Statement of

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To the

Committee on Resources

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Mr. Chairman and Members of the Committee:

I am pleased to join my colleague from the Department of the Interior in discussing the energy potential of our federal lands and the importance new technology will play in permitting the nation to benefit fully from these energy resources in the most environmentally responsible manner.

With much of the nation's attention again focused on the security of global energy supplies, it is important to remember that we remain an energy-rich country. Our nation has rich deposits of coal, oil and natural gas. We have more energy in our domestic coal reserves, for example, than the rest of the world has in its recoverable oil. Our natural gas deposits are extensive with resources ranging from the shales of Appalachia to the tight sandstones of the Rocky Mountains to the ice-like hydrates of the Gulf of Mexico and the Arctic. And even though we currently produce less than half the oil we consume, we remain the world's third largest oil producing nation.

Today, fossil energy resources supply 85% of the energy we consume; over the next 20 years, virtually all credible energy projections agree that these fuels will supply a similar, if not larger, share of our energy needs.

Coal will continue to supply around 50% of our nation's electricity, and because of the growing demand for electric power, that will require nearly 1.4 billion tons of coal to be mined in 2020, 20% more than was mined last year. Similarly, by 2020, the United States will need about 50% more natural gas, largely because of increasing gas use for power generation. Moreover, demand for these fuels could increase even beyond current projections since both coal and natural gas could serve as major feedstocks for the "hydrogen economy" described by the President in his recent State-of-the-Union address. It is also projected that the nation's use of oil will increase by about a third over the next two decades.

Because coal, oil and natural gas are the dominant fuels in the U.S. economy, when President Bush formulated his National Energy Policy, he recognized that to be truly energy secure, we must look for ways to maximize the energy potential of these traditional energy resources even as we explore the possibilities of future energy resources such as renewables and fusion and improve efficiencies in the way we use energy.

The Importance of Federal Lands

The energy strength of our nation lies in the abundance and diversity of our energy resources, and many of these resources exist on federal lands.

The federal government owns about 31 percent of our nation's land. Large portions of U.S. energy resources are contained in these federal lands and offshore areas. Public lands provide nearly 30% of annual energy production and are estimated to contain a substantial majority of the nation's undiscovered

domestic energy resources.

The Department of Energy supports the Department of the Interior's activities to effectively inventory these domestic resources vital to our nation's energy supplies and assess the consequences of restrictions to land access. We have worked closely with the Interior Department in conducting these inventories, and we stand ready to continue our close collaboration in future studies.

The Energy Policy and Conservation Act (EPCA) enacted in 2000 directed the Interior Department, in consultation with the Energy and Agriculture Departments, to conduct an inventory of energy resources beneath onshore Federal lands. The resulting report assessed five basins which have proven to contain some of the most significant amounts of natural gas and oil resources under onshore public lands: Powder River Basin (Montana and Wyoming), Montana Thrust Belt (Montana), Greater Green River Basin (Wyoming and northwestern Colorado), Uinta-Piceance Basin (Utah and western Colorado), and Paradox-San Juan Basin (Colorado and Utah). It also identified ten different categories of land accessibility through a process of mapping the surface of the public lands in conjunction with the underground resource. This method provides the ability to look at resource restriction as well as land surface restriction.

The key findings of the report indicate there are an estimated 226 trillion cubic feet (Tcf) of natural gas and 6.3 billion barrels of oil under these lands.

This report begins the process of identifying and making an inventory of these resources and I believe that this process will be an invaluable tool for improving public policy decision-making. With President Bush's comprehensive energy plan and this new federal inventory we can meet the challenge of both providing energy for Americans and protecting our environment.

Responsible Domestic Production

The United States is one of the most mature oil and gas regions of the world. The vast majority of resources that have been developed have been from shallow reservoirs with relatively easy access. Maintaining a strong base of domestic production is a challenge to the industry, but we have continued to produce by implementing constantly improved technology and operational practices. Because of our ability to develop resources more efficiently with smaller land disturbance, the U.S. remains the third largest producer in the world.

The President's National Energy Policy emphasizes that 21st century technology is the key to environmental protection and new energy production. The American oil and gas industry has made great strides in technology development and is one of the global leaders in the successful use of advanced technologies and best operational practices.

As technology and understanding of our Nation's resource potential advances, previously unrecoverable, higher cost resources become feasible, thereby providing a larger contribution to reliable and affordable energy supplies for America. Technological advances have enabled oil and gas producers to access new frontiers such as tight gas formations, ultra-deepwater, Arctic areas, and gas from coal seams. It also has made exploration and production activities much more efficient. Drilling success rates have doubled in the last two decades, resulting in fewer dry holes. Today, fewer than half as many wells must be drilled to locate the same amount of oil and gas reserves as two decades ago. Enhanced recovery now allows industry to produce a higher proportion of the hydrocarbons in discovered reservoirs, leaving less behind.

Not only have we learned how to produce oil and gas more efficiently, we also have been able to do so with a greater degree of environmental protection. Through both technology developments and new operational techniques, domestic oil and gas production shows considerable environmental improvements. Fewer wells to add the same level of oil and gas reserves, lower volumes of produced water and other production fluids, smaller footprints for oil and gas rigs and other field facilities; reduced air emissions; and an enhanced worker safety environment.

I would like to give you a perfect example of the ability of the domestic oil and gas industry to provide energy supplies while protecting the environment. Recently, a new modular drilling rig has been deployed in Alaska as the platform for a methane hydrates well.

This drilling rig is patterned after offshore jack-up rigs and sits above the tundra on stilts. Its use will allow drilling operations to have a virtually zero footprint. This is a dramatic leap forward in our ability to maintain

and protect the environment while developing our essential resources.

In addition to its negligible environmental impact, this technology has the added benefit of allowing production to continue year-round. Currently, in Alaska, wells are only drilled in the winter when the ground is frozen and will support ice roads and ice drilling pads. When the ice melts, the rigs and associated equipment can sink; consequently the rigs and equipment must be removed prior to thawing. Ice roads will be unnecessary because all equipment for this new rig can be brought in on rollagons – vehicles specifically designed for Arctic travel – by land in the winter and by helicopters in the summer. This rig will also be able to fully contain any drilling fluid or potential spills.

It is technological improvements such as the virtually zero-footprint drill rig that give us confidence that oil and gas operations can be conducted on Alaska's North Slope, including in the 1002 Area of the Arctic National Wildlife Refuge, in a way that protects the character of the land and the quality of the Arctic environment. Continual improvements in the way the industry does business in the Arctic now open the possibility that we could achieve the 1002 Area's potential as the single most promising prospect in the United States. As we examine ways to secure the Nation's energy future, it is important to recognize that with advances in environmentally-sensitive oil field technology, production from ANWR could one day account for more than 20 percent of all U.S. oil production and could be equal to more than 60 years of current oil imports from Iraq.

In addition to the inherent environmental benefit of a virtually zero-impact drilling rig, new technologies will also enhance our ability to produce natural gas from potentially huge methane hydrate resources. We believe methane hydrates constitute one of the most significant long-term sources of natural gas in the world. On the North Slope of Alaska alone, the hydrate resource has been estimated at 590 TCF. For years, the discovery of natural gas hydrates beneath the permafrost during drilling operations has been considered a nuisance at best and at times, has been detrimental to production. However, technological advances are giving us the capability to extract natural gas from the hydrates.

Coalbed methane is another prime example of an energy resource the nation will need increasingly in the future. In 2000, about 1.4 Tcf of coalbed methane was produced in the United States, 7.5 percent of total annual domestic natural gas production. While the San Juan Basin in southwestern Colorado and northwestern New Mexico is the nation's top producer of coalbed methane and there are other large coal seams, such as in Alabama, that produce natural gas, the Powder River Basin, located in northeastern Wyoming and southeastern Montana, is the fastest growing source of coalbed methane.

In the next 10 years, as many as 39,000 new coalbed methane wells could be drilled in the Powder River Basin. Nearly 24,000 of these will likely be on the Federal mineral estate.

The amount of natural gas that will be economically recoverable from these coal seams will depend largely on the clear definitions and consistency of regulations surrounding produced water. We recognize the importance of the safe disposal of produced water, and that is why we need a clear and consistent regulation. We are committed to working with Interior, EPA and other Federal and State agencies to make sure that we will have a regulatory process that is not only effective, but not unduly burdensome.

Other recent technological advancements that can help realize the energy potential of our federal lands while protecting the environment include:

Ø Three and four-dimensional seismic technology now provide the capability for virtually "seeing" resource formations – including how the reservoir changes over time. This, in turn, allows better targeting of exploration prospects and improved recovery in discovered fields;

Ø Directional and multi-lateral drilling now enable industry to access oil and natural gas resources miles away from a drill rig. Multiple boreholes can now be drilled into different producing horizons from a single wellbore – again minimizing surface disturbance.

Ø New, high performance synthetic drilling fluids can be safely discharged without harm to the environment. These new fluids greatly improve the economics of drilling, allowing the pursuit of resources in complex geological settings.

Ø Developments in offshore platform technology now take advantage of advances in materials and computer-aided design. This has resulted in lower cost, modular production facilities that enable producers

to pursue smaller prospects in deepwater settings.

When the President released his National Energy Policy almost two years ago, he gave us a blueprint for energy security. It is imperative that we have reliable and affordable supplies of energy, and we must improve our stewardship of the environment. It is through the use of best available technology and best operation practices like these that I have just described that allow us to responsibly develop large new domestic resource basins while improving the quality of environmental protection. These capabilities already exist and are being put into practice, from the coal seams of Alabama to the Rocky Mountains to the Alaskan Arctic.

Thank you Mr. Chairman.