

Submitted Testimony of
Marvin E. Odum
President, Shell Oil Company
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Committee on Natural Resources
Oversight Hearing on
“Industry Perspectives on the Outer Continental Shelf”
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Mr. Chairman and members of the Committee,

Thank you for the opportunity to testify before the Committee. I would like to thank Chairman Rahall for having this series of hearings to examine the OCS and the role it can play in helping America meet the energy challenge, and for inviting me to participate in this hearing regarding the energy industry’s perspective on the future of the US Outer Continental Shelf.

These hearings are timely as a new Congress and a new Administration work to address the global economic recession, and our energy and climate challenges. I believe that all of these challenges – the economy, energy and climate change – should be addressed holistically.

Shell’s testimony today about our perspectives on the US OCS will focus on the following points:

- In order to meet the energy challenge, the US needs access to more domestic oil and gas and the US OCS offers a tremendous resource, much of which is untapped. The OCS is a critical part of the solution.
- Our experience in the Gulf of Mexico and elsewhere shows that we can produce oil and gas safely and efficiently, and our technology is helping us produce more with a smaller environmental footprint.
- Access to more OCS energy will help fuel the economy and provide additional stimulus to the economic recovery. It will mean jobs and benefits to the local community and revenues to the federal treasury. We will need more OCS oil and gas to transition to the renewable fuels of the future.
- In order to effectively access new areas, such as the Alaska OCS, we need to fix the regulatory system to make government work better. Federal agencies need to work together and be adequately funded. With this and a productive partnership between government, industries and other stakeholders, we can address concerns about adequate safeguards for communities and ecosystems.

About Shell

Before we address these points, I would like to provide a little background about Shell. We are an integrated oil and gas company, dedicated to meeting ever-growing energy demands efficiently and responsibly. Shell puts safety, sustainability, the global search

for viable new energy sources and innovative technologies at the heart of how we do business.

We have a robust portfolio in North America that consists of offshore and onshore exploration and production, unconventional resource development, oil products manufacturing and distribution, chemicals, LNG, hydrogen and renewables, including wind and biofuels.

In 2009, we expect to invest between \$31 and \$32 billion worldwide to develop a broad portfolio of energies.

Three Hard Truths

At Shell, our commitment to exploring for and developing new energy resources stems from our recognition of Three Hard Truths:

- **First**, global demand for energy has been accelerating and, when global economies recover, will continue to accelerate as emerging nations grow and their citizens acquire more buying power.
- **Second**, given this growth, existing and developing energy sources will struggle to keep up with demand and oil and gas resources will be needed for decades to come.
- **Third**, increased energy use will mean increased stress on the environment – a factor which must be addressed.

There has always been tension in the global energy system, but those strains are becoming more acute as the world grapples with these realities. Although the recent economic slowdown has tempered energy demand, this is only a temporary situation. When global economies revive and grow – especially those in China, India and other parts of the developing world – we will once again see accelerating energy demand. World energy demand is projected to increase by roughly 50 percent over the next 20 years and could double by 2050. To address this demand, we will need hydrocarbons, alternatives/renewables and significant progress in efficiency.

The United States imports more petroleum than it should and the cost is enormous. According to the EIA:

- More than 12 million barrels per day are imported, nearly 60 percent of our consumption.
- Imports cost the US more than \$600 billion last year.
- The US could produce more of our own resources, rather than having others produce theirs for us.

The choice is clear. We can continue to import increasing volumes of oil and gas, or we can develop more of our own domestic resources. Producing more oil and gas in our own country is a “no lose” proposition. It provides real economic and security benefits. With increased domestic production, less money is exported from the US, more money is invested in the US and federal revenues increase through royalties and taxes. This can be

done in a way that provides appropriate environmental protections based on solid science and an understanding of ecosystems and the impact of oil and gas activities on them.

As we move to meet the nation's energy needs, we recognize that environmental challenges, both changes in terms of climate change and local pollution, are increasing. We need to embrace policies that address not only the global energy challenge but also these environmental challenges. We can sum it up in five words: More Energy – Carbon Dioxide Solutions. Shell supports a cap and trade program to address CO₂.

The United States needs a national climate change policy that is built within the context of energy demand – realistically recognizing the amount of energy that will be required to grow the economy. Human ingenuity combined with business acumen and political will has helped us clean up rivers, improve air quality, and make acid rain in the US history. It is the same human ingenuity that will solve the climate piece of the challenges we face.

Fundamentally, it comes down to government taking its role in defining a framework. We need to create a viable, efficient and workable market; and free enterprise will innovate and solve this problem. The energy industry has a key role to play, including working on carbon capture and storage technology solutions. Currently, this technology is too expensive and our country lacks a regulatory framework to enable this technology.

Renewables and energy efficiency will play a greater role as well. Shell is investing heavily in sustainable next generation biofuels, including woodchips, biomass waste, and algae. We are testing new solar technologies and have a wind business in North America. Shell foresees strong future growth for alternative energy forms paced by:

- the speed of technological development,
- public and private investment capacity,
- government policies, and
- the affordability of energy supply.

Developing effective policies to address our energy and climate challenges can only be possible through joint, concerted efforts between governments, industry, consumers and other important stakeholders.

Economic Benefits

Shell believes that addressing the Energy Challenge head-on will result in jobs and economic benefits to the nation that can help us recover from the current financial crisis.

- The oil and gas industry is one of America's largest employers, with employees in all 50 states.
- The industry has some of the highest paying jobs in the US, about two times the national average.
- Domestic OCS oil and gas activities support other industries as well as local economies across the nation.
- The oil and gas industry makes a significant contribution to the Federal treasury and more access will mean more revenue.

- The more energy we produce in the US, the less we will need to import from other countries.

According to the US Minerals Management Service (MMS) revenues from the OCS leasing program are the second largest federal revenue source behind the US Treasury Department. MMS collected and distributed a record \$23.4 billion to state, American Indian and federal accounts from onshore and offshore energy production in 2008.

Employment in the energy sector can and will have a positive impact in pushing economic recovery. A recent study commissioned by the American Petroleum Institute showed that a substantial number of new jobs would result from making new areas available for oil and gas leasing. Oil and gas activities are an excellent source of employment. The industry directly employs about two million people at an average salary of \$93,000 per year and there are an additional four million jobs indirectly related to oil and gas activities.

Future OCS activities would produce more federal revenues. According to a study recently released by ICF International, development of America's oil and natural gas resources that have been kept off-limits (both offshore and onshore) could generate more than \$1.7 trillion in government revenue, create thousands of new jobs and enhance our nation's energy security.

A growing oil and gas sector has a positive impact on many other sectors of the economy. A few of the many industries that would benefit directly and indirectly from a growing oil and gas sector include iron and steel, aviation, electronics, agriculture, construction, chemicals, plastics, marine vessels, telecommunications, manufacturing, trucking and transportation. Most of these industries have expressed their support for expanded access to the OCS.

Our industry does not need funds from the stimulus package in order to create jobs and economic growth – we need access to new oil and gas resources.

OCS Experience: Gulf of Mexico

While Shell is committed to addressing the many facets of the energy challenge, the focus of this testimony will address the topic of the hearing "Industry Perspectives on the Outer Continental Shelf." Our experience in the Gulf of Mexico has shown us that:

- We can drill safely and efficiently with an ever-decreasing environmental footprint.
- Technology enables us to find and produce oil and gas further from shore and at greater depths.
- It can take years to develop the technology and innovations that can result in a commercial project.
- The 10-Year Lease Term is key to enabling us to explore deeper and more challenging areas.

We have been exploring the Gulf of Mexico safely and efficiently for decades. During that time we have developed a host of new technologies that have enabled us to find and produce oil and gas in ever-deeper waters, more than 8,000 feet, and at greater depths below the sea floor. At the same time, advances in subsea equipment and technology allow us to produce more oil and gas, from fields and wells scattered over a wider area, through sea floor pipeline tiebacks to a single platform. In practice, the number of producing wells one platform can handle is limited only by onboard processing capacity. All of this significantly minimizes the environmental footprint.

For example, our Mars tension leg platform produces about 140,000 barrels of oil and 165 million cubic feet of natural gas every day. It produces from 34 wells: 24 direct to the platform and another 10 remote wells producing through subsea equipment then feeding through single dedicated pipes up into Mars' processing and export systems. By itself, the Mars platform accounts for about 3 percent of all US crude production and 1 percent of the nation's total daily consumption.

The Gulf of Mexico remains a significant petroleum province and we expect to achieve further success through continued sound geological work, combined with leading-edge technology. Shell is one of the leading deepwater producers in the Gulf. Shell-operated total gross production in the Gulf averages more than 500,000 barrels of oil equivalent every day.

We believe that the Gulf of Mexico, and indeed the US OCS, has a bright future. But in order for this domestic resource base to continue to make its contribution to the US economy, we will need more running room through access to new areas in the Gulf, Alaska and elsewhere.

Environmental Record

Shell's record of preventing and minimizing oil spills in offshore drilling and production operations is excellent. Shell has had no significant offshore well blowouts in more than 30 years and no significant platform spills in more than 25 years – worldwide.

That record is reflected widely across industry due to advances in technology, such as subsea wellheads, control valves and robotics and diligent operations. According to the National Academy of Sciences less than 1% of hydrocarbon pollution in all U.S. waters now comes from drilling and extraction, while natural oil seeps contribute 63%. As a description of how diligently this is tracked and reported, Shell routinely tracks and reports oil spills of less than a tablespoon.

There has been much discussion about oil spills associated with strong hurricane activity in the Gulf of Mexico in recent years. As a result of Katrina in 2005, one of the strongest hurricanes recorded in history, Shell lost no oil from any Gulf of Mexico wells. We did spill 325 barrels of crude oil from a damaged oil storage tank on one platform. Wind and wave action dispersed it at sea. This was the only spill from our offshore assets that is directly attributable to this storm. Our Mars platform was severely damaged, but held fast in 200+ mph winds and 120-foot waves.

As a result of Hurricane Ike in 2008, it is estimated that Shell spilled 59.5 barrels of oil from a heavily damaged Pipeline Crossover Platform. This estimate was made after underwater inspection and again, the oil was dispersed by the elements during the hurricane. In all of 2008 Shell had about two-thirds of a barrel (about 28 gallons) spilled from all of our offshore drilling and production assets combined.

In 2007 there were 38 spills from our drilling and producing assets totaling only 27.24 gallons (less than 1/3 barrel). In 2006 the total spill volume was less than one-and-a half barrels (<63 gallons). These totals include all reportable spills down to drops of oil capable of producing mere sheen on the water.

There has never been an oil spill caused by a well blowout from offshore exploration and production in state or federal waters off Alaska or Canada – over 110 wells have been drilled.

Diligent Development of Leases

There has been much talk in recent months about oil companies not developing the leases they already have. There are some who are making a case that this is a justification for not offering new areas for oil and gas development. While the “use it or lose it” concept makes a catchy “bumper-sticker” slogan, the arguments that are being made to support it are not grounded in reality. In fact, we evaluate all of our leases. Prior to drilling there are a number of activities that are taken on our leases as part of our overall exploration program. These activities include, but are not limited to, geological model building, seismic acquisition and processing and reservoir analysis. The fact is, most are obtained in the exploration phase and the vast majority will not result in the finding of commercial quantities of oil and gas. This is one of the key commercial risks inherent in this business.

Lease expirations and delay rental payments are a key component of the offshore leasing program. The 5- and 10-year primary terms, during which lessees must make additional “delay rental payments” in the event that they do not conduct operations on a lease, provide the lessees with the necessary time to internally “develop” a lease before actual operations take place on the lease. At the end of a primary term, a lessee can no longer maintain the lease by making delay rental payments. At that point, it must have conducted operations in order to maintain the lease beyond the primary term. Thus, the MMS already has a “use it or lose it” system in place. Shell is a strong proponent of this system.

When we find commercial quantities, we develop them. If we determine that a lease is not prospective, we return it to the government. In fact, last December we relinquished 19 lease blocks in the Beaufort Sea to the Federal government when we determined that they were not prospective.

Shell holds 400 federal offshore leases in the Gulf and about a quarter of them (96) are producing. More than 80% are in deep and ultra-deep water. Shell will continue to be an industry leader in the Deepwater Gulf of Mexico, a frontier we pioneered more than a

decade ago. In the past five years, we have produced nearly one billion barrels of oil in the Gulf.

Shell has been a leader in finding oil and gas in greater depths in the Gulf of Mexico. The 10-year lease term has been essential to allowing the development of deepwater oil and gas leases where new technology is needed in order to economically find and produce commercial quantities of hydrocarbons. A case in point is the Perdido Development Project, a world-class project Shell and other participants are undertaking in 7800 feet of water and about 200 miles south of Galveston, Texas.

The project includes four discoveries on 10 leases in a 30-mile area. The first leases were acquired in 1996. At the time Shell acquired these leases, the deepest projects in the Gulf of Mexico were in about 3,000 feet of water. We did not have the technology to develop oil and gas resources in 7,800 feet of water depth, but we did have faith in our ability to develop new technology that would enable commercial development under the lease terms we were granted by the federal government.

Around the turn of the decade Perdido is expected to yield 100,000 barrels of oil per day and 200 million cubic feet of natural gas per day. It will be the deepest offshore oil development in the world, as well as the deepest drilling and production facility and the deepest subsea well (at Tobago in 9627 feet of water). I have attached a recent *Popular Science* magazine article entitled “The World’s Deepest Oil Well” that does a good job of explaining the technical feats involved in bringing Perdido on line.

Shell is involved in a number of near-field exploration projects where we are able to bring leases to the production phase relatively quickly because they are near existing development projects.

The Deimos field, in 3,000 feet of water, 130 miles south of New Orleans, produces oil and gas from three wells tied back to Shell’s Mars platform four miles away. Deimos is a prime example of existing infrastructure - a big platform, processing equipment and export pipelines – expediting the delivery of energy to market. The project moved from the go-ahead at final investment decision to first oil production in just 15 months. Stand-alone development would have taken at least seven years.

The Gulf of Mexico oil and gas leasing program has been extremely successful for more than 50 years, arguably one of the most successful leasing programs in the world. This success is based on the maintenance of a system that provides balance, certainty and continuity to both the companies that purchase leases and the government and taxpayers who benefit from it. The current system provides stable lease terms for the government and oil and gas companies.

OCS Experience in Alaska: A *de facto* Moratorium

In 2005, Shell was awarded leases in the Alaska OCS and we have acquired additional OCS acreage in subsequent federal lease sales. Our experience in Alaska has shown that:

- The area potentially has tremendous offshore energy resources that could provide a substantial benefit to the country.
- Despite being issued these leases, Shell has been unable to drill exploration wells due to legal challenges.
- The current regulatory system can be inefficient and hinder development of resources in new areas.

According to MMS, Alaska's OCS has enormous oil and gas potential with an estimated 25 billion barrels of oil and 122 trillion cubic feet of natural gas. Development of these resources will benefit the nation and the state of Alaska, both economically and as a bridge to future fuels. Shell has made a significant investment to explore and develop these resources in a responsible way but has not yet been allowed to take the first step. Litigation against the government has resulted in a *de facto* moratorium for the Alaska OCS.

Exploring for oil and gas offshore Alaska is not new. In the 1980s, Shell acquired federal leases and drilled seven exploratory wells in the Beaufort Sea. Although we found oil and gas, production from these wells was not economically viable at that time. To date there have been a total of 30 wells drilled in the Beaufort Sea and five wells drilled in the Chukchi. There have been over 110 wells drilled in the Canadian and US Arctic waters.

Shell returned to Alaska in 2005 and has participated in several Federal lease sales. We have paid the Federal Treasury nearly over \$2 billion for the right to lease the acreage. We currently have 434 leases in the Beaufort Sea and the Chukchi Sea. We have invested heavily in equipment, support vessels, baseline studies, and workforce training in order to take the first step to explore for oil and natural gas. We have assembled what is arguably the most environmentally sensitive and thoroughly responsible exploration plan in history.

However, as mentioned earlier, we have yet to drill a single exploration well. There are many lawsuits challenging Federal government actions in the Alaska OCS. Only one court in one lawsuit has issued a ruling that stops the work. In 2007, the US 9th Circuit Court of Appeals issued an injunction against the permit MMS issued approving Shell's plan of exploration. This injunction effectively blocked our exploratory work in both the 2007 season and the 2008 season. After nearly 16 months, in December 2008, the court ruled and ordered the MMS to vacate its approval of our Beaufort Sea Plan of Exploration pending further environmental studies.

Let me stress that I fully support the permitting work and the regulatory requirements that Congress has put in place to protect the environment. And I am not suggesting that this process become a rubber stamp – quite the opposite. My objective is to have a valid process that leads to a timely decision. Endless delays and inefficiencies should not be tolerated because it is a waste of effort and money for all concerned, Shell and the government and the taxpayer. Congress should consider legislative solutions that would, for example, require legal challenges to federal permits to be resolved in a reasonable timeframe. It should ensure that federal agencies are adequately funded so that environmental studies and other requirements can be performed on time. Finally, Congress should consider establishing an a pilot office in Alaska to coordinate the regulatory activities of all the

federal agencies that address energy activities in Alaska can share resources and work together on studies, permits and other activities regarding these projects.

All of this uncertainty in Alaska is keeping an important resource from the American people and is keeping benefits from the citizens of Alaska. Let remember that a successful OCS program in Alaska will:

- Create thousands of jobs in Alaskan and outside Alaska.
- Generate billions of dollars of direct revenues to the Federal treasury as well as to the state and local communities.
- Extend the life of the Trans Alaska Pipeline System – a valuable resource to Alaska and the nation.
- Improve the economic justification for the Alaska Gas Pipeline project.

We understand that we need to protect the environment and Arctic ecosystem. Shell is ready to move forward with an exploration program that does just that. We also need to remember that the potential energy security benefits of the Alaska OCS are great. I urge Congress to examine the issues raised here – the regulatory process and litigation – that currently hinder exploration in the Alaska OCS. The same issues will arise if and when other OCS areas are opened. It is imperative that we address them now and address President Obama's goal of making government work.

Key Policies Going Forward

Shell believes that there remains enormous energy potential on the OCS. Developing those resources can have a substantial impact on the US economy and jobs, energy security, federal revenues and coastal states and communities. Properly expanding our oil and gas development on the OCS requires policy that:

- Recognizes the resource potential and impact on the US economic recovery.
- Provides access to new areas on the OCS.
- Provides adequate environmental and community safeguards.
- Extends OCS revenue sharing beyond the four Gulf of Mexico coastal states.

According to the US Minerals Management Service, there are 466 trillion cubic feet of natural gas and more than 96 billion barrels of oil yet to be discovered on the Outer Continental Shelf, including Alaska. To put that in perspective, that is enough natural gas to heat 100 million homes for 60 years and enough oil to fuel 85 million cars for 35 years. If we are going to utilize this resource and make it work for the American people, we need for government to take action.

Until last year, most offshore areas in the US were restricted by Congressional withdrawal. Given the sustained high energy demand in the US and globally, access to these resources under the long-respected government lease planning program is imperative. While I believe that much can be accomplished through that process, other issues like the need to address the regulatory system and its vulnerability to litigation requires more scrutiny.

Shell would like to work with Congress and regulatory agencies to enable proper exploration and development in the OCS in areas including:

- Marine Sanctuaries and No-Go Areas
- Ecosystem Based Management
- OCS Revenue Sharing
- State's Rights Issues

I would like to emphasize that states and communities adjacent to offshore development will have infrastructure needs such as roads, housing and schools for workers and their families, enhanced sea port and air terminal facilities, greater demands for basic public services and other expenses common to economic growth. For that reason we encourage Congress to extend the revenue sharing made available to four Gulf of Mexico states through the Gulf of Mexico Energy Security Act to other states and coastal communities that have oil and gas leasing off their coasts. Providing revenue sharing to states and local communities with future oil and gas production off their coasts would not take money out of the federal treasury. It would bring new money into the federal treasury and provide an incentive for states and local communities to support such activities.

We encourage a healthy discussion of these issues through the 5-Year Planning process and through informative hearings like those that are being held in this Committee. Ultimately, the government needs to decide what areas need to be made available for leasing and under what conditions. Those decisions need to be based on science and we need to act quickly and decisively so that we can begin developing these new energy sources that will enable us to meet the energy challenge and create new jobs and revenues for the American people.

For too many years the energy and environmental debate has been framed as an “either-or” and “us-against-them” proposition. It is wrong to frame the OCS issue in this way. It is not a trade-off between energy and economic value versus the environment. It is counter-productive to pose it as these false choices. We need to come together around the facts, reject the myths and move forward on solutions that will fuel the economic growth.