



Testimony of
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Before the
Select Committee on Energy Independence and Global Warming
United States House of Representatives

Regarding:
The Future of Oil

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Mr. Chairman and members of the Committee, good morning. My name is Athan Manuel, and I am the Director of Lands Protection for the Sierra Club. I am here representing over 750,000 Sierra Club members who belong to more than 65 chapters and 450 groups nationwide. We are the largest environmental grassroots organization in the country. I am very appreciative of the opportunity to testify this morning regarding “The Future of Oil” before the Select Committee on Energy Independence and Global Warming.

I was asked by the committee to address five issues as they relate to “The Future of Oil”:

1. Estimates of current global petroleum liquid reserves vary from 14 to 24 trillion barrel. EIA uses a base case of 20.6 trillion barrels. Approximately how many barrels of oil have already been recovered and combusted? What contribution has this made to increased atmospheric greenhouse gas concentrations? What are the global warming implications of combusting a significant portion of these remaining reserves?
2. How would drilling in the Arctic National Wildlife Refuge and expanded drilling in the offshore regions impact the price of gasoline for American consumers? When would that impact be felt?
3. Beyond greenhouse gas emissions, what are the other major environmental consequences to drilling in these areas?
4. What percent of recoverable reserves are already open to drilling? How much land in the United States is already held by oil and gas companies? How much of this land is currently not being utilized?
5. How do other energy options - increasing energy efficiency or advancing oil substitutes like cellulosic biofuels and electric vehicles - compare to drilling in terms of economic and environmental impact?

The Future of Oil

When considering the future of oil, it helps to look at the present. More than ever before, Americans are paying the price—a record-breaking \$4 a gallon—for our dependence on fossil fuels. More than 30 years after the first oil shock of the early 1970’s, America continues to be dependent on fossil fuels like oil, natural gas and coal.

When contemplating that past, as a Greek-American I am reminded of a favorite phrase from Homer - Homer Simpson: “Stupidity got us into the mess, and stupidity will get us out.”

Unfortunately, some members of Congress and the Administration think like Homer Simpson, that the solution to our energy problems is the actual problem itself – a continued dependence on fossil fuels and more and more oil and gas drilling. If we are truly addicted to oil, as President Bush admitted in a recent State of the Union address, the answer is not to simply seek a bigger fix by drilling off of our beaches and in our last special places like the Arctic National Wildlife Refuge.

The Bush Administration’s own Energy Information Administration (EIA) admits that at peak production—which wouldn’t be until 2027—the effect on prices at the pump, if any, would be a few pennies from drilling in the Arctic Refuge. By contrast, EIA research indicates that clean

energy and energy efficiency technologies could do *ten times more* to help reduce our dangerous dependence on foreign oil.

Fortunately, last year Congress increased fuel economy for cars and light trucks, and this year members of Congress have offered sensible plans that promise consumers real relief and will help put us on the path toward a clean energy future.

It is not hard to see this future of clean energy. In addition to federal action on fuel economy, states are promoting renewable energy and clean technologies.

Finally, we hope that instead of a future of oil, the United States enjoys a future of clean, homegrown renewable energy, and a future of aggressive energy efficiency. It is time to embrace the clean energy solutions that will put America back to work, help end our dangerous dependence on fossil fuels, and fight global warming, as well as protect our special places and vulnerable coastal communities. That is the future our nation should pursue.

Oil and Gas Drilling, and the Price of Gas

Regarding additional drilling and the price of gas, we do not think that drilling anywhere in the United States will significantly impact the price of gas or help consumers. Conservation, efficiency and clean energy technologies far outweigh the meager benefits of any oil and gas thought to be in the Arctic Refuge or the outer continental shelf.

The most recent U.S. Energy Information Administration (EIA) May 2008 update report¹ concludes that drilling in the Arctic Refuge would do little to ease world oil prices. The report – an analysis in response to a request from Alaska Senator Ted Stevens – on the petroleum potential of the coastal plain of the Arctic Refuge concludes that:

- Based on the U.S. Geological Survey mean resources estimate, EIA reports that leasing and development on the Arctic Refuge Coastal Plain region would result in production of approximately 2.6 billion barrels of oil between 2018 and 2030;
- Production from the coastal plain of the Arctic Refuge would peak in 2027 at approximately 780,000 barrels per day (0.78 million bpd) and would average approximately 657,000 bpd (0.657 million bpd) between 2018 and 2030;
- During the decade between 2021 and 2030, Arctic Refuge production would reduce prices at the gas pump by approximately \$0.032 (3.2 cents) per gallon. At peak, the gas pump reduction would be less than \$0.04 (four cents) per gallon, based on a \$0.78 per barrel reduction in the price of crude oil (all figures in 2008 dollars);
- At most, EIA projects that new oil from the Arctic Refuge would lower the world price of oil by no more than \$1.44 a barrel and possibly as little as 41 cents a barrel;
- Due to geologic and logistical constraints, EIA has not increased its estimate of Arctic Refuge production potential through 2030 since its last review in 2004, despite high oil prices;
- If Congress authorized leasing for the coastal plain of the Arctic Refuge production would not start for another ten years.

¹ Energy Information Administration, Analysis of Crude Oil Production in the Arctic National Wildlife Refuge, May 2008.

For more on the Arctic Refuge and the price of gas, please see the attached report, “Existing Conservation and Alternative Technology Gains Far Outweigh Arctic National Wildlife Refuge Potential: Oil Imports Have Declined Significantly Since 2005” by Richard Fineberg.

The same is true for America’s Outer Continental Shelf. There are an estimated 930 million barrels of oil in the entire eastern Gulf of Mexico, the area with the most industry interest. Against current rates of consumers, that breaks down to approximately 47 days worth of oil. As is the case with the Arctic Refuge, such a small amount of oil will not significantly impact the price of gas or solve America’s energy challenges.

Finally, more off shore drilling does not automatically lead to lower prices. The price of gas is set on the world market, largely by OPEC. Consider gas prices in these countries that allow and promote offshore drilling: United Kingdom: \$8.37; Norway \$7.33; Germany, \$6.72; Canada, \$4.34; Japan, \$4.16.²

It is disappointing that in the face of skyrocketing gas prices, some members of Congress and the Bush administration can only come up with the same ‘solution’ that got us into this problem: drill for more and more oil and gas. If we’re truly addicted to oil, as President Bush admitted we were long ago, the answer is not to simply seek a bigger fix by drilling off of our beaches and in our last special places like the Arctic National Wildlife Refuge.

Environmental Consequences of Drilling

Despite better technology and know-how, oil and gas drilling, both on shore and off shore, is a dirty and risky business.

Arctic National Wildlife Refuge

Oil Spills

Just two years ago, BP, the largest operator on Alaska’s North Slope, had to shut down the entire field due to pipeline corrosion. BP’s problems at Prudhoe Bay caused the largest oil spill in North Slope history – over 200,000 gallons of crude oil and a temporary, but massive shutdown of the nation’s largest oil field.³ Worse yet, BP couldn’t guarantee that corrosion in their negligently managed oil field would not cause further environmental devastation. BP was subsequently fined for criminal negligence.⁴

The corrosion problems experienced by BP highlight the hazards of drilling for oil and gas on Alaska’s North Slope. On average, there are “about 500 oil spills . . . in the Prudhoe Bay oil fields and along the 800-mile pipeline each year,” according to the Alaska Department of Environmental Conservation.⁵ The spills occur despite the fact that the daily “throughput” of oil has declined from about 2 million barrels a day in 1987 to less than half that today.⁶

² (AA Motoring Trust; USA Today, April 18, 2008)

³ http://www.usdoj.gov/opa/pr/2007/October/07_ag_850.html

⁴ <http://www.bp.com/genericarticle.do?categoryId=2012968&contentId=7020563>

⁵ Brad Knickerbocker, *The Christian Science Monitor*, August 09, 2006

⁶ Id

Last year, after investigation of fires and other safety problems on the Trans-Alaska Pipeline System (TAPS), the federal Pipeline and Hazardous Materials Safety Administration levied the largest proposed fine issued in 2007 against the operators of TAPS, the Alyeska Pipeline Service Company.⁷

Infrastructure

The U.S. Geological Survey (USGS) reports that Arctic Refuge oil production, if it occurs, would come from many relatively small oil fields and not one large field like Prudhoe Bay. The result would be a sprawling industrial complex of drilling sites spread throughout one and a half million acres of critical wildlife habitat. Hundreds of miles of pipelines and roads, airstrips, power lines and pumping stations and housing for workers, as well as tankers calling at the port of Valdez to transport this oil, risk further oil spills in critical habitat.

Drilling in the coastal plain of the Arctic Refuge would replace wilderness with oil derricks, roads, long pipelines connected by feeder pipelines, power plants, oil processing facilities, landfills, air pollution (particularly nitrogen oxides and methane, a greenhouse gas), oil spills, drilling wastes and sewer sludge.

Existing oil development in Prudhoe Bay and 13 other fields on Alaska's North Slope spans nearly 1,000 square miles – an industrial footprint larger than the state of Rhode Island.⁸ Superimposed on the East Coast, the development proposed for the Refuge would stretch from Washington, D.C. north almost to Philadelphia and out to the Eastern Shore.

Offshore oil and gas drilling

New off shore oil and gas drilling is bad for our coastal environment, our beaches, for marine life and their habitat, and for the broader environment. While there have been many advances in oil and gas recovery technologies in recent decades, many serious consequences still result from exploration and drilling for either oil or gas.

Harm to wildlife

America's coasts are a complex mosaic of sea grasses, wetlands, estuaries, beaches, and dunes. Off shore drilling is simply not compatible with this fragile ecosystem.

The Gulf of Mexico alone is home to more than twenty species of marine mammals, four species of shark, seven species of tuna and five species of sea turtle. All five turtle species found in the Gulf are either endangered or threatened, making any adverse effects very significant to the overall populations.

This area is the heart of one of the most important migration corridors in the world, traveled by hundreds of species of birds⁹. Offshore oil rigs interfere with migratory routes, spawning, and feeding areas for target species, generate pollution that destroys crucial nursery habitat for larval and juvenile stages, and cause large and small oil spills that reduce catches.¹⁰ In addition to

⁷ http://ops.dot.gov/library/saferep/SRC_2002.pdf

⁸ <http://www.arcticrefuge.org/>

⁹ Deepwater Gulf of Mexico Environmental and Socioeconomic Data Search and Literature Synthesis. Volume I: Narrative Report. 2000. Minerals Management Service.

¹⁰ Interactions Between Migrating Birds and Offshore Oil and Gas Platforms in the Northern Gulf

migratory birds, the eastern Gulf of Mexico supports large populations of brown pelicans and bald eagles.

America's coasts host a number of environmentally sensitive animals such as, sea turtles, whooping cranes, bald eagles, brown pelican, and manatees, among other charismatic species.

Important beach areas include the: Florida Panhandle, southwest Florida, the Grand Strand of South Carolina, North Carolina's Outer Banks, popular beaches in Maryland, Delaware, New Jersey, and Cape Cod. All these environmentally sensitive and economically important beaches could be damaged by a large oil spill and by the routine pollution that accompanies off shore oil and gas drilling.

Onshore damage

The onshore infrastructure associated with offshore oil or gas activities causes significant harm to the coastal zone. The shoreline processing infrastructure for offshore drilling often requires industrialization within the coastal zone of affected states, using installations similar to onshore storage and processing facilities including miles of pipeline and roads and other industrial apparatus like ports, helipads, and dorms.

For example, OCS pipelines crossing coastal wetlands in the Gulf of Mexico are estimated to have destroyed more coastal salt marsh than can be found in the stretch of coastal land running from New Jersey through Maine.¹¹ Years of wear and tear by the oil and gas industry has torn apart the coastal wetlands of the Louisiana Bayou. Thanks in part to drilling operations, Louisiana is losing 25 square miles of coastal wetlands each year, eating away at natural storm barriers.

Water pollution

Drilling muds are used to lubricate drill bits, maintain downhole pressure, and serve other functions. Drill cuttings are pieces of rock ground by the bit and brought up from the well along with used mud. Massive amounts of waste muds and cuttings are generated by off shore oil and gas drilling operations – an average of 180,000 gallons per well.¹² Most of this waste is dumped untreated into surrounding waters. Drilling muds contain toxic metals, including mercury, lead and cadmium. Significant concentrations of these metals have been observed around drilling sites.¹³

A second major polluting discharge is “produced water,” the water brought up from a well along with oil and gas. Offshore operations generate large amounts of produced water. The Minerals Management Service estimates that each platform discharges hundreds of thousands of gallons of produced water every day.¹⁴ Produced water typically contains a variety of toxic pollutants, including benzene, arsenic, lead, naphthalene, zinc and toluene, and can contain varying amounts of radioactive pollutants. Most major field research programs investigating the fate and effects of

of Mexico. Final Report. 2005. Minerals Management Service.

¹¹ Boesch and Rabalais, eds., “The Long-term Effects of Offshore Oil and Gas Development: An Assessment and a Research Strategy.” A Report to NOAA, National Marine Pollution Program Office at 13-11.

¹² MMS, 2000. Gulf of Mexico OCS Oil and Gas Lease Sale 181, Draft Environmental Impact Statement (DEIS), p. IV-50.

¹³ *Id.*

¹⁴ *Id.*, p. IV-32.

produced water discharges have detected petroleum hydrocarbons, toxic metals and radium in the water column down current from the discharge.¹⁵

Air pollution

Drilling an average exploration well for oil or gas generates some 50 tons of nitrogen oxides (NO_x), 13 tons of carbon monoxide, 6 tons of sulfur dioxide, and 5 tons of volatile organic hydrocarbons. Each OCS platform generates more than 50 tons per year of NO_x, 11 tons of carbon monoxide, 8 tons of sulfur dioxide and 38 tons of volatile organic hydrocarbons every year.¹⁶

Oil spills

If offshore areas are leased for gas exploration there is always the possibility that oil also will be found. There is no known example of a case where a lease prohibits an oil company from developing oil if oil is found in a “gas prone” region. There is no documented instance of any company ever agreeing to such a condition in the history of the OCS leasing program. Without such a restriction included in a lease there would be no assurances that oil would not in fact be developed, raising the possibility of an oil spill. According to statistics compiled by the Department of the Interior, there were some *3 million gallons* of oil spilled from OCS oil and gas operations in 73 incidents between 1980 and 1999.¹⁷ Oil is extremely toxic to a wide variety of marine species, and as noted by a recent National Academy of Sciences study, current cleanup methods are incapable of removing more than a small fraction of the oil spilled in marine waters. It is important to note that, with the exception of oil spills, the environmental damages described above result from drilling or exploring for either oil *or natural gas*.

Hurricane risks

The Gulf Coast and East Coast - the two offshore areas most coveted by the oil and gas industry - are no strangers to destructive hurricanes that could wreak havoc on offshore drilling operations. The 2005 hurricane season highlighted the danger of depending on this vulnerable offshore oil and gas infrastructure. It was the first year in recorded history with three category 5 storms--- Katrina, Rita, and Wilma.

In 2005, Hurricanes Rita and Katrina caused massive spills of oil and other pollutants and seriously affected the production, refinery capacity, and price of oil in the United States. The storms caused 124 oil spills into the waters of the Gulf of Mexico. During Hurricane Katrina alone 233,000 gallons of oil were spilled. There were 508,000 gallons spilled during Hurricane Rita.¹⁸ The U.S. Minerals Management Service reports that Hurricanes Katrina and Rita destroyed 115 petroleum production platforms in the Gulf of Mexico. The storms also damaged 457 pipelines connecting production facilities in the Gulf and bringing oil and natural gas to shore¹⁹.

¹⁵ *Id.*, p. IV-32-33.

¹⁶ *Id.*, p. IV-40.

¹⁷ MMS, 2000. Gulf of Mexico OCS Oil and Gas Lease Sale 181, Draft Environmental Impact Statement (DEIS), pp. IV-50.

¹⁸ U.S. Minerals Management Service. Estimated Petroleum Spillage from Facilities Associated with Federal Outer Continental Shelf (OCS) Oil and Gas Activities Resulting from Damages Caused by Hurricanes Rita and Katrina in 2005. 8 August 2006.

¹⁹ U.S. Minerals Management Service. News Release. MMS Updates Hurricanes Katrina and Rita Damage. 1 May 2006.

A full year after Katrina, BP admitted that a damaged oil well valve in the Gulf of Mexico was still leaking oil. The knee-jerk reaction to throw up more rigs offshore – especially in hurricane-prone waters like Florida’s Gulf Coast and the Eastern Seaboard – is precarious at best and not smart energy policy.

Drilling and testing

Seismic Surveys

The first step to drilling for oil and gas involves doing an inventory of estimated resources. One technology used for this type of inventory is a “seismic survey.” This technology involves ships towing multiple “airgun” arrays with tens of thousands of high-decibel explosive impulses to gather geologic profiles of seabed rock structures. These airgun arrays fire regular bursts of sound at frequencies in the range of 20 to 150 Hz, which is within the auditory range of many marine species, including whales.

As the National Marine Fisheries Service explains:

Aside from explosions, the loudest human noise in the oceans is from airgun arrays used in oil and gas exploration. . . . With source levels of up to 255 dB, and capable of shooting every 10 seconds around the clock, any one of these surveys can put more acoustic energy into the ocean annually than [Navy Low Frequency Active] sonar.²⁰

The noise generated by seismic airguns can “substantially harass and injure” marine mammals in numerous ways.²¹

Increased noise levels could interfere with communication among whales, mask important natural sound, cause physiological damage, or alter normal behavior, such as causing avoidance behavior that keeps animals from an important area or displace a migration route farther from shore. Noise from various sources has been shown to affect many marine mammals in ways ranging from subtle behavioral and physiological impacts to serious injury and death.²²

Marked changes in behavior in marine species in response to loud underwater noises in the ocean have been well documented. Seismic survey devices and military sonar (which operate at a similar decibel level) have been implicated in numerous whale beaching and stranding incidents, including a December 2001 mass stranding of 16 whales in the Bahamas, an incident of Cuviers beaked whales being beached and stranded in the Galapagos Islands and a more recent stranding in the Canary Islands.²³

The auditory organs of fish are particularly vulnerable to loud sounds such as those produced by survey airguns. As fish rely on their ability to hear to find mates, locate prey, avoid predators,

²⁰ 67 Fed. Reg. 46,712, 46,718 (July 16, 2002)

²¹ [Minerals Management Service, Draft Programmatic Environmental Impact Statement, Alaska Outer Continental Shelf, Seismic Surveys in the Beaufort and Chukchi Seas, Alaska \(OCS EIS/EA MMS 2007-001\) \(February 2007\).](#)

²² [Id.](#)

²³ NMFS, NOAA Fisheries Status Report: Preliminary Findings on the Stranding of Beaked Whales in the Bahamas (June 14, 2000); NMFS, NOAA Fisheries Status Report; NMFS, NOAA Fisheries Status Report on the One Year Anniversary of the Stranding of Beaked Whales in the Bahamas (Mar. 26, 2001).

and communicate, damage to their ears can seriously compromise their ability to survive.²⁴ In addition, mortality is possible in species like salmon that have swim bladders (the flotation organ that fish use to orient themselves vertically in the water), which have been shown to rupture on exposure to intense sounds.²⁵

“Dart Core” Seabed sample extractions

“Dart core” sampling, another survey technique, consists of dropping large hollow metal tubes from ships to vertically puncture the seafloor. The samples are retrieved and analyzed for information about subsea rock structures. This technique is extremely destructive to seafloor benthic organisms and fish habitat, discharging silt plumes that are transported on ocean currents and smothering nearby life on the seabed.

Seafloor “Grab samples”

“Grab samples” are retrieved from the seafloor sediments with large hinged “buckets” dropped from the shipboard into the seafloor to analyze silt, rocks, and seabed sediments and seafloor organisms. These buckets damage benthic organisms at the seafloor and cause silt plumes.

Directional Drilling

Directional drilling has been used to access oil and gas reserves under our National Parks, the Great Lakes, and the Gulf of Mexico. In the case of drilling off shore, the wellhead is on shore while the bottom of the well may be thousands of feet offshore. In 1997, Governor Engler of Michigan directed the Michigan Environmental Science Board to study the impacts of directional drilling on environmental and human activities. This study concluded impacts from directional drilling could result in the contamination of groundwater aquifers and loss of habitat while also increasing noise levels, odor, and congestion, impacting recreation and tourism.²⁶

Impact on coastal economies

Our coasts and marine waters provide the economic lifeblood for thousands of tourism and fishing communities, providing billions of dollars of economic activity and millions of jobs. They are destinations for thousands of vacationing families each year, sanctuary for fish and wildlife and a critical part of America’s “sea to shining sea” natural heritage. Offshore drilling is simply not compatible to the quality of economy and life this fragile ecosystem supports.

There are five main economic benefits attributed to beaches and coastlines.

1. Increased sales, income and employment opportunities resulting from spending.
2. Enhanced property value,
3. Expansion of the federal, state and local tax base.
4. Protection of developed shorefront property from storm surges,
5. Provide recreational opportunities for people

Tourism in America is a \$1.2 trillion industry with coastal communities representing over \$700 billion annually²⁷. Travel and tourism is one of the largest employers in America, employing

²⁴ McCauley.R.D., J. Fewtrell and A.N. Popper, 2003. “High intensity anthropogenic sound damages fish ears.” J.Acoust.Coc.Am. 113, January 2003.

²⁵ Id.

²⁶ Long, D.T., W.E. Cooper, W.B. Harrison III, R.H. Olsen, B.J. Premo and K.G. Harrison. 1997. *Evaluation of Directional Drilling under the Great Lakes*, October 1997. Michigan Environmental Science Board, Lansing, Michigan.

²⁷ Houston, James R. (2002). *The Economics Value of Beaches*. U.S. Army Engineer Research and Development Center.

approximately 16.9 million people²⁸. It is estimated that in 1992 beaches contributed approximately \$170 billion annually to the national economy²⁹. In South Carolina alone, beaches generate \$1.54 billion in wages and earnings³⁰.

Florida is one of the world's top travel destinations with 825 miles of beaches.³¹ With nearly 80 million tourists in 2005, the hospitality industry generated approximately \$57 billion for Florida's economy and helped create nearly one million jobs. Florida's tourism industry is responsible for 20 percent of Florida's economy. Miami Beach alone reports approximately 21 million tourist visits annually. In 1992, about 40 million tourists visited Florida, spending nearly \$14 billion and creating about 630,00 jobs with a payroll of \$8.9 billion³².

In addition to potentially catastrophic effects on the tourism industry, drilling for gas and oil off our coasts could have significant negative impacts on commercial fishing. Florida generates more than 800 million dollars worth of commercial fish caught annually. Florida also has more than \$5.6 billion in annual recreational fishing expenditures.

In a Norwegian study conducted in the central Barents Sea, seismic shooting severely affected fish distribution, local abundance, and catch rates over a large geographic area. In this study, catch of cod and haddock fell precipitously within a 38-nautical-mile by 38-nautical-mile area, and remained depressed for at least five days following the conclusion of seismic survey activities.³³

In addition, the Canadian T. Buck Suzuki Environmental Foundation and the United Fishermen and Allied Workers Union – CAW recently weighed in on the Canadian Statement of Practice on the Mitigation of Seismic noise, citing their concern for the B.C. marine-based industries, which employ over 20,000 and contribute over \$2 billion in revenues and \$600,000 in total GDP. These groups point to mortalities in fish eggs, fish and shellfish larvae, and adult fish with swim bladders; trawl catch declines from 50 to 70 percent and long line catch declines by 44 percent for 5 days after cessation of seismic shooting; and the particular concern about seismic activity during salmon migration or herring spawning. Salmon are of particular concern because of the endangered status of some populations off the Atlantic and Pacific coasts, and because of their apparent inability to detect and avoid low-frequency sound until damaging levels are reached.

III. There is no shortage of places to drill in the United States

²⁸ World Travel and Tourism Council. (2001). Year 2001, World, United States, TSA Research Summary and Highlights. www.wttc.org/ecres/pdfs/a111/pdf

²⁹ U.S. Travel and Tourism (1993). World Tourism at the Millennium. U.S. Department of Commerce.

³⁰ Marlowe, Howard. Assessing the Economic Benefits of America's Coastal Regions. Trends and Future Challenges for U.S. National Ocean and Coastal Policy.

³¹ Murley, James, Lenore Alpert, William Stronge. (2005). Tourism in Paradise: The Economic Impact of Florida Beaches. 14th annual Biennial Coastal Zone Conference.

³² Strong, W.B. (1994) Beaches, tourism and economic development. *Journal of the American Shore and Beach Preservation Association*. 62(2).

³³ Engas, Arill, Svein Lokkeborg, Egil Ona, and A.V. Soldal. Institute of Marine Research, 1996. Effects of Seismic Shooting on Local Abundance and Catch Rates of Cod (*Gadus morhua*) and Haddock (*Melanogrammus aeglefinus*). *Can. J. Fish. Aquat. Sci.* 53: 2238-2249.

There is no shortage of places to drill in the United States; in fact, the opposite is true. Companies hold thousands of unused oil and gas leases. There are more than 7,500 active leases in the outer continental shelf and only 1,655 in production.³⁴

According to a new report by the House Natural Resources committee, the number of drilling permits has exploded in recent years, going from 3,802 five years ago to 7,561 in 2007. Between 1999 and 2007, the number of drilling permits issued for development of public lands increased by more than 361 percent, yet gasoline prices have also risen dramatically contradicting the argument that more drilling means lower gasoline prices. There is simply no correlation between the two.³⁵

In the last four years, the Bureau of Land Management has issued 28,776 permits to drill on public land; yet, in that same time, 18,954 wells were actually drilled. That means that companies have stockpiled nearly 10,000 extra permits to drill that they are not using to increase domestic production.

Further, despite the federal government's willingness to make public lands and waters available to energy developers, of the 47.5 million acres of on-shore federal lands that are currently being leased by oil and gas companies, only about 13 million acres are actually in production, or producing oil and gas. Similar trends are evident offshore as well, where only 10.5 million of the 44 million leased acres are currently producing oil or gas. Combined, oil and gas companies hold leases to nearly 68 million acres of federal land and waters that they are not producing oil and gas.

The vast majority – 80 percent – of the nation's undiscovered technically recoverable oil and gas is located in areas that are already open to drilling, according to the Department of the Interior's 2006 Report to Congress: Comprehensive Inventory of U.S. OCS Oil and Natural Gas Resources.³⁶

There are estimated to be 86 TCF of Undiscovered Technically Recoverable Resources (UTRR Mean Estimate) in all OCS areas withdrawn from leasing compared to 479 trillion cubic feet (tcf) of Reserves, Reserve Appreciation and UTRR in the total OCS of the U.S. Therefore, all the potential gas placed off limits to drilling at present constitutes less than 20 percent of the gas thought to exist in the OCS.

Furthermore, according to the 2003 Energy Policy and Conservation Act (EPCA) report issued by the Department of the Interior, 85 percent of federal onshore oil resources and 88 percent of federal onshore natural gas resources (122.6 trillion cubic feet, or tcf) occurring on federal lands in Montana, Colorado, New Mexico, Utah and Wyoming are already available for leasing and development. Only 12 percent of federal onshore natural gas resources are off-limits to leasing.³⁷

³⁴ (Sources: Department of the Interior, unpublished table entitled "Total Number of Acres Leased, Data from FY 1994 through FY 2007" from Response to Questions for the Record from the House Appropriations Subcommittee on Interior, Environment, and Related Agencies, February 7, 2008; MMS, "Producing and Nonproducing OCS Oil, Gas, Slat, Sulphur Leases under Federal Supervision by Year Since 1960," Region's Quarterly Reports, as of April 2006.

³⁵ The Truth About America's Energy: Big Oil Stockpiles Supplies and Pockets Profits, Rahallreport.pdf, June 2008

³⁶ Inventory of Onshore Federal Oil and Natural Gas Resources and Restrictions to Their Development, U.S. Departments of the Interior, Agriculture, and Energy; May 2008

³⁷ BLM, "EPCA Inventory Fact Sheet," 1/15/03, p. 3

In addition to availability for leasing, Bureau of Land Management (BLM) data indicates that the vast majority of federal lands currently under lease are not being developed. Of the more than 35,000,000 acres of public lands under lease, development is occurring or has occurred on approximately 12,000,000 acres.³⁸ Drilling permit approvals on Western public lands by the BLM increased by 62 percent in 2004, to a record number of 6,052, while the number of new wells that were drilled declined by nearly 10 percent, to 2,702.³⁹

Based on this data, it is clear that the vast majority of federal oil and gas resources occurring on federal lands and waters are available for development. The oil and gas industry clearly has plenty of access to our public lands already; there is no reason to grant access to additional areas currently under moratorium for additional leasing.

Solutions

Sacrificing America's Arctic and our coasts and beaches will not bring down — and keep down — energy prices. The bottom line is the United States has about 5 percent of the world's population but consumes about 25 percent of the world's energy.⁴⁰ Instead of more drilling, which will only add to the billions in profits already being made by ExxonMobil and other oil companies, Congress should continue to raise the fuel economy of our cars, encourage the use of renewable energy like wind and solar power, and adopt other, existing energy-saving technologies that cut pollution, curb global warming and create good jobs.

For example, if our cars, trucks and SUVs together averaged 40 miles per gallon — something that is achievable with existing technology — we would save as much oil as the United States currently imports from the Persian Gulf, with another million barrels to spare. And the average driver would save nearly \$600 a year at the pump⁴¹. A single modern wind turbine can produce enough power to meet the annual electricity needs of 500 average homes.⁴²

There are other examples of clean energy solutions and alternatives to off shore oil and gas drilling. Many states have adopted renewable energy standards. By simply making our homes, offices, cars and trucks more efficient we will save energy and money today and far into the future. Instead of relying on volatile and expensive sources of oil and gas, we can use better technology to reduce our energy demand while producing more energy from renewable sources of energy like wind and solar power. These cheaper, cleaner and faster policies reduce short-term demand and costs while also providing long-term solutions to our energy needs. And it does not require you to put our most sensitive ecosystems and our favorite vacation spots on the chopping block.

³⁸ BLM, "Total Number of Acres Leased" (unpublished table, January 31, 2005) and BLM, "Number of Producing Acres on Federal Lands" (unpublished table, January 31, 2005)

³⁹ BLM, "Number of APDs approved by Year on Federal Lands" (unpublished table, January 31, 2005) and BLM, "Number of Well Spud During the Year on Federal Lands" (unpublished table, January 31, 2005)

⁴⁰ Energy Information Administration, "U.S. Crude Oil, Natural Gas and Natural Gas Liquid Resources, 1999 Annual Report," DOE/EIA-0216 (99) (December 2000).

⁴¹ Freidman, David, et al. "Drilling in Detroit: Tapping Automaker Ingenuity to Build Safe and Efficient Cars." Union of Concerned Scientists. June 2001. p. 41.

⁴² American Wind Energy Association – <http://www.awea.org/pubs/documents/FAQ2002percent20-percent20web.PDF>.

