

Statement

of

**John Hofmeister
President, Shell Oil Company**

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and
Global Warming

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Drilling for Answers on Oil and Gas Prices, Profits, and Alternatives

Chairman Markey, Ranking Member Sensenbrenner and members of the Committee, I am John Hofmeister, President of Shell Oil Company.

Shell Oil Company is an affiliate of the Shell Group, a global group of energy and petrochemical companies, employing approximately 104,000 people and operating in more than 110 countries and territories. Shell Oil Company, including its consolidated companies and its share in equity companies, is one of America's leading oil and natural gas producers, natural gas marketers, gasoline marketers and petrochemical manufacturers. Shell, a leading oil and gas producer in the deepwater Gulf of Mexico, is a recognized pioneer in oil and gas exploration and production technology.

I welcome the opportunity to testify today. It is, in fact, very timely because it comes at the end of an 18-month Shell journey called "A National Dialogue on Energy Security." We traveled to 50 cities and visited with more than 15,000 Americans to engage in meaningful dialogue on energy security.

I heard what you are hearing.

Americans are very worried about the rising price of energy – the cost to fill their cars, as well as the cost to heat, cool and light their homes and businesses. These cost increases are hitting consumers hard, particularly the poor and those on fixed incomes.

Let's look at historical data on the price of a barrel of crude and the average price of regular gasoline. Since April 2004, the price of a barrel of U.S. light sweet crude has gone up by \$70, which is a 300 percent increase. In this same period, the average U.S. nationwide price of regular gasoline at the pump went up 72 percent. Looking just at the last 12 months, the price of a barrel has increased \$40, or more than 60 percent. The price of regular gasoline has gone up 8 percent.

There is no single reason or simple explanation for the recent run-up in crude oil prices. Rather, a combination of circumstances, some short-term and some long-term in nature, is playing a role.

Let me highlight some of these factors.

- The rate of growth in global demand for oil has accelerated in recent years. This is largely the result of rapid economic growth and industrialization in countries like China and India and also sustained subsidies on oil products in oil exporting countries.
- Geopolitical events, such as the disturbances in the Niger Delta, have reduced supplies available to the international market.
- The cost of materials, labor and engineering services has skyrocketed. This in turn drives up the cost of new energy projects and the cost of developing new energy supplies.
- There is a shortage of capacity in energy services and materials. This shortage is in some instances leading to project delays and lengthening the time it takes for new projects and new supplies to come on line to meet increased demand.
- Access to oil and gas resources is becoming more difficult around the world. This, coupled with more stringent fiscal conditions governing investment in several major oil and gas-producing countries, adversely affects the economics of new energy projects. It may lead to reductions in or delays of new investment in oil and gas supply capacity.
- The oil and gas resources that are available for development are increasingly found in extremely difficult or hostile areas – areas that are more technically challenging, more remote from markets, require more infrastructure, carry greater technical risk, have longer development lead times and are more costly to develop than has been the case during the past 30 years.

In addition to the above factors specific to oil and natural gas, developments in the financial market have also contributed to the rise in prices.

- The fall in the value of the U.S. dollar, relative to other currencies, has reduced the equivalent revenue available to oil exporting countries and also partially shielded other oil importing countries from the impact of rising dollar-denominated oil prices.
- Global investment funds are rebalancing their portfolios to include a higher portion of commodities, including oil and natural gas, and this trend has accelerated with recent weakness in equity markets.

Most of these factors are not controlled by or even much influenced by the actions of oil companies. However, our business is developing energy and delivering it to consumers in the most efficient and cost-effective manner we can. We will continue to strive to contain cost pressures and to deliver these energy products to consumers at competitive prices in a secure and reliable manner.

Today I will talk about three issues related to the energy future of America. First, the global demand for energy and the supply outlook. Second, the investments that Shell is making to increase energy supply. Third, actions that policymakers, like you, can take to address the energy challenge.

Energy Demand and Supply

The world will demand an additional 35 million barrels of oil per day by 2030, which is a 42 percent increase over today's demand. It will demand 64 percent more natural gas than we are producing now. The United States accounts for 25 percent of the world's energy demand. Americans use 10,000 gallons of oil – enough to fill a backyard swimming pool – every second of every day. We use 20 railcars of coal every minute.

These are sobering facts. How will this demand be met? Alternative and renewable energy sources will play a role and grow substantially. Energy efficiencies will improve as new technologies are developed and implemented. But leading experts forecast that oil and natural gas will continue to meet more than half of the world's energy needs in 2030.

As U.S. demand for oil and gas has been growing, U.S. production has fallen steadily for the last 35 years. Oil production in this country peaked in the 1970s. As U.S. consumption of oil has doubled, domestic oil production has fallen off nearly 40 percent. Why? In large part, this is the result of government policies that placed important oil and gas resources off limits. In 2006, the U.S. imported 3.7 billion barrels of oil to meet domestic demand, which is more than seven times the amount imported in 1970.

As we increased imports to meet our domestic energy needs, a new concept of “resource nationalism” was emerging in resource-rich nations around the world. This concept has changed the dynamics of global energy development. Thirty years ago, national oil companies owned by or

affiliated with governments were either non-existent or small players. Today, these national oil companies own as much as 90 percent of the proven oil reserves in the world. While investor-owned oil companies – some of which are here today – hold just six percent of proven reserves.

So what is Shell doing? We are making significant capital investment to produce more energy – and more kinds of energy – to meet global demand. Enormous amounts of capital are required to fund our huge-scale projects and our cutting-edge research.

Let me share with you some statistics:

- Today, we have double the number of new projects under construction that we had in 2004.
- Last year, we spent some \$25 billion on capital investment worldwide developing energy projects.
- This year, Shell will spend \$28 billion to \$29 billion – the largest capital expenditure program in the oil and gas industry.

Shell has invested in alternative and renewable technologies, as well as additional conventional and new unconventional energy sources.

Wind

Shell is becoming a significant wind energy producer. We are involved in 11 wind projects spread across the U.S. and Europe. The total capacity of these projects is around 1,100 megawatts (Shell share is about 550 megawatts) with 845 megawatts in operation and more than 260 megawatts under construction. Out of the total capacity, almost 900 megawatts are in the United States where we have wind farms in Texas, Colorado, Wyoming, California, Iowa and West Virginia. More wind farms are under development. Our activities focus on the development and operation of commercial-scale wind developments that can add significant power and capacity to the grid.

Solar

Shell is an international developer of thin-film solar technology. We believe thin-film technology – although in the early phases of development – could

prove to be the most commercially viable form of photovoltaic solar technology to generate electricity from the sun's energy.

Biofuels

Shell is making a major commitment to the use of biofuels in transport fuels. Shell is the world's largest blender of biofuels by volume and one of the world's largest distributors of transport biofuels, at around 800 million gallons a year. Shell buys and sells 400 million gallons of ethanol a year in the United States, about 11 percent of the total U.S. ethanol production.

More important, however, Shell is a leader in the development of advanced biofuels technologies. Like most energy companies, we are engaged in the race to develop these technologies and fuels and make them commercially viable.

Shell believes that cellulosic ethanol holds particular promise. In the last six months, we have announced three new or expanded partnerships in cellulosic research and development projects in the United States, including fuel from algae and a promising new technology that could convert sugars directly to gasoline, rather than ethanol. This technology could potentially eliminate the need for special infrastructure and the low blend rates now required for standard vehicles.

Hydrogen

Shell is a leader developing transportation solutions with hydrogen. We are building hydrogen infrastructure in the United States, Europe and Asia. Right here in Washington, D.C., approximately three miles from Capitol Hill is the nation's first integrated gasoline/hydrogen station at our Shell station on Benning Road.

Gasification and Gas-to-Liquids Fuel

The Shell proprietary gasification technology is being used to convert coal and biomass into a cleaner fuel for power generation and other applications. We also have a leading position in Gas-to-Liquids (GTL) technology for the production of cleaner transportation fuels. Our Pearl GTL project under construction in Qatar will be the world's largest plant converting natural gas into transportation fuel. GTL from our plant in Malaysia is mixed with diesel and sold at 5,000 Shell stations in 11 countries.

Liquefied Natural Gas

Shell is an industry leader in the production of liquefied natural gas (LNG). When projects under construction in Australia, Sakhalin and Qatar are completed, our LNG production will have increased 80 percent above 2005 levels. In the United States, we have significant regasification capacity at two existing LNG terminals and plans for development of a new terminal in the Northeast.

It is important that we put these energy sources into proper perspective. As I mentioned earlier, alternative and renewable energy sources will not make a significant contribution to the energy mix for many decades to come. Therefore, Shell continues to make significant investment in producing and refining conventional oil and gas.

Oil and Gas

Exploration and Production: The Shell Exploration & Production (E&P) North American business is dedicated to growing the North American energy supply, a commitment underpinned by a history of investing billions each year, developing future domestic energy sources and defining new frontiers.

In the Gulf of Mexico, our exploration strategy is to drill prospects with large potential volumes and pioneer new plays. We are involved in a number of material prospects. 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 there. The costs of deepwater exploration and production are immense and rising – from buying leases to bringing product to market. In November 2005, I told the combined panel of the Senate Energy & Natural Resources and Commerce Committees that the industry average cost of renting a deepwater oilrig was approximately \$200,000 a day. Twenty-two months

later, rigs were in such scarce supply that the cost of chartering one had climbed to more than half a million dollars a day. That was just the rig rental. The *total* daily costs of drilling a deepwater well – with the costs of pipe, support and all the rest – are even higher. In 2007, the average daily cost for a deepwater exploration well in the Gulf of Mexico was \$759,000.

Shell is also pursuing natural gas prospects in a number of onshore North American basins. It is our goal to build new supply positions by developing both conventional and unconventional gas resources. Today Shell is drilling for new natural gas supplies in the Gulf of Mexico, Texas, and the U.S. Canadian Rockies.

Petrochemicals: Shell has a world-class manufacturing organization. By running our facilities safely, reliably and efficiently, we achieve consistently high levels of operational excellence that help us better meet customer demand. In the U.S., refineries operated by Shell and our joint venture, Motiva, currently have a refining capacity of nearly 1.4 million barrels per day. Motiva is spending around \$7 billion to double the capacity of its refinery in Port Arthur, Texas. This project, when finished, will be one of the largest refineries in the United States and in the world. By adding 325,000 barrels-per-day capacity, the expansion is equivalent to building a new refinery.

Oil Sands and Oil Shale: Shell is investing in the technology and infrastructure to develop vast oil sands in Canada and oil shale in the United States. The Canadian resources can benefit the United States fuels market. Shell has a 25-year research and development program to access oil locked in shale rock in Colorado, Wyoming and Utah. Congress should pursue policies that ensure that these critical energy resources can be responsibly developed to help meet our nation's energy challenge.

This brings me to my closing point.

What policymakers can do to address the energy challenge.

I invite you to read the attached report, “A National Dialogue on Energy Security: The Shell Final Report,” which highlights the findings of our tour across America. It lays out a 12-point plan to address future energy needs.

For today, however, let me highlight six points for you to consider.

First, I urge policymakers to look at the facts. Energy demand is rising to fuel economic growth. Oil and natural gas will be the major energy sources for decades, even as we grow new technologies. We cannot rationally decide among the hard choices ahead of us without understanding the basic issues of energy security.

This brings me to the second point. In general, the United States tends to resist the need to develop new domestic energy sources. Can we afford to continue this approach while energy demand and costs are rising? Oil and gas development can and should occur in an environmentally responsible way. In 2006, Congress took a significant step in opening some new oil and gas prospects in the Gulf of Mexico to exploration and development while, at the same time, providing those energy-producing states and local coastal communities in the region with a revenue stream to help ensure economic and environmental stability. Congress should extend Outer Continental Shelf revenue sharing for all coastal areas adjacent to offshore development and should make more areas available for offshore leasing.

Third, we need more than oil and gas to meet demand. We need all forms of energy – plus conservation and energy efficiency. I commend Congress for passing the Energy Independence and Security Act of 2007 with more stringent CAFE standards. These standards and the other provisions in EISA will do more to increase energy efficiency than any other piece of legislation in recent memory. Congress should continue to adopt policies that encourage conservation, and companies like ours must continue to think more creatively about products and services we can develop to help customers use less energy. Consumers – and that means all of us – must think more about our own energy footprints: when and how we drive, what we buy, how we work and the kind of world we want to create for coming generations.

Fourth, government agencies must have the staff and the resources needed to do the environmental analyses and other scientific studies that must underpin energy projects of all kinds. This data is critical and must be completed in a thorough and timely manner. Therefore, Congress should consistently authorize and appropriate funding for these key federal agencies to hire, retain or contract the expertise needed.

Fifth, Shell supports the adoption of a federal law to reduce greenhouse gases. Specifically, we support a cap-and-trade program coupled with sector approaches. Such a program must include policies that lead to commercialization of a carbon capture and storage (CCS) technology. Congress should ensure that we address CO₂ emissions as we make the transition away from fossil fuels to new energy sources.

Finally, we need individuals skilled in math, science, technology and engineering to build the workforce of the future that will bring new energy sources to America. School curricula should include more study of energy – where it comes from, how it is used and the impact of the energy choices we make. And these lessons should begin at an early age, to shape consumer behavior and encourage curious young minds to become our next generation of energy engineers. We welcome Congressional initiatives that will help secure a future energy workforce.

I am aware that Chairman Markey has stated that the nation's energy challenge requires a commitment on the scale of the Manhattan Project during World War II or the space program of the 1960s. I agree with him. I am hopeful that policymakers, the private sector and the American people will come together on this important topic. We need to commit resources to all existing and potential energy sources, as well as innovations to address supply, demand and carbon footprint.

Thank you. I am happy to answer questions you may have.