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Select Committee on Energy Independence and Global Warming

U.S. House of Representatives

On

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Introduction

Good morning, Mr. Chairman and Members of the Select Committee on Energy Independence and Global Warming. My name is John Lowe, and I am executive vice president of Exploration and Production for ConocoPhillips. In that capacity, I am responsible for worldwide oil and natural gas exploration, development and production for the company.

ConocoPhillips appreciates the invitation to testify about the present energy situation facing the United States and the world, as well as our activities to encourage increased supplies of alternative and renewable energy. We share your and the American public's concerns about high consumer energy prices and welcome the opportunity to discuss our own efforts to develop new energy sources that will improve the nation's energy security, as well as what we believe the government should do to facilitate the process.

Let me begin by briefly describing ConocoPhillips. We are an international, integrated energy company, headquartered in Houston, Texas and operating in nearly 40 countries. Among U.S.-based companies, we are the third-largest integrated energy company based on market capitalization, the second largest domestic refiner, and a leading natural gas producer. In 2007, we had annualized revenues of $187 billion, assets of $178 billion and approximately 32,600 employees at year-end.

As you requested, my testimony here today will address the following subjects:

- ConocoPhillips' activities in alternative and unconventional fuels,
- ConocoPhillips' activities to increase U.S. conventional oil and gas supply,
- Energy industry trends, and
- The path to a sound energy policy.

However, before I get to these topics I would like to discuss the need for cooperation between government and industry in forging solutions to our energy challenges.

Need for Cooperation Between Government and Industry

The United States faces some daunting energy challenges – improving the security and affordability of energy supplies, while also reducing the environmental footprint of the nation's energy use, including reducing greenhouse gas emissions. Responding effectively to these challenges will require unprecedented cooperation between government and industry. ConocoPhillips is eager to do our part on both fronts. We will describe today the substantial investments we are making to develop new energy supplies and our support of mandatory regulation of carbon. We believe that a regulatory framework and carbon avoidance price is needed to allow our company and others to make investments in improving efficiency, in developing low-carbon energy sources and in capturing and storing carbon dioxide from fossil fuels. In support of this belief, we joined the U.S. Climate Action Partnership to call upon government leaders to enact a workable architecture for a mandatory national carbon cap and trade program with international ties.

While we are optimistic about what industry and government could accomplish collaboratively, we must share our frustration with the present state of affairs. We are hopeful that, through dialogues such as today's, our industry and the government can forge a better working relationship that will be essential in enabling America to address its energy needs, as other countries around the world are doing. We acknowledge that the industry has not done a good job of educating the public or Congress about our business in the past. Because of this oversight on our part, many policies emanating from Capitol Hill do not reflect how global energy markets actually function, and therefore will not improve the situation. These shortcomings must change so that together, we may progress toward improving U.S. energy supply security on behalf of consumers. For our part, ConocoPhillips has stepped up our public outreach efforts on energy issues in recent years. For example, last year our executives held "conversations on energy" with community leaders in 35 cities across the United States to discuss energy issues and solutions.

Unfortunately, at a time when the world needs more energy, rising worldwide resource nationalism in other countries and limited domestic access to resources here at home are impeding our industry's crucial efforts to replace current production with new reserves. In other countries, governments work closely with their domestic energy industry to assure access to resources and build critical energy infrastructure.

We must point out that as our nation develops policies to increase supplies of renewable and alternative energy supplies, we must not overlook the vital need to also encourage the development of conventional supplies of oil and natural gas. To focus strictly on one and not on both, is certain to create supply problems in the near future. As Congress periodically debated the architecture of a national energy policy, the industry has consistently stressed the need for more resource access. Gaining this access is, in fact, critical to lowering energy prices. Yet, domestic access restrictions are increasing. To illustrate this point, during the most recent energy bill debate, the House of Representatives voted to ban drilling in Colorado's Roan Plateau Basin, a potentially prolific natural gas producing area, further decreasing the areas of the U.S. accessible to resource development. Development of domestic natural gas offers the dual benefits of improving U.S. energy security and lowering carbon dioxide emissions. We cannot see a viable policy solution to either challenge without an increased role for domestic natural gas.

Additionally, we have had many discussions on Capitol Hill in which our industry was urged to build new domestic refineries or expand existing facilities. Yet today, we face state and local government roadblocks that often delay planned refinery expansions, along with an uncertain regulatory climate, which increases the cost of producing more clean-fuel products and of processing the more difficult crude oils that increasingly constitute available supplies. In cases where infrastructure is clearly needed to serve the national interest, Congress should expedite federal and state permitting processes to ensure there is a balance between federal, state and local, and special interests. We also find that investors are confused about whether the industry's efforts to expand refining

capacity actually conflict with the many other Congressional policies calling for reduced dependence on oil.

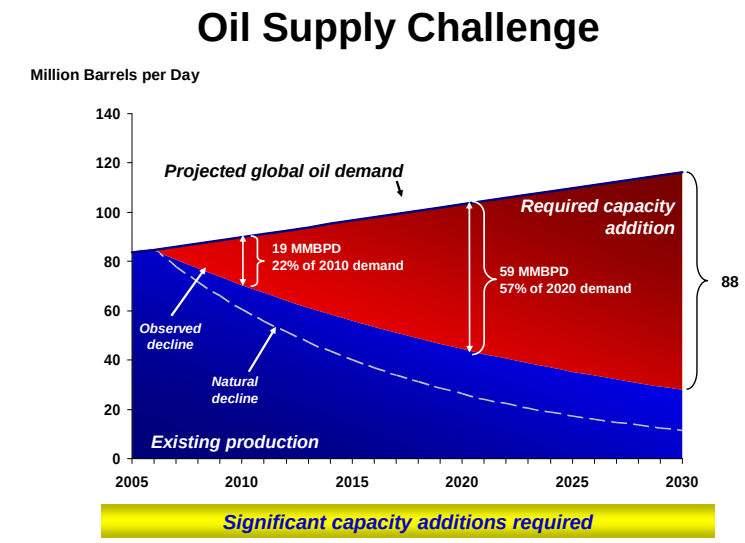
ConocoPhillips strongly favors rapid development of alternative sources, but there are many challenges that must be overcome before these alternatives are commercially viable. For example, the National Petroleum Council recently reported that potential obstacles to wider use of renewable fuels include the need for "expanding rail, waterway, and pipeline transportation; scaling up ethanol production plants and distribution systems; developing successful cellulosic ethanol conversion technology; and maximizing the potential of arable land."[1] With potential advances in technology and infrastructure improvements, these obstacles can be overcome, but we must realize that alternatives cannot be developed overnight and that our dependence on conventional resources will continue into the foreseeable future. Overestimating how quickly the United States can transition to new fuels will likely lead to inadequate development of conventional supplies and higher prices at the pump.

Most energy demand projections indicate that even with rapid penetration of alternative-energy technologies, accompanied by substantial reductions in carbon dioxide emissions, fossil fuels must still supply at least two-thirds of global energy by 2030.[2] Indeed, there is an apparent misunderstanding of the enormous scale of fossil-fuel use – for example, the world currently consumes 86 million barrels per day of oil – or 40,000 gallons per second. There is also a lack of understanding of the enormous scale of existing infrastructure or the ongoing investment required merely to maintain existing production. For example, the United States has 200,000 miles of oil pipelines and 280,000 miles of natural gas pipelines that required a century of construction.[3] Oil and natural gas must serve as important bridge fuels as we move toward alternative sources. If the United States is to improve its energy security, Congress must ensure that the nation has sufficient conventional oil and gas supplies, even as it works to develop alternative energy supplies. Figure 1 below shows how much oil production will need to be added to

[1] National Petroleum Council, "Facing the Hard Truths about Energy," 2007, page 21
[2] International Energy Agency, "World Energy Outlook 2007"
[3] National Petroleum Council, "Facing the Hard Truths about Energy," 2007, page 12

replace the decline in existing conventional oil production and expand supplies. It will take unprecedented investment to achieve the production levels required to satisfy global oil demand. In fact, the International Energy Agency estimates that through 2030, nearly $10 trillion of investments in oil and natural gas exploration and production, refining, transportation and infrastructure will be required, averaging about $400 billion annually.[4]

Figure 1



Source: Based on IEA World Energy Outlook 2007
Natural decline forecast at 8% rate
Observed decline forecast at 4.5% rate requires substantial investment

The Committee has asked us to address the question of what ConocoPhillips is doing to develop alternative fuels. We believe that it is critical for the nation and our company to diversify into alternative energy sources and support efforts to that end. Over two years ago, Tyson Foods and ConocoPhillips began discussions that led to an unusual relationship between the two companies. We developed a process that married Tyson's technologies in dealing with by-product animal fats and greases with our refining know-how, to produce a clean, renewable diesel fuel that, unlike other biodiesel fuels, can be transported via pipelines. We were excited about this new venture and have been told by many lawmakers it represents the very kind of partnership and innovation that is needed to advance alternatives and reduce dependence on imported oil. Yet today, we find that partnership very much in question due to legislation passed in the House that denies us

[4] International Energy Agency, "World Energy Outlook 2007," page 95

the same blending tax treatment provided to all other renewable and biodiesel producers. We cannot compete in a market where a few competitors are singled out for discriminatory treatment. Policies that encourage alternative fuel growth must be technology and feedstock neutral. To do otherwise will surely limit the growth of alternative fuels in this country.

We are also concerned that recent Congressional tax proposals would reduce funds available to invest in developing new energy supplies and impede the ability of American companies to compete in the global marketplace for resources. This would further tighten the energy market – the opposite of Congress' intent. This nation already learned this lesson from the windfall profits tax imposed on the domestic oil industry between 1980 and 1988. According to the Congressional Research Service, this tax reduced domestic oil production by as much as 6 percent and increased oil imports by as much as 16 percent.[5]

Some tax proposals would target only a handful of the integrated major energy companies – a patently unfair approach that does not acknowledge that these companies already pay their fair share of taxes. In a recent survey of 80 diverse American companies, ConocoPhillips' effective tax rate between 2004 and 2006 of 43.6 percent was the highest, about 14 percent higher than the average.[6] Income taxes paid by domestic energy producers have already increased by 460 percent between 2002 and 2005.[7] Income taxes are only one of the ways we contribute to government revenues. We also pay royalties, production and excise taxes, and lease bonuses, which are paid whether you discover hydrocarbons or have a dry hole. When you take all these other forms of government payment into account, our effective tax rates are much higher. For example, our incremental fiscal government take rate in Alaska is about 85 percent at current prices.

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[5] U.S. Congressional Research Service, "The Windfall Profits Tax on Crude Oil: Overview of the Issues," September 12, 1990, page 2

[6] Martin A. Sullivan, "Reported Corporate Effective Tax Rates Down Since Late 1990s," Tax Notes, February 25, 2008

[7] U.S. Department of Energy, Energy Information Administration, "Performance Profiles of Major Energy Producers 2006," Table B12 ($14.5 billion in 2002 to $81.5 billion in 2006)

We must change the current adversarial relationship between industry and government in order to accomplish either goal of improving energy security or reducing the risk of climate change. We have some suggestions on policies that could be enacted to help achieve these goals and will share them later in this testimony.

ConocoPhillips' Activities in Alternative and Unconventional Fuels

Renewable energy

ConocoPhillips is already a large blender of conventional ethanol in the United States. As the nation's second-largest refiner and fuels producer, we are thus a large blender of ethanol into fuels. In 2007, our marketers in the United States sold about 425 million gallons of ethanol, equivalent to a nationwide blend rate of 4.7 percent. Additionally, we are rapidly expanding our U.S. ethanol blending capabilities. We have expanded capability for blending ethanol to 95 terminals this year and are evaluating additional expansions. We are selectively adding biodiesel blending capabilities, although this fuel is currently priced higher than petroleum-based diesel fuel, and the economics of blending are challenged.

We are test marketing unbranded E-85 under our branded canopy in a number of states with over 2,500 potential sites, provided the marketer meets certain image, safety and fuel-quality guidelines. Results from our test are pending; but industry data has shown that the consumer response to E-85 to date has not been very good. Many retailers who have installed E-85 dispensers report insufficient consumer demand to justify the expense of the conversion. The problem is that there aren't enough vehicles with flexible fuel capability today (only about 3 percent of the U.S. passenger fleet), and consumers who own flexible fuel vehicles are often unaware of it. In addition, consumers are concerned about the roughly 25-percent reduction in gas mileage using E-85 versus conventional gasoline.

ConocoPhillips is also test marketing biodiesel, allowing under-the-canopy sales of unbranded B11 in Illinois and of branded B5 in many farm states, again provided that the marketer meets specific image, safety and fuel-quality guidelines. Over 800 branded sites could potentially pilot market biodiesel in five states.

The company is also engaged in development and production of new biofuels that have a better environmental footprint than existing sources. We currently produce renewable diesel fuel at our Whitegate refinery in Ireland using vegetable oils as a feedstock and are test manufacturing the process at our Borger refinery in Texas as part of our arrangement with Tyson Foods to utilize by-product animal fat as a feedstock. Our process produces diesel fuel that does not have the same performance and transportation issues as biodiesel. The technology is performing well, but the economics are threatened by rising raw material costs and the prospective loss of the previously-mentioned federal tax credits that are available to competing biomass-based diesel fuels. We are prepared to spend $50 million this year to expand production if the technology is economically viable.

ConocoPhillips conducts or funds internal and external research on new biomass fuels and has a joint development agreement with Archer Daniels Midland to develop fuels from agricultural waste. This effort could enable biomass to become a refinery feedstock that yields market-compatible fuels. We also have a major relationship with Iowa State University to research all phases of biofuels. In addition to funding new advanced biomass pathways, our eight-year $22.5 million grant will fund research to understand and support environmental sustainability, crop improvement and production, harvesting and transportation and the impact of biofuels on economic policy and rural sociology. We are also a founding member of the Colorado Center for Biorefining and Biofuels, a cooperative research and educational center devoted to the conversion of biomass to fuels and other products.

Further, ConocoPhillips has created an internal group dedicated to evaluating opportunities to invest in solar, wind and geothermal projects. We have also committed

$350,000 to Virginia Tech University as the primary corporate sponsor of a solar-powered home that will showcase advanced residential solar and energy efficiency products. This home will be entered into a national competition in Washington, D.C. next year.

Alternative automotive technology

ConocoPhillips has participated in the FreedomCAR and Fuel Partnership with the U.S. Department of Energy, automobile manufacturers and other fuel providers since 2003. We have played a lead role in several committees and participate in four out of the five technical teams, including the teams for hydrogen production, storage and delivery.

We are also working to facilitate wider use of electric vehicles by developing high-performance materials for lithium-ion batteries, a critical component in these vehicles. Performance of the cathode and anode parts determines overall battery performance, and ConocoPhillips CPreme® graphites are the highest-performing anode materials currently available for lithium-ion batteries. We currently supply anode material in small lots, but are rapidly scaling up to meet growing transportation demand. Using the technology platform for the anode material, we are also developing high-performance cathode material to help reduce the cost of batteries, while meeting demanding automotive-industry performance standards. This product will soon be available for testing by battery manufacturers.

Gasification and combined heat and power

ConocoPhillips' E-Gas™ technology is a leading, commercially proven gasification technique. We are developing projects based on this technology and licensing it to others to utilize in producing synthetic natural gas, electrical power and a variety of chemicals. Syngas can replace increasingly expensive oil or natural gas-based fuels and feedstocks currently supplying manufacturing plants, and may thus help sustain their financial viability and employment base. Further, a coal-to-synthetic natural gas plant with carbon

capture and storage can feed a conventional gas-based power plant, yielding about half the carbon dioxide emissions of a conventional coal-based power plant. In addition, integrated gasification combined cycle (IGCC) power plants based on E-Gas™ technology offer an environmentally superior way to produce electrical power from domestic coal and petroleum coke resources.

Our two major E-Gas™ equity gasification projects could be on line by 2014, at total expected gross capital costs of up to $7 billion. One, a joint venture with Peabody Energy to develop a coal-to-substitute-natural-gas facility in Western Kentucky, would produce up to 70 billion cubic feet per year or 1.5 trillion cubic feet in 30 years – equivalent to a very large natural gas field. In the second, ConocoPhillips is developing a petroleum coke gasification project at our Sweeny refinery on the Texas Gulf Coast. It will utilize 5,000 tons per day of petroleum coke. Its location provides multiple options for product integration. The resulting carbon dioxide production of 10 million metric tons annually from these two projects could be utilized in enhanced oil recovery operations or sent to storage. Here again, we need government's help in establishing a conducive legal and regulatory framework to address carbon, capture and storage.

ConocoPhillips believes that wider use of combined heat and power facilities is an important part of the solution to conserve fuel and reduce carbon dioxide emissions. We operate about 2,000 megawatts of electricity generation capacity using this technology and have encouraged third parties to build such capability at four other ConocoPhillips facilities.

Heavy oil and unconventional oil and natural gas

ConocoPhillips is presently undertaking significant research to improve the recovery of heavy oil and unconventional oil, such as oil shale, and improve energy efficiency throughout the production, transportation and processing value chain. We are also undertaking research and development focused on reducing our environmental footprint in terms of greenhouse gas emissions, water and land use.

Other areas of focus for our research and development efforts include improving recovery of challenged natural gas and developing methods to commercially produce methane hydrates.

Carbon dioxide capture and storage and water usage

ConocoPhillips believes that development of carbon capture and storage (CCS) technology is essential, in that, it will improve the environmental acceptability of available fossil fuel resources. The company funds internal research as well as university research programs in the United States, Canada, Australia, Norway and the United Kingdom that are investigating CCS technology and how it can be customized to meet our industry's needs and the needs of our specific sites.

We are in the planning phases for selecting several possible CCS sites in the United States and other countries. To facilitate this effort, we have allocated personnel in the geosciences, reservoir engineering and other specialties to analyze seismic and engineering data to select the most appropriate sites and develop understanding of the basin containment mechanisms and optimum storage sizes.

ConocoPhillips is also engaged in a number of research projects with the U.S. Department of Energy (DOE). We are operator of a scientific test of potential carbon dioxide (CO_2) injection rates into the major coal formations of the San Juan Basin. We expect to soon receive DOE's authorization to commence drilling and injection. We are also actively engaged with two other DOE regional partnerships – WestCarb and the Midwest Geological Sequestration Consortium. We are a partner in the CO_2 Capture Project 2, a research consortium operated and funded by eight major energy companies, the European Union, Norway, and DOE. The consortium reviewed 250 research proposals and has focused on the most likely to succeed, conducting more than $60 million in research projects to develop understanding of surface capture, subsurface storage applications, and methods to monitor and verify storage. The program is working

to make CCS more affordable, secure and technically viable. We are active at the executive board and scientific levels.

ConocoPhillips is also active in these international research consortia:

- CACHET – Partly funded by the European Union and 28 international members, this consortium focuses on capture technology.
- International Energy Agency (IEA) Greenhouse Gas R&D Programme – We are a funding member and serve on the board.
- CO_2CRC – The Cooperative Research Centre for Greenhouse Gas Technologies (Australia) is one of the world's leading collaborative research organizations focused on carbon dioxide capture and geological storage (geosequestration).
- CO_2ReMoVe (European Union) – This is a $20 million project for carbon dioxide monitoring technologies in the subsurface.

As for other carbon emissions reduction solutions, we understand the major point sources of emissions in our operations and have analyzed and ranked potential mitigation projects. Projects to improve energy efficiency and eliminate fugitive emissions are already underway. A cost for avoiding carbon is also considered in our evaluation of major new projects.

ConocoPhillips believes that reducing the footprint of energy production on water resources will help improve the sustainability of both conventional and alternative energy sources. We are measuring our freshwater usage and developing detailed water assessments of selected business units, bringing greater focus to water management as a fundamental component of business planning. We recently announced the establishment of the Qatar Water Sustainability Center, with the long-term vision that it will become a corporate center of excellence for water-related technologies. We have hired a world-class membrane expert to lead our technology development and application efforts at this center, which will be additive to technology work under way in our existing Oklahoma laboratories. In the North Sea, we have installed new treatment technologies to

substantially reduce the hydrocarbon component of water discharged to the ocean. ConocoPhillips Canada is planning to recycle 95 percent of the water utilized in its steam-assisted gravity drainage for heavy oil in-situ operations.

Activities to Increase U.S. Conventional Oil and Gas Supply

Fossil fuels will continue to provide an important bridge to the time when alternative energy sources are available in significant quantities. This bridge is likely to be necessary for decades given the scale of the world's current energy consumption and the massive infrastructure investment and construction that would be needed to replace existing energy infrastructure. Thus, it is important that the energy industry retain the capability and opportunity to invest sufficient capital in economically attractive traditional oil and gas opportunities in order to continue meeting U.S. and global energy demand.

Upstream investment and exploration

ConocoPhillips has significant investments planned to develop oil and natural gas resources in North America. In 2008, we will spend more than $6 billion in North America, with two-thirds of that amount in the United States.

North America is a key exploration focus area for ConocoPhillips. We predominantly operate in large resource plays onshore and the deepwater trend in the Gulf of Mexico offshore. In the Arctic we have exploration acreage in the Chukchi Sea, Mackenzie Delta area and Canadian arctic islands. In fact, we are planning on spending more than $890 million this year alone for our high bids in Gulf of Mexico and Chukchi Sea lease sales.

We are also conducting considerable research and development to improve recovery rates from existing resources, which could add considerably to the resource base. For example, we are developing and deploying improved seismic acquisition, processing and interpretation techniques to increase recovery from existing assets – such as through improved well placement that accesses new resources that were previously difficult to

image. Another example is our research into the next generation of improved/enhanced oil recovery techniques (e.g., nano-technology and enhanced water flooding). A third example is applying alternative techniques to facilitate cost-effective drilling in challenged resource plays, thus improving access and recovery. Among the techniques used are new mobile drilling rigs in the Barnett shale trend and horizontal wells in coal bed methane trends.

Heavy oil

The Canadian oil sands are projected to become an increasingly important source of oil for the United States, particularly considering recent declines in heavy oil production in Mexico, Venezuela and California. The Canadian oil sands are projected to approach 20 percent of U.S. oil supplies by 2020.[8]

ConocoPhillips has a leading land position in the Canadian Athabasca oil sands and is actively investing to produce this oil, and then transport it to the United States for processing at our refineries. We have access to over 15 billion barrels of net potential oil resources, and plans are in place to increase our net production to about 400,000 barrels per day over the next decade. In 2008 alone, we are spending $900 million in development capital on the Canadian oil sands.

ConocoPhillips is also spending significantly on technology to improve heavy oil output and reduce the resulting environmental and carbon footprint. For example, ConocoPhillips Canada is a member of the Integrated CO_2 Network, an industry and government consortium researching development of pipeline infrastructure to transport carbon dioxide from oil sands development sites to locations where it can be used in enhanced oil recovery, or potentially sequestered below ground. We have also invested in research and development projects that study alternate recovery technologies, which reduce both our energy requirements and carbon footprint.

[8] Purvin and Gertz (18.5%)

ConocoPhillips also has a 50 percent interest in developing the 2,148-mile Keystone oil pipeline, which will transport additional Canadian crude oil to the United States. The pipeline will have an initial nominal capacity of 435,000 barrels per day in late 2009 and will be expanded to a nominal capacity of 590,000 barrels per day in late 2010.

We are working to expand the Wood River refinery (a 50 percent joint venture with EnCana) in Illinois to enable it to utilize additional volumes from the Canadian oil sands. This expansion will increase Wood River's crude inputs by 54,000 barrels per day and increase the yield of total clean-fuel refined products by 80,000 barrels per day. This proposed expansion has been delayed by a pending appeal of a permit that was previously granted for the project by the Illinois Environmental Protection Agency.

Natural gas

ConocoPhillips was the leading natural gas producer in the United States in 2007, producing about 2.3 billion cubic feet per day (or enough to fuel over 10 million homes in the United States). ConocoPhillips has a significant domestic natural gas resource base (about 12.6 trillion cubic feet of proved gas reserves), and is actively adding acreage in large resource plays and exploring for additional supplies. For example, we plan to drill more than 200 exploration wells onshore in North America during 2008.

We are also investing to improve our natural gas delivery capabilities. We have a 25 percent ownership position in the Rockies Express pipeline, which was recently built to move trapped Rockies natural gas to Midwest and East Coast markets. The pipeline's western segment is projected to reach Missouri shortly, and the eastern segment is projected to reach the Ohio terminus in January 2009, reaching full capacity at 1.8 billion cubic feet per day in June 2009. We also have invested in liquefied natural gas (LNG) regasification facilities on the Gulf Coast in order to provide a potential outlet for LNG supplies we are developing around the world.

Natural gas is an important bridge fuel to a low carbon world since it is the most greenhouse gas-friendly fossil fuel.

Arctic activities

ConocoPhillips is Alaska's largest oil and natural gas producer, with production of 300,000 barrels of oil equivalent per day in 2007.

Alaska holds significant stranded natural gas resources, which if connected to the lower 48 states, would increase commercially proven U.S. gas reserves by about 17 percent. ConocoPhillips has long urged progress on the proposed 4 billion cubic feet per day Alaska natural gas pipeline, and we applaud Congress for your bipartisan efforts in passing the needed "Enabling Legislation" to progress this project. We are moving forward on planning the pipeline and are continuing our dialogue to deliver a project acceptable to all stakeholders. In order for this project to advance, close cooperation between all resource owners, the State of Alaska and the Canadian and U.S. federal governments will ultimately be needed.

ConocoPhillips is also working with our partners, native groups and the Canadian federal government to move the 763-mile Mackenzie Delta gas pipeline project forward. The 1.2 billion cubic feet per day pipeline project would connect northern onshore gas fields with North American markets and provide consumers additional supplies of much needed natural gas.

Refining, marketing and transportation

In 2008, ConocoPhillips plans to invest $2.8 billion in our global refining, marketing and transportation operations. Of that amount, 74 percent will be invested in the United States and 69 percent will be invested in refining.

Over the next five years (2008-2012), we plan to invest $7.0 - $7.5 billion in our base refining, marketing and transportation business, with 80 percent of that spent on continued investments in reliability, safety, expansion of clean fuels production and emissions reduction. The other 20 percent of that spending will be for projects that provide an economic return, such as those intended to improve refinery yield and margin, enhance energy efficiency, reduce operating costs or enhance crude oil advantage or product flexibility. Ongoing capital requirements for safety and reliability and to meet all regulatory requirements are large, which makes it challenging for the refining industry to achieve attractive returns on capital.

We also plan to spend $6.5 - $7.0 billion over the next five years (2008-2012) on strategic investments, which are primarily refinery projects that increase crude capacity, clean product yields, or the ability to utilize low-cost crude supply.

We are targeting a 10 percent reduction in the energy intensity index of our U.S. refining system by 2012, as part of a voluntary commitment through the American Petroleum Institute to reduce carbon dioxide emissions in the U.S. refining sector. This reduction also makes good business sense because, as a large consumer of energy, the refining industry has been adversely impacted by higher energy prices in recent years.

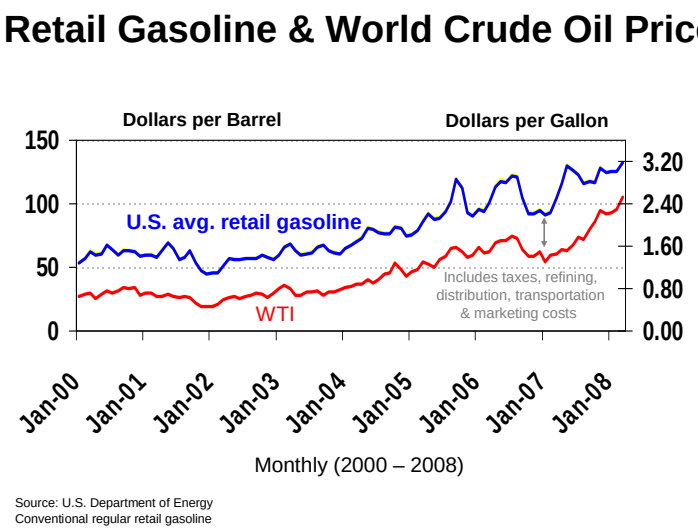
Energy Industry Trends

Global crude oil prices

We would like to share our views on why gasoline and diesel fuel prices have increased in the United States in recent years. Historical analysis shows that changes in crude oil prices explained about 97 percent of the variation in the pre-tax price of gasoline between

1918 and 2006.[9] Figure 2 below shows that gasoline prices have historically moved with crude oil prices, primarily because crude oil prices are the largest single cost component of refined products. According to the U.S. Department of Energy, in January 2008, crude prices constituted 68 percent of the retail price of a gallon of gasoline.[10]

Figure 2



Crude oil is a global commodity with prices determined by the interaction of thousands of buyers and sellers in physical as well as futures markets around the world. Prices set in this global market reflect both current and future expected supply and demand.

One of the biggest drivers of global oil prices has been sustained *global economic growth* since 2004, which led to stronger-than-expected energy demand growth. In fact, real growth in global gross domestic product between 2004 and 2007 of nearly 5 percent per year was about 40 percent higher than the average growth rate since 1980.[11] Due to this economic prosperity, between 2004 and 2007 oil demand grew by 2 percent per year,

[9] Carol Dahl, Colorado School of Mines, "What Goes Down Must Come Up; A Review of the Factors Behind Increasing Gasoline Prices, 1999-2006," April 2007
[10] U.S. Department of Energy, Energy Information Administration, "Gasoline and Diesel Fuel Update," March 10, 2008 based on January 2008 gasoline price ($3.04/gallon)
[11] International Monetary Fund, "Updated October 2007 World GDP Growth and PPP Weights," January 30, 2008 (4.7% average for 2004-2007 vs. 3.3% average from 1980-2007)

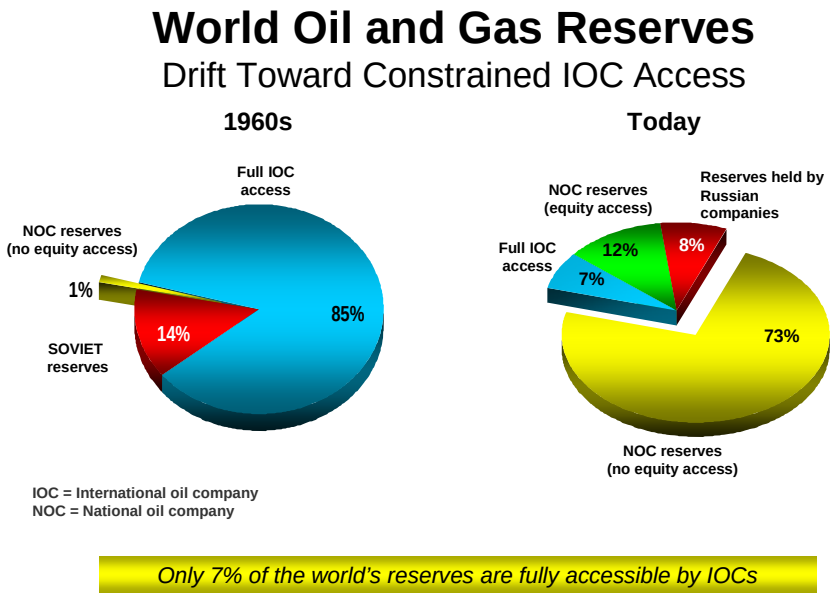
almost twice the rate experienced from 2000 to 2003. Nearly half of the demand growth since 2000 has been in developing Asian nations that have reached a highly energy-intensive stage of economic growth. In these nations, rising per-capita income also enables a larger proportion of the population to afford affluent lifestyles similar to those in the United States. Although responsible for only 12 percent of global oil demand growth since 2000, the United States, with just five percent of the world's population, still accounts for 24 percent of global oil demand.[12]

A second reason for high global crude oil prices is *constraints on expanding conventional supplies,* in particular, rising resource nationalism that limits access to resources for development. Figure 3 below shows that in the 1960s, 85 percent of global oil and natural gas reserves were available for direct development by international oil companies, versus only 7 percent today. In addition, rising competition for access to the resources that are open for development has enabled host governments to dictate fiscal terms that are so onerous that publicly traded oil companies cannot economically pursue them. Morgan Stanley estimates that the tax rates of major oil companies have increased from about 30 percent to 45 percent since 2000.[13] In some cases, governments change fiscal terms after investments have been made or increase taxes on existing production, even in mature producing areas in otherwise stable countries (Alaska in the United States, and the United Kingdom). Such actions can make it uneconomic to invest the capital required to slow decline rates in existing fields.

As mentioned earlier, resource access is also very limited in the United States, where an estimated 40 billion barrels of technically recoverable oil resources are either completely off limits or subject to significant lease restrictions. Similar restrictions apply to more than 250 trillion cubic feet of recoverable natural gas resources.[14]

[12] International Energy Agency, Annual Statistical Supplement and Monthly Oil Market Report, March 11, 2008; United Nations for world population
[13] Morgan Stanley Research, "Integrated Oil," March 14, 2008, Exhibit 17, page 11
[14] National Petroleum Council, "Facing the Hard Truths about Energy," 2007, page 20

Figure 3



Source: PFC Energy, Oil & Gas Journal, BP Statistical Review 2007
Note: Excludes unconventional crude oil and bitumen reserves

Another constraint on supplies is rapid inflation in industry drilling and service costs. An upstream capital cost index, published by Cambridge Energy Research Associates, indicates that industry capital costs have approximately doubled since 2000,[15] reflecting higher costs for materials, equipment and personnel. Driving factors include higher industry activity and spending levels, as well as strong demand for materials, equipment and people in other sectors of the global economy. Industry costs are also pushed upward by limited resource access and depletion of existing lower-cost resources, which force the industry to develop higher-cost resources. These may be located in deeper water or more remote locations, or may be more unconventional in nature, requiring specialized development and refining techniques. It is important to recognize that inflation in capital and labor costs is also adversely impacting the economics of alternative energy sources.

Also pushing crude oil prices upward is the high *geopolitical supply risk* attributable to the world's low level of excess oil production capacity and the fact that in several key oil-producing countries, political factors often result in constrained production (e.g., Nigeria,

[15] Cambridge Energy Research Associates, "Upstream Capital Costs Index," December 5, 2007

Iraq, Venezuela and Iran). The combination of strong demand growth and the need to offset lost production from these countries left the Organization of the Petroleum Exporting Countries (OPEC) at year-end 2007 with only 2.5 million barrels per day of excess capacity, equal to just 3 percent of global oil demand. This contrasts sharply with the greater than 10 million barrels per day of excess capacity that existed in the mid-1980s. This lack of spare capacity leaves the world more vulnerable to oil supply disruptions caused by political events, storm damage to producing facilities, or unforeseen operational problems.

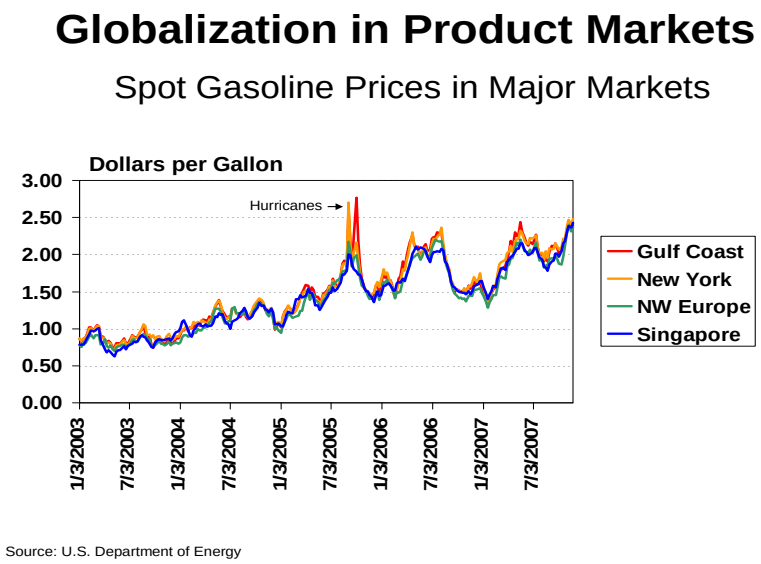
A final reason for recent increases in crude oil prices is the increasing attractiveness of *commodities to financial investors*. Commodity index funds have been developed to provide investors with a financial vehicle to gain commodity price exposure. Investors have moved tremendous amounts of capital into these funds in order to seek higher returns than stock and bond markets provide, or more recently as a "flight to safety", given their concerns about the credit markets, inflation, the U.S. dollar and the direction of stock and bond markets. The funds are disproportionately weighted in energy commodities – one popular fund reports over a 70 percent weighting for energy. It is likely that the large inflow of capital into the commodity funds is temporarily exaggerating upward oil price movements, as well as upwards movements in the prices of other commodities (e.g., copper, nickel, silver, gold, wheat).

U.S. gasoline and diesel fuel prices

While most of the variation in refined product prices is due to changes in crude oil prices, relatively high global refinery capacity utilization rates in recent years have also contributed. Like crude oil, refined products also trade on global markets. Figure 4 below demonstrates that worldwide wholesale or spot gasoline prices move together. There are occasional temporary regional dislocations due to weather conditions or refinery or transportation outages. However, additional products tend to rapidly move into the

supply-short regions and restore the global equilibrium, provided that geographic isolation or specialized product specifications do not interfere with the flow of products.

Figure 4

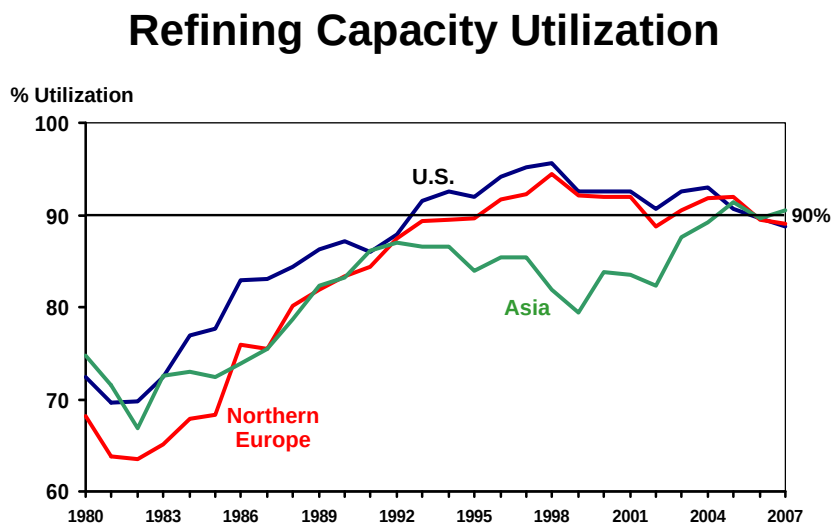


Source: U.S. Department of Energy

Up until the mid 2000s, substantial excess refinery capacity in other nations enabled the United States to benefit from imports of surplus refined products. However, *strong global demand growth* absorbed that surplus, which led to stronger global refining margins over the last few years. Figure 5 below shows that refinery capacity utilization rates in the United States, Europe and Asia have increased substantially in recent decades. High utilization, in turn, led to higher refinery margins that have made economically possible the current round of refinery capacity expansion. The International Energy Agency estimates that 10.6 million barrels per day of global refining capacity is being added between 2007 and 2012. Half of the additions are from incremental expansions in the United States and Asia and half are from new refineries being built in the Middle East and developing Asian nations. In addition to the 1.1 million barrels per day of expansions in distillation capacity planned in the United States by 2012, there are also large-scale

upgrading capacity additions that will process increasing amounts of Canadian heavy, sour crude oil, and increase yields of clean-fuels products. [16]

Figure 5



Source: BP Statistical Review, 2007; U.S. Department of Energy for U.S.
2007 = YTD DOE for U.S., COP estimates for other regions

Our industry is often asked why the number of operable refineries in the United States declined from 319 in 1980 to 149 in 2007. According to the Federal Trade Commission, the closures typically involved small, relatively unsophisticated facilities.[17] Between 1973 and 1981, federal government incentives enabled companies to own and profitably operate these small and often inefficient refineries. However, these refineries were hurt by the elimination of these incentives in 1981 and the large capital expenditures that were required to meet government-mandated product specifications (such as clean fuels) and emissions reductions. These expenditures also crowded out investments that might have been made on expansion. However, continuous expansions of the remaining refineries and improved efficiency have enabled the U.S. refining industry to increase crude runs

[16] International Energy Agency, "Medium-Term Oil Market Report," July 2007, pages 54 and 60
[17] U.S. Federal Trade Commission, Bureau of Economics, "The Petroleum Industry: Mergers, Structural Change, and Antitrust Enforcement," August 2004, page 7

nearly 30 percent since 1983, [18] despite closures of the smaller refineries and the refining industry's historically low returns on investment.

Another factor that has caused upward gasoline price volatility is the *proliferation of different grades of gasoline* required by differing federal and state government environmental mandates. The existence of multiple unique product specifications makes it difficult to replenish supplies in the event of a disruption, such as a storm-related refinery equipment outage. Regions with unique product specifications therefore experience greater price volatility than regions with standard specifications. A study by the U.S. Department of Energy indicated that "boutique" specifications did in fact result in upside volatility of gasoline prices,[19] a particular concern since more states are in the process of mandating new "boutique" grades of biofuels.

Additionally contributing to higher gasoline price levels are *higher refining costs*. The refining industry has experienced substantial increases in energy, labor and materials costs. For example, the Nelson-Farrar composite index of refinery operating costs increased by 50 percent since 2002.[20] Contributing to this inflationary pressure is the fact that much of the domestic refining industry is working to expand capacity at the same time, competing for goods and services. Further, the U.S. refining and marketing industries spent $100 billion on environmental projects between 1990 and 2005.[21]

Even as concerns grow over higher gasoline costs, the global *gasoline market is already moving back into equilibrium* due to slowing growth in demand caused by higher prices, startups of refinery capacity expansions and the increased use of ethanol in gasoline. U.S. consumption was relatively strong over the last decade due to growth in vehicle travel and a lack of improvement in average fuel efficiency. Since the early 1990s, consumers purchased a growing percentage of light trucks, including sports utility vehicles, which

[18] U.S. Department of Energy, Energy Information Administration, U.S. Weekly Crude Inputs Into Refineries, website (11.8 mmbd in 2003 and 15.2 in 2007)
[19] U.S. Department of Energy, Energy Information Administration, "Gasoline Type Proliferation and Price Volatility," September 2002, page 4
[20] Oil and Gas Journal data base, "Nelson-Farrar refinery operating index," monthly as of November 2007
[21] American Petroleum Institute, "Environmental Expenditures by the U.S. Oil and Gas Industry," June 2007, page 4

are generally less fuel-efficient than cars. In addition, manufacturers utilized technological advances to meet consumer demand for increased vehicle size and greater horsepower rather than improve fuel efficiency. However, recent increases in fuel costs have reduced growth in gasoline consumption due to both a slowdown in the growth of vehicle miles traveled and a shift toward purchases of smaller, more efficient vehicles. The Department of Energy estimates that gasoline demand grew by only 0.4 percent in 2007, versus annual growth of 1.5 percent during the last two decades. The combination of increased supplies and lower demand growth has restored some balance in the gasoline market. This is evidenced by the fact that although fuel prices are higher, the increase has not fully reflected the rise in crude oil prices. For example, between July 2, 2007 and March 11, 2008 the price of West Texas Intermediate crude oil increased 53 percent (from $71 to $109 per barrel) but spot gasoline prices increased less than half of that amount (20-25 percent depending on the region), while the average U.S. retail price increased about 10 percent (from $3.00 to $3.27 per gallon).[22]

The other shift occurring in global and U.S. product markets is the *strengthening of diesel fuel prices relative to gasoline prices*. This is caused by tightening global diesel markets as Europe shifts its passenger fleet to consume diesel fuel and as diesel fuel demand grows in other parts of the world. Refineries have not yet had time to shift their production capabilities, and only limited changes are possible with existing equipment. However, new diesel fuel production capacity is being added at a number of refineries. Also contributing to recent price increases are government-mandated shifts in production to ultra-low-sulfur diesel fuel in the United States and Europe. This fuel is more expensive to manufacture, and the lack of global capacity to produce diesel fuel with the required specifications limits the ability to import fuel. As a result of these global forces, U.S. prices for on-road retail diesel fuel averaged nine cents per gallon above gasoline

[22] U.S. Department of Energy, Energy Information Administration, Weekly Petroleum Status Report, spot WTI at Cushing, spot conventional regular gasoline at NY Harbor, Gulf Coast and Los Angeles, U.S. retail motor gasoline, all grades all formulations

prices since 2005, compared to averaging 5.5 cents per gallon below gasoline prices between 1995 and 2004.[23]

Industry Profits: Addressing Common Misperceptions

Oil and natural gas industry earnings are highly cyclical, as they are with other commodity industries. Profits have increased in recent years with the strength in underlying commodity prices, but costs have escalated rapidly and are still rising. In fact, Morgan Stanley estimates that the returns on capital employed for exploration and production of the integrated oil companies peaked in 2005.[24] Morgan Stanley also estimates that from 2008 to 2012, new upstream investments will require crude oil prices of nearly $85 per barrel (West Texas Intermediate) to be profitable at the industry's cost of capital. Given continuing cost increases, Morgan Stanley believes that crude oil prices by 2012 of approximately $90-100 per barrel will be needed to justify investment.[25] Thus, higher prices today reflect higher replacement costs.

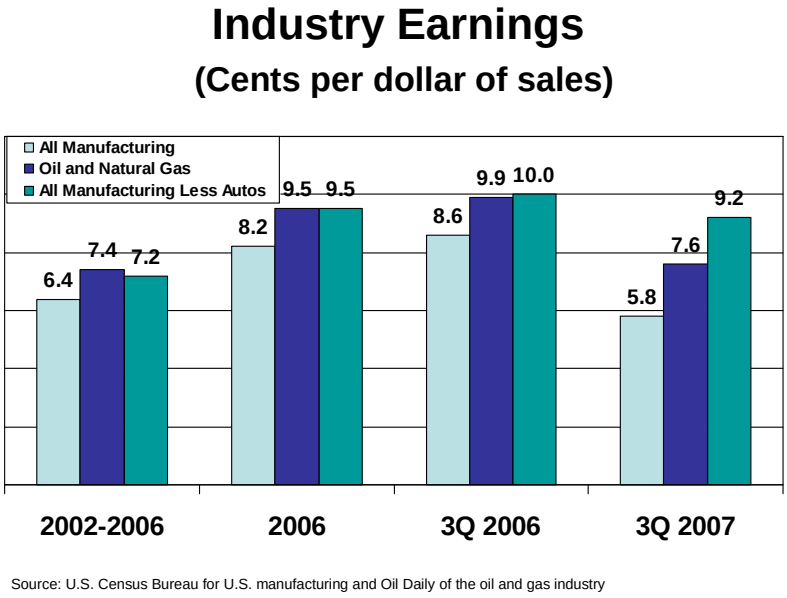
There is a common misperception that the absolute dollar amount of major oil company earnings is indicative of the industry's profitability. Rather, its earnings reflect the industry's enormous scale and the capital investment needed to replenish depleting supplies. Constrained resource access at home and abroad has required international oil companies to undertake increasingly large, complex and risky projects that host governments may not have the financial strength, skills or technology to undertake on their own. A typical large ConocoPhillips exploration and development project requires several billion dollars of initial investment and may not generate revenues for over a decade from project sanction. A single large offshore platform in the Gulf of Mexico designed to operate in thousands of feet of water costs more than $1 billion to develop. A project to produce and deliver liquefied natural gas currently may cost between $7-21

[23] U.S. Department of Energy, Energy Information Administration, Weekly Petroleum Status Report, U.S. Gasoline and Diesel Retail Prices
[24] Morgan Stanley Research, "Integrated Oil," March 14, 2008, Exhibit 18, page 12
[25] Morgan Stanley Research, "Integrated Oil," March 14, 2008, page 12

billion, depending on its size, location and complexity of the project. The proposed Alaska natural gas pipeline is expected to cost $25-40 billion. Only large companies with substantial financial capacity and technical resources can effectively develop these projects, while sufficiently diversifying the number of projects and geographies to manage the risk.

There is also a common misperception that energy industry earnings and returns on investment are higher than those in other industries. Figure 6 below shows that the industry's earnings are comparable to those of other manufacturing industries.

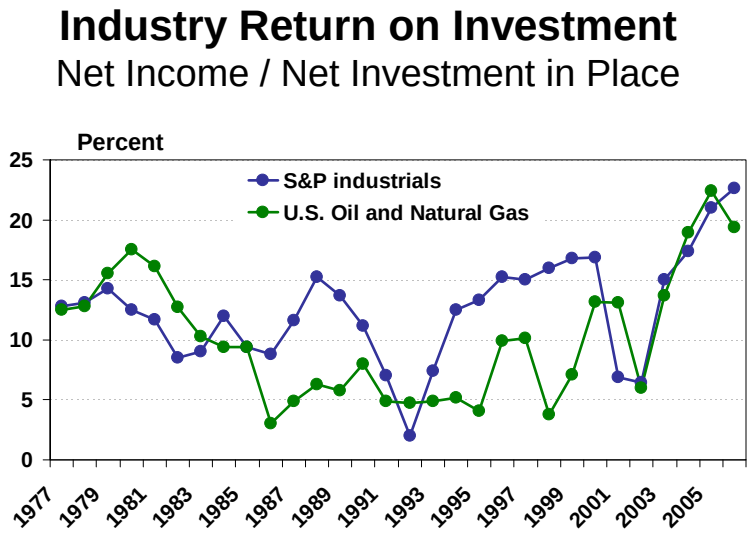
Figure 6



Source: U.S. Census Bureau for U.S. manufacturing and Oil Daily of the oil and gas industry

Figure 7 below, based on U.S. Department of Energy data, shows that the return on investment for the oil and natural gas industry is currently comparable to average returns for the S&P industrials, after lagging those returns for many years.

Figure 7

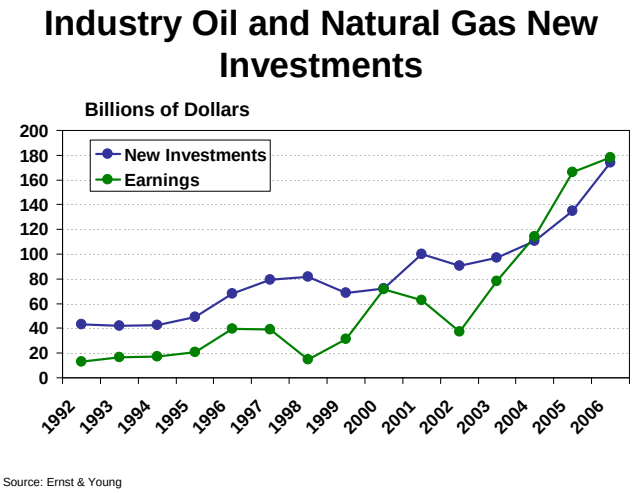


Source: U.S. Department of Energy, Energy Information Administration, Performance Profiles of Major Energy Producers, various issues and 2006 S&P figure compiled by PWC from Compustat data

Another common misperception is that the oil and natural gas industry is not reinvesting its earnings to develop new supplies. Figure 8 below shows that investments have increased along with earnings. For example, 2006 investments of more than $174 billion increased by 29 percent over 2005. Between 1992 and 2006, the U.S. oil industry invested more than $1.25 trillion in a range of long-term energy initiatives, compared to net income of $900 billion. Some also express concerns over the industry's rate of stock repurchases. However, according to U.S. Department of Energy data, for the last 11 years, the industry spent only 21 percent of net income on stock repurchases, compared to the S&P industrials repurchase rate of 52 percent.[26] Despite the relatively low stock repurchase rate, the oil and gas industry would likely reinvest at even higher rates if governments made more resources accessible.

[26] U.S. Department of Energy, Energy Information Administration, "Performance Profiles of Major Energy Producers 2006," December 2007

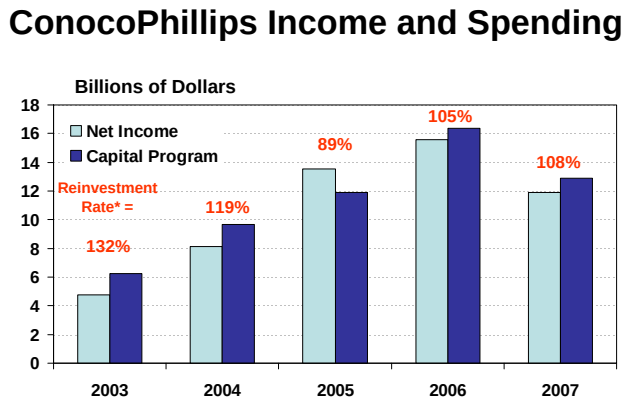
Figure 8



Source: Ernst & Young

ConocoPhillips' reinvestment rates have typically exceeded its earnings. Figure 9 below shows that between 2003 and 2007 the company's average reinvestment rate as a percent of net income averaged 106 percent. In addition, capital spending increased nearly 150 percent between 2003 and our projected 2008 spending level of about $15 billion. A final point is that while our earnings are numerically large, they in fact reflect the substantial capital investment required to replace reserves and achieve growth. For example, ConocoPhillips earned nearly $12 billion in 2007, but spent close to $13 billion.

Figure 9



* Reinvestment rate as a percent of net income
Source: ConocoPhillips' SEC filings

Path To A Sound Energy Policy

ConocoPhillips believes there are several concrete steps that Congress can take to enhance the nation's future energy security. We want to first emphasize that despite the current tight market, the world is not short of energy supplies. Rather, it lacks sufficient political will to develop the vast fossil fuel and alternative resources that are available. Additionally, it is vital to point out that there is no "silver bullet" that would quickly and inexpensively replace fossil fuels and create energy security. Instead, the United States must bring all economic sources of energy to the marketplace. Doing so will require strong political leadership and determination, as well as, sound insight into the realities of the energy market. We need no less than a national commitment to achieve security of both near- and long-term energy supply and policies that outline a clear path to follow. ConocoPhillips believes that a sound U.S. energy policy must incorporate the six actions explained below.

Encouraging conventional supplies

Although the United States has only 3 percent of the world's remaining oil and natural gas proved reserves, this is due in part to governmental policy. We could increase U.S. reserves by drilling in the vast onshore and offshore areas that are currently off limits. Altogether, these areas are estimated to hold 80 billion barrels of recoverable oil and natural gas equivalent – enough to double current U.S. reserves.

Industry critics frequently charge that since one area or another only offers a few months or years of supply, it should not be developed. ConocoPhillips believes that it is economic folly to instead transfer $8 trillion dollars – the possible market value of these potential resources at current oil prices – to other countries through imports instead of keeping that money at home and gainfully employing thousands of Americans. Unless Congress acts to improve access to domestic resources, the United States must accept oil import dependence at the current rate of about 60 percent, or even higher in the future. Therefore, the federal drilling moratoria on non-sensitive lands should be suspended and

drilling allowed under strict environmental oversight. Industry technology and operating practices have made quantum leaps in the years since these moratoria were enacted. Our national vulnerability no longer allows the luxury of ignoring so much energy potential. It is often said by those opposed to providing more access that, "We cannot drill ourselves out of our domestic energy situation." That is true, as is the fact that, "We cannot expect an aggressive program to develop alternative and renewable fuels to provide needed energy security overnight no matter how aggressively we develop them." A balance of both is required.

To satisfy projected demand, the United States and the world also need OPEC nations, and particularly those with large reserve holdings, to expand their production capacity. We are concerned about the mixed signals that U.S. policymakers are giving these countries. On one hand the United States urges them to increase production, while on the other it threatens to back out a substantial portion of Middle East oil imports, or to sue OPEC. These countries may not expand their production capacity to the extent that is needed if they do not believe there is a sustained market for their crude oil.

Congress should also facilitate the building of the critical infrastructure needed to deliver energy supplies to the public. The United States needs more ethanol unloading and blending terminals, more pipelines and power transmission lines, and more refinery expansions. But duplicate and overlapping federal and state laws, and overly long and difficult regulatory processes, discourage or delay such infrastructure additions, particularly for refineries. For example, ConocoPhillips applied in May 2006 for a permit to expand our Wood River refinery in Illinois, and we still do not have a final permit. At our refinery in Wilmington, California, local permit challenges and litigation have threatened an ultra-low-sulfur diesel fuel project since 2004. An expansion at our Rodeo refinery near San Francisco took 28 months to permit and only after a compromise was reached with the state Attorney General. These expansions are designed to increase supplies of transportation fuels – precisely as Congress would wish. In cases like these, where infrastructure is clearly needed to serve the national interest, Congress should

expedite federal and state permitting processes to ensure a balance between federal, state and local and special interests.

A related issue is the proliferation of different types of gasoline. State mandates require production of 16 localized “boutique” blends for particular markets, multiplied by three different octane grades and by different winter and summer blends. Also, some states now require boutique biofuels blends. The result is a profusion of different fuels, each with its own specifications. These boutique blends prevent the transfer of fuels from one region to another in the event of logistical or operational challenges. This causes shortages and price spikes. Congress could alleviate these problems by setting uniform national fuel requirements.

Optimizing biofuels production

Moving to biofuels, the Energy Independence and Security Act of 2007 mandates the use of 36 billion gallons by 2022. While this is a laudable objective, some improvements to that statute are needed.

First, the creation of different “silos” or categories of biofuels reduces flexibility in complying with the mandate, which is likely to cause inefficiency and increase costs. The Act also presumes to know what the best technologies will be 14 years from now. Congress should not attempt to pick “winning” technologies. Instead, a more sound approach would be to enact incentives or mandates that are both technology-neutral and fuel-neutral. For example, it is not reasonable for biodiesel to qualify for tax support, while renewable diesel fuel does not. As long as both processes use renewable feedstock, support should be neutral and treatment equal.

A second concern is mandating a level of biofuels use exceeding 15 billion gallons. Such concentrations will exceed the capability of both the vehicle fleet and the supply delivery infrastructure (ethanol’s corrosiveness requires use of special equipment). Also, advanced biofuels that do not use potential food sources as a feedstock cannot be produced

commercially today. The Environmental Protection Agency has the ability to waive high mandated volumes if technology and production have not advanced sufficiently. However, such waivers are made known only a few months before the start of a compliance year, which does not allow fuel providers sufficient time to plan optimized and efficient compliance activities.

A third concern is the current 54-cent-per-gallon tariff on imported ethanol, which penalizes lower-cost and less carbon-intensive imports, such as from Brazil. This tariff should be phased out or eliminated.

Finally, ConocoPhillips is quite concerned about the potential for governments to layer on overlapping policies. For example, we hear that policies are being considered to add a national low-carbon fuel standard on top of a low-carbon renewable fuel standard. The overlap between these programs would further confound the overlap of state programs previously discussed. If the United States continues to overly constrain its production and supply systems, optimal solutions will cease to exist, and the result will likely be higher fuel costs and possibly even supply outages.

Encouraging alternative and unconventional sources

While alternative and unconventional energy sources will be essential in the future, it is important to recognize that new technologies take time to commercialize and usually cost more than conventional supplies. Here, Congress is at risk of too strongly favoring politically expedient energy sources. The market should decide which are the best technologies in order to avoid over-reliance on old technologies or uneconomical energy sources.

We would encourage Congress to also recognize that, although oil sands and unconventional fossil fuels such as oil shale and coal gasification are more energy- and carbon-intensive than conventional sources today, they could substantially improve energy security because these resources are abundant in the United States and Canada.

There is significant opposition to developing these sources unless carbon capture and storage is also employed. However, until the U.S. establishes a working regulatory framework for greenhouse gas emissions, it would not be economic to store carbon from these sources. It would also be risky to make these investments given the uncertainty over when and whether the United States will enact legislation to regulate carbon and the parameters of such a program.

ConocoPhillips suggests that in order to improve both energy and climate security, Congress should put a program in place to encourage commercialization of large-scale carbon storage projects from these types of oil resources – without waiting for enactment of a full cap and trade program. To facilitate this process, the federal government can commit to provide "carbon-price insurance" for carbon storage projects for up to one million barrels per day of oil supply and three billion cubic feet per day of natural gas supply by 2020. This would represent about 5 percent of U.S. oil and natural gas demand. The government could auction this insurance to the projects that yield the largest reductions in carbon intensity relative to cost.

For example, if a winning bid was a project with a storage cost of $40 per tonne of carbon dioxide avoided, the government would guarantee that the project would have the $40 per tonne to store carbon. If, in the interim, a federal cap and trade program was implemented that brought the cost of carbon allowances to $40 per tonne, the project would fully assume the storage cost and there would be no government outlay.

Lowering the carbon intensity of energy supplies

We would encourage future Congressional policies to focus on lowering the carbon intensity of U.S. energy supplies, and work to encourage the global community to join in this effort.

Congress could take action to reduce our carbon footprint by establishing a baseline, and a system of incentives and penalties to ensure that we meet this baseline. The first step

would be to create a mandatory framework that would lower our greenhouse gas emissions, and set a price for carbon avoidance. This could be done by either a tax or a cap and trade system. This step would influence investment decisions across the entire economy.

Incentives should be offered for development of carbon capture and storage. Companies are ready to begin making the required investments, but first government must establish a value for carbon avoidance and national legal and regulatory frameworks for liability and permitting issues. And the government should provide access to federal lands that offer the potential for underground carbon storage.

Next, Congress should encourage greater use of renewable sources – such as solar and wind power – by extending their investment tax credits by five years at a time. This would help provide the financial certainty needed for investment. Development of these renewable power sources benefits the public at large and should be paid for with public funding, not by imposing discriminatory tax provisions on three or four American companies, as is being considered. The United States must develop more of every form of energy, including oil and natural gas. Developing low-carbon energy supplies should be a national priority, and one industry should not be required to fund this effort alone.

Congress should also encourage greater use of nuclear power, which represents higher percentages of total electricity supply elsewhere than in the United States. To do so, the federal government should fulfill its commitment to dispose of waste generated by nuclear power plants. It should also sponsor research into advanced technology that uses the fuel more completely – while reducing waste volumes and half-life – and lowering proliferation risks.

Improving energy efficiency

The Energy Independence and Security Act of 2007 did much to improve fuel efficiency standards for light-duty vehicles and appliances, and ConocoPhillips commends Congress

for this bold action. We also encourage governments to take action to slow the rate of growth in peak electricity use – an important step, given the strong historical growth in electricity consumption and rising reliance on natural gas to generate power during peak demand periods. Electricity represents 40 percent of current U.S. energy consumption, compared to 25 percent in 1970.

Over the last decade a substantial amount of natural-gas fired power generation capacity was added in the United States due to the attractive economics of combined cycle gas turbines and the clean-burning characteristics of gas. As a result, electricity costs in many regions are highly dependent on natural gas prices during peak daytime demand periods. Therefore, to improve availability of natural gas as well as electricity, we need to advance the construction of natural gas pipelines from Alaska and the Mackenzie Delta in Canada, and of new liquefied natural gas terminals. All have been delayed due to hyper-inflation in costs, local politics and special interests.

Government could also help reduce peak electricity demand by enacting regulatory and fiscal incentives that encourage utilities to reduce electricity demand by offering more transparent real-time pricing that shows consumers the cost of power as they use it. A key technology to enable this pricing, called “smart meters,” already exists.

Encouraging technology innovation

It is also vital that Congress encourage investment in new technologies in all areas of energy development. A variety of technological advances are needed to help maximize recovery of conventional resources, enhance ability to operate complex projects in harsher environments, improve environmental performance, develop new alternative and unconventional energy sources, reduce the carbon intensity of energy supplies, and improve the efficiency of energy use across the entire economy.

Both the public and private sectors should increase spending on energy research and development. Government technology investments should be made in a transparent and market-based manner, with incentives going to the best ideas.

Government could further drive technological innovation through greater support of education. With half of the energy industry's technical work force expected to reach retirement eligibility in the next 10 years, there is growing need for more university students majoring in engineering, geology, geophysics and the other technical disciplines. The United States also needs better secondary education to prepare its students for rigorous college study.

Recognizing the increased need for training for the many new employees entering our industry, and to help our existing employees reach their full potential, ConocoPhillips recently purchased land in Louisville, Colorado, to develop a center for corporate learning. We are also building a global technology center at this location to foster innovative research and the development of new technology.

Conclusion

Improving energy security and reducing the risk of climate change are formidable challenges. As one of America's leading energy suppliers, ConocoPhillips intends to be part of the solution. We believe Congress can provide critical leadership in:

- Increasing domestic resource access,
- Improving the ability to permit key energy infrastructure in this country,
- Enacting a mandatory regulatory framework for reducing carbon dioxide emissions so we can invest to reduce the carbon intensity of the nation's energy supplies.

We understand that many of these recommendations may involve differences of opinion between government and industry, but we encourage an atmosphere of cooperation and are eager to engage with you in finding solutions for meeting this country's energy needs.

The United States has much to gain from a healthy U.S. energy industry that can compete domestically and globally to expand the energy supply available to the United States. Actions taken to weaken the U.S. energy industry will accelerate the shift in control of resources into the hands of national and foreign oil companies at our expense. China, India, the European Union and other nations are deeply engaged in helping their energy industries capture resources to meet the future energy needs of their constituents. We must work together to ensure that our nation's energy needs are met.

Again, Mr. Chairman, thank you for inviting ConocoPhillips to participate in today's hearing. We look forward to working with this important committee in the days ahead.