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***Securing the Nation's Energy Future***

# Congress Should Address Regulatory and Tax Impediments to Domestic Energy Production

## Executive Summary

- The nation's energy picture has grown increasingly unstable over the last few years, as evidenced by rising prices and supply difficulties in nearly every sector of the energy economy. Both the oil and natural gas sectors have been particularly hard hit.

- The United States contains plentiful supplies of both oil and natural gas; it is the presence of regulatory and tax barriers that are largely preventing their production. If Congress wants to relieve the strain on this vital sector, it should address these barriers.

- The price of natural gas has more than doubled over the last few years from $2.55 per million Btu in July 2000 to $6.28 per million Btu now. The price of gasoline has jumped nearly 40 cents a gallon since this time last year.

- The Outer Continental Shelf contains over half of the nation's known natural gas reserves; the Interior West contains most of the nation's onshore natural gas resources; the Arctic National Wildlife Refuge contains the nation's largest oil field. All of these resources are (at least effectively) closed to development by federal policy.

- Environmental concerns are the leading justification for closing these areas to energy exploration. These concerns are largely without merit, however.

- The corporate Alternative Minimum Tax has reduced investment in the oil and gas industry by 9 percent. Its repeal would eliminate a number of tax disincentives that present a barrier to domestic energy production.

- Nuclear-generated electricity is another option to ease the demand pressure on natural gas; implementation of the nation's nuclear waste repository will allow growth in that sector.

## Introduction

The nation's energy situation has grown increasingly unstable over the last few years, as evidenced by rising prices and supply difficulties in nearly every sector of the energy economy. The oil and natural gas sectors both have been particularly hard hit. This situation is exacerbated by federal regulatory and tax barriers; if Congress wants to relieve the strain on this vital sector, it should address these barriers.

Federal Reserve Chairman Alan Greenspan warned the House Committee on Energy and Commerce last year that the tight natural gas markets "have been a long time in coming, and futures prices suggest that we are not apt to return to earlier periods of relative abundance and low prices anytime soon."[1] At the time, natural gas prices were at $6.31 per million Btu, a significant rise from the year before when gas sold at $3.65 per million Btu. In July 2000, the price was $2.55 per million Btu. Today, natural gas spot prices are at $6.28 per million Btu, and the futures price for August delivery is $6.37 per million Btu.[2] Greenspan noted that *rising prices are due to rising demand that is not being matched by increases in supply.*

Motor fuel prices also have experienced similar trajectories. Current U.S. gasoline prices are nearly 40 cents a gallon higher than a year ago. In 2004, several events coalesced to create the "perfect storm" for the oil market: production quotas by OPEC (Organization of Petroleum Exporting Countries) and political instability in Venezuela, Nigeria and Iraq have restricted supply and increased crude oil prices; meanwhile, strong worldwide economic growth has increased demand for oil.[3] The U.S. situation has been exacerbated by a weak dollar, which raises the cost of imports. Currently, the United States imports 64.5 percent of the oil it uses.[4] Moreover, bans on the fuel additive MTBE in California, New York and Connecticut, and new federal low-sulfur gasoline mandates have further increased the cost of producing gasoline. All of these factors have contributed to a precipitous rise in motor fuel prices this year, again, due to demand outpacing supply.

Rising energy prices have an adverse impact on the U.S. economy, especially on the working poor and those on fixed incomes, as they pay a higher portion of their incomes on energy than those with higher income. Often the effects on rising energy costs are difficult to determine, but in the case of natural gas, at least, many job losses can be directly traced to higher prices. The American Chemistry Council estimates that the U.S. chemistry industry has lost 90,000 jobs in the last five years.[5] These jobs have gone offshore where energy costs are lower.

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[1]Alan Greenspan, testimony before the House Committee on Energy and Commerce, June 10, 2003.

[2]Energy Information Administration (EIA), "Natural Gas Weekly Update," July 8, 2004.

[3]China is the largest contributor to global demand growth. The International Energy Agency (IEA) estimated that China will account for 30 percent of global demand growth in 2004. IEA, *Monthly Oil Market Report*, November 13, 2003.

[4]American Petroleum Institute, "Monthly Petroleum Facts at a Glance," June 2004.

[5]*Chicago Tribune*, "Energy Costs an Offshore Factor: Chemical Firms Flee for Fuel Relief," April 25, 2004.

Last year, the Council warned that an additional 35,000 well-paying jobs in the chemistry industry and 200,000 jobs nationwide could be lost if natural gas prices do not come down.[6]

And several fertilizer producers, who use natural gas not only for power but also as a primary factor in their products, have gone out of business due to higher gas prices.[7]

Congress is able to bring greater stability to U.S. oil and gas markets by addressing the tax and regulatory barriers. Meanwhile, suggestions that the energy market instability can be addressed simply by increasing the supply of renewable energy to augment the conventional energy sources and encouraging greater energy conservation are untenable. Neither of these options can possibly reach the magnitudes necessary to meet current or foreseeable future energy demand.[8]

Given the current lack of viable alternatives, the United States must continue relying on fossil fuels for the lion's share of its energy needs. That means that in order to stabilize energy markets, and to provide a secure, reliable and affordable supply of oil and gas, the United States must increase supplies of those fuels. As noted above, looking to the world market is insufficient.

The most logical place to look for increased supplies, then, is toward this nation's own energy resources. That can best be achieved by addressing several federal regulatory and tax barriers that hinder domestic production of the nation's oil and gas resources. Removing those barriers would spur investment in domestic energy production, increase energy-related jobs, boost the economy, and put the nation's energy future on a more secure footing.

## Regulatory and Tax Restrictions on Domestic Oil and Gas Production

Federal policy has prevented the nation's oil and gas producers from developing our domestic oil and gas resources. The Outer Continental Shelf, for instance, contains more than one-half of the nation's known natural gas reserves, about 362 trillion cubic feet (Tcf).[9] But the area has been subject to both congressional and executive moratoria since 1981, and many coastal areas are closed to new leasing through 2012.[10]

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[6]American Chemistry Council, statement for the record for the Senate Subcommittee on Clean Air, Climate Change and Nuclear Safety, May 8, 2003.

[7]*Gas Daily*, "Economist Says La. Chemical Industry's Future Bleak," January 9, 2004; *Power Economics*, "Energy Prices Hit Chemical Cos.," May 31, 2004.

[8]Currently, nonhydroelectric renewable sources account for just 2.2 percent of total electricity generation. The amount is expected to rise only slightly, to 3.7 percent, by 2025. EIA, *Annual Energy Outlook 2004*, Washington, D.C., 2004.

[9]U.S. Department of the Interior, U.S. Department of Agriculture, U.S. Department of Energy, "Scientific Inventory of Onshore Federal Lands' Oil and Gas Resources and Reserves and the Extent and Nature of Restrictions or Impediments to their Development," January 2003.

[10]National Oceanic and Atmospheric Administration, "Turning to the Sea: America's Ocean Future," September 2, 1999, http://www.publicaffairs.noaa.gov/pdf/ocean_rpt.pdf.

Additionally, in the Interior West, which contains most of the nation's onshore resources (138 Tcf), significant regulatory barriers prevent oil and gas development. While a federal study released last year concluded that 57 percent of the technically recoverable oil and 63 percent of the technically recoverable gas in the Interior West is on acreage that can be obtained under standard lease stipulations, those figures are misleading.[11] For example, the study correctly identifies about 600,000 acres of the Bridger-Teton National Forest that are available for leasing under standard stipulations and that have cleared the environmental review process. But it fails to mention that the forest supervisor decided not to authorize the Bureau of Land Management (BLM) to issue oil and gas leases on portions equaling 370,000 acres, citing the need to preserve the area's recreational opportunities.[12] Forest managers also have failed to act on an additional 132 applications filed since 1995 to allow bidding on over 200,000 acres in that area.[13] In other words, just because federal land is available for lease doesn't mean that permission will actually be given for energy production.

To its credit, however, the study also points out that even when the gas is located on land with standard lease stipulations, those standard stipulations may be so onerous that they preclude development. One frequent problem is inconsistent land management: "These inconsistencies included differences in protective stipulations that resulted from jurisdictional boundaries – state line, agency boundaries, BLM Field Office areas – rather than a resource protection need."[14] The study noted that the reasons were usually unclear for the high degree of variance in management practices for the same resource in the same setting.[15]

Moreover, the successful acquisition of a lease to develop a natural gas field still does not assure production of natural gas. The next step is the permitting process. The federal study did not address the myriad constraints to development associated with the permitting process and other post-lease conditions of approval. It, did, however, hint at the problems: "All oil and gas leases on Federal land, even those with the least restrictive stipulations, are subject to full compliance with all substantive and procedural environmental laws and regulations. These laws include the National Environmental Policy Act, Clean Water Act, Clean Air Act, Endangered Species Act, and the National Historic Preservation Act."[16] In other words, acquiring a lease alone may well only be the first step in a very long journey toward increased supply.

Overlaid on that federal morass is the ability of individuals in the private sector – well utilized by environmental groups – to aggressively litigate. A representative for the Independent

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[11]U.S. Department of the Interior, et al., January 2003.

[12]*Casper Star-Tribune*, "Bridger-Teton Areas Off-Limits for Oil and Gas," March 11, 2003.

[13]Data supplied by Barry Burkhardt, United States Forest Service Intermountain Region, Minerals Team Leader.

[14]Rebecca Watson, Assistant Secretary of Land and Minerals Management, Department of the Interior, testimony before the House Resources Subcommittee on Energy and Mineral Resources, June 24, 2003.

[15]Watson, 2003.

[16]Watson, 2003.

Petroleum Association of America spelled out how significant the litigation process can be to achieving the goal of increased energy security:

> The federal government is now confronted with litigation threats and actions at every step in its process. Litigation has been filed to prevent exploration activities designed to identify possible resources. Litigation is filed over granting permits, challenging existing RMPs [Resource Management Plans] and opposing revisions to EISs [Environmental Impact Statements]. The primary result of this litigation is delay and more delay – and no new energy supplies. Delay is a key component of the strategy. Energy producers must invest capital, must replace and expand their production. If opponents to development can forestall access, it forces producers to shift their investment elsewhere. The longer producers are delayed, the higher the likelihood that they will give up on an area. This is the ultimate objective of this strategy of litigation, but it is ultimately a strategy that costs the nation domestic natural gas and impacts our energy security.[17]

Federal restrictions and litigation are justified on environmental grounds. Yet, in many cases environmental concerns are merely a pretext to stop development. Years ago, energy extraction severely scarred the land, but that is no longer the case. Oil and natural gas exploration has become a high-tech industry, and its advanced exploration and production technologies have made it possible to extract energy with minimal environmental impact.[18] Moreover, there is little evidence that offshore drilling is harmful to the environment beyond the visual impacts – and even those can be addressed by subsea wells, which can eliminate the need for offshore platforms.[19]

***Removing Restrictions on Drilling in the Arctic National Wildlife Refuge***

Currently, the Arctic National Wildlife Refuge (ANWR) is off-limits to oil and gas exploration, with environmental concerns cited as the primary reason. But there is little environmental justification for such restrictions. Indeed, the environmental arguments made against energy production in ANWR are virtually identical to those that were used against drilling in Prudhoe Bay in Alaska in the 1970s. None of the environmentalists' concerns have come to fruition after 30 years of energy production.[20]

ANWR is North America's largest oil field. In March, the Energy Information Administration (EIA) completed a study showing that by opening up just .01 percent, or 2,000 acres, of the Refuge to energy development today, that field would begin to produce oil by 2013 and production would reach 876,000 barrels per day by 2025, or about 4.5 percent of U.S. daily

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[17]Bruce Thompson, testimony before the Senate Energy and Natural Resources Committee, July 10, 2003.

[18]U.S. Department of Energy, Office of Fossil Energy, "Environmental Benefits of Advanced Oil and Gas Exploration and Production Technology," October 1999.

[19]Keith Rattie, testimony before the U.S. House Resources Committee, June 19, 2003.

[20]For background, see http://www.anwr.org/backgrnd/backgrnd.htm.

consumption.[21] Unfortunately, President Clinton vetoed legislation to open ANWR to oil exploration in 1995. Had he not done so, development of that resource would be near completion and the oil available within the next couple of years.

### ***A Note on Renewable Energy and Energy Efficiency***

Many have argued that increasing domestic production of oil and gas is not necessary because the United States can meet its future energy needs by increasing the use of renewable energy and by conserving more energy through increased efficiency.

These efforts, singly or combined, are insufficient to meet the nation's energy needs. Although the EIA forecasts significant growth for renewable energy over the next 20 years, those sources still will provide a small percentage of the nation's total energy use.[22] Moreover, even after 30 years of hefty government funding, these sources remain heavily dependent on subsidies. Renewable sources simply cannot compete with conventional energy sources in the market.[23]

Energy efficiency is a laudable goal, but the best way to achieve it is through competition, not by coercion. Coerced energy efficiency is counterproductive because it distorts overall efficiency. In an effort to increase overall, or economic, efficiency, firms seek the most efficient mix of productive inputs. Sometimes that may mean increasing energy efficiency, other times it may mean increasing labor force efficiency, or the efficiency of some other input. By forcing a firm to focus narrowly on the efficiency of a single input, such as energy, the government may actually make the economy less efficient overall. The United States has an impressive track record of increasing energy efficiency along with economic efficiency, due to relatively free markets. Firms compete by reducing costs and one of the ways they reduce costs is by increasing efficiency. As a result, the nation has become more energy-efficient over time.

The government can encourage greater efficiency through more favorable tax treatment of capital investment. One way to do this is to allow companies to fully write off their capital investments immediately, rather than over several years. This speeds up the rate of capital-cost recovery and encourages investment. This would also increase efficiency as each new generation of technology is more efficient than the last. By speeding up capital turnover, firms shed their old inefficient plant and capital and replace it with new, more efficient plant and capital.

### ***The Corporate Alternative Minimum Tax Barrier***

The corporate Alternative Minimum Tax (AMT) is a tax system that exists in parallel to the standard corporate tax system. Under current law, a company must calculate its tax liability both pursuant to the standard corporate-tax rules and then again under the alternative-minimum-

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[21] EIA, *Analysis of Oil and Gas Production in the Arctic National Wildlife Refuge*, March 2004.

[22] See footnote 8.

[23] *Los Angeles Times*, "U.S. Hasn't Gotten Much Mileage Out of Energy Research Spending: Nuclear and Renewable Sources Get Most of the Money But Supply Just a Fraction of the Power," February 27, 2001.

tax rules, and the company must pay the higher of the two. In general, the corporate AMT contains a more expansive definition of gross income and more restrictive deductions against income. For the oil and gas industry, the corporate AMT's less favorable depreciation rules can affect a company's cost of capital by slowing the rate at which the firm can deduct capital investments, thereby increasing the firm's taxable income up front.[24]

The corporate AMT was passed as part of the 1986 Tax Reform Act to prevent profitable companies from avoiding taxes altogether through the use of special tax deductions and exclusions – commonly referred to as tax preferences. Since implementation of the alternative tax system, domestic oil and gas exploration experienced a steep decline. As noted by the Independent Petroleum Association of America (IPAA), between 1986 and 1997, domestic oil production fell by 2 million barrels a day or by about 25 percent of 1986 capacity.[25] A study on the effects of the corporate AMT on oil and gas exploration found that 9 percent of that decline was due to the alternative tax system.[26] While the Taxpayer Relief Act of 1997 eased some of the investment-distorting features of the corporate AMT, companies that are subject to the tax are still frequently at a disadvantage relative to firms paying the standard corporate tax, primarily because of the corporate AMT's more restrictive depreciation rules.[27]

According to IPAA, "Independent producers account for 85 percent of the wells drilled in the United States, produce 40 percent of the oil – 60 percent in the lower 48 states onshore – and produce 65 percent of the natural gas."[28] This shows that domestic oil and gas production are heavily dependent on the health of the small independent producers. The IPAA goes on to note, "Because oil and natural gas exploration and production are capital intensive and high-risk operations that must compete for capital against more lucrative investment choices, much of its capital comes from its cash flow."[29] When companies are subject to the corporate AMT, it subjects them to higher taxes, which lowers their cash flows. In addition, the increased potential tax liability raises the threshold for the pretax return that a company must achieve with respect to a project in order to justify the initial investment.[30]

Repealing the corporate AMT would eliminate a number of tax disincentives that currently present a barrier to greater domestic energy production.

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[24]Andrew B. Lyon, *Cracking the Code: making sense of the corporate alternative minimum tax*, The Brookings Institution, Washington, D.C., 1997.

[25]IPAA, "Building a Sound Energy Policy," http://www.ipaa.org/govtrelations/factsheets/pdf/BuildingStrongEnergyPolicy.pdf.

[26]Jeff P. Boone, "The Effect of the Corporate Alternative Minimum Tax on Investment in Oil and Gas Exploration and Development," *Journal of Energy Finance & Development*, volume 3, number 2, pp. 101-128. The rest of the decline was probably due to the collapse in the price of oil and gas during that time.

[27]Margo Thorning, testimony before the U.S. Senate Committee on Energy and Natural Resources, March 25, 1999.

[28]IPAA.

[29]IPAA.

[30]Lyon, 1997.

***A Note on Nuclear Power***

Although this paper focused on domestic oil and gas production, in any discussion on domestic energy supplies, it is appropriate to consider nuclear power because it is a plentiful (even a nearly inexhaustible) source of energy. Increased reliance on this source would relieve some of the heavy demand on natural gas since most new power plants are gas-run.

Nuclear power currently accounts for about 20 percent of total electricity generation in the United States. The EIA says that additional capacity will be added through improvements to existing nuclear plants, but it does not foresee the construction of new plants over the next 20 years. Safety and environmental concerns have hindered further development of nuclear power, but these fears appear to be largely unfounded.[31] France generates 75 percent of its electricity from nuclear power, while maintaining a high level of safety. Several other countries also make safe use of nuclear power.

A major roadblock to increasing nuclear power capacity has been the long-unresolved issue of waste disposal. Recognizing how critical it was to move forward with this issue, Congress in 2002 gave final approval for Yucca Mountain, Nevada to serve as a waste repository. The U.S. Court of Appeals for the D.C. circuit recently affirmed the plan, but complicated the issue by requiring the Environmental Protection Agency (EPA) to extend the compliance period during which the repository must limit exposure to beyond 10,000 years. The EPA could either attempt to comply with that order or Congress could authorize EPA to implement the current plan with a 10,000-year compliance period.

## Conclusion

The U.S. energy system is plagued by numerous weaknesses, as evidenced by a series of energy-related difficulties experienced over the past few years. By removing federal regulatory and tax impediments to capital investment and domestic energy exploration, Congress can help put the United States on the path to a more secure energy future.

[31]The only major nuclear accident in the United States occurred in 1979 at Three Mile Island in Pennsylvania. Long-term studies have not detected a statistically significant increase in cancer deaths as a result of that accident. See: Evelyn O. Talbott et al., "Long-Term Follow-Up of the Residents of the Three Mile Island Accident Area: 1979-1998," *Environmental Health Perspectives*, March 2003.