacts from development. With proper planning,

[4] "Interior's Minerals Management Service Disburses Record $23.4 Billion in FY 2008," press release, DOI, 11/20/08.
[5] Louisiana Mid-Continent Oil and Gas Association website.

these communities, working with industry and government, can learn and benefit from past experiences and best practices from other jurisdictions.

According to an ICF International study, developing America's domestic oil and natural gas resources in areas where leasing has been prohibited could generate a total of more than $1.7 trillion in government revenue, create over 160,000 new jobs and significantly boost domestic petroleum production.

The ICF study also suggests that opening offshore and onshore areas would lift U.S. crude oil production by as much as two million barrels per day in 2030, offsetting nearly a fifth of the nation's imports. Natural gas production could increase by 5.34 billion cubic feet per day, or the equivalent of 61 percent of the expected natural gas imports in 2030.

Time Frames and the Need for Informed Choices

It has been said that allowing increased oil and gas exploration off America's shores isn't worth it, since it will take years before any newly discovered energy starts reaching American consumers. The same can be said for new wind projects as well, however. The reality is that energy projects of scale require significant lead-time to plan, permit, litigate, procure and construct.

One of the things you learn quickly in the energy business is that nothing happens quickly. Ours is an industry that has no choice but to take the long view. Oil used to heat Americans' homes and power their automobiles today is available as the result of decisions taken by policymakers and business leaders years or even decades ago. The sooner we start, the sooner the American people will start seeing the benefits.

The United States has one of the world's most restrictive policies when it comes to accessing resources on its Outer Continental Shelf. In an increasingly globalized world economy, this serves only to increase dependence of the US — and increasingly places our energy future in the hands of others. In recent years, we have

witnessed American officials requesting oil producing nations to boost output for our benefit.

There are no silver bullets or magic formulas when it comes to energy. Our nation requires a comprehensive “all-of-the-above” approach to energy.

We must be realistic. Exploration alone will not solve our energy dilemma. Likewise, conservation and efficiency efforts without increased production are a recipe for ongoing scarcity and economic decline.

Until we can bring new, renewable energy sources online in a big way in the decades to come, safe, environmentally-conscious oil and gas production off our shores holds the best prospect for providing our nation’s economy with the growing and secure energy supply it needs.

BP stands ready to work with Congress to develop the policy measures necessary to make this happen.

Exploration – Production Value Chain

Steps through the Exploration - Production Process