

Comment by Email

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Natural Gas Supply/Demand Notice of Inquiry

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U.S. Department of Energy
Office of Fossil Energy (FE-30)
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Washington, DC 20585

Re: Natural Gas Supply and Demand

These comments are submitted in response to the Department's request for public input on section 1818 of the Energy Policy Act of 2005 which authorized DOE to prepare a "Natural Gas Supply Shortage Report" for Congress. Western Resource Advocates (WRA) has substantial expertise on natural gas and related energy supply and demand issues in the West. WRA's "Gas Efficiency" report is attached to the hard copy of these comments.

These comments encompass two categories of input. The first offers observations and input on energy supply and demand issues nation-wide and in the Western states. These comments are premised on WRA's expertise on supply and demand issues. The second category offers observations and input about natural gas development issues in the Rocky Mountain region. They are premised on our expertise on protecting local communities and the environment from the impacts of poorly planned energy development.

In formulating its report, we urge the Department to bear in mind a practical perspective on energy supply and demand presaged in an understanding that the United States cannot drill our way out of current supply shortages. We believe both the executive and the legislative branches are aware of this reality, but federal policies often over-emphasize the potential for more drilling and domestic production to produce unrealistic short or long-term results. Policy makers in Congress and federal agencies need to guard against unacceptable impacts to Western landscapes, local economies, wildlife, water resources, and air quality of gas-bearing provinces.

Policies should be crafted consistent with the following observations and recommendations.

Background

- Clean energy - efficiency and renewables - is the fastest, cheapest, most reliable way to increase energy supplies and hold down prices.
- Between 1996 and 2002, America's economy grew by 21 percent, but energy consumption grew just 2 percent. This shows that our economy's growth depends on the efficient use of energy, not just reliable energy supplies. Imagine how much worse our energy problems would be today if consumption had also grown by 10 or 20 percent.
- Reducing gas demand by 2 percent with efficiency measures can result in price reductions of up to 25 percent.
- With aggressive efficiency measures, the West could improve energy efficiency by 20 percent over the next 15 years, and eliminate the need many proposed new coal- or gas-fired power plants.
- According to the American Wind Energy Association, by the end of 2005, wind farms already installed in the U.S. will be saving over a half billion cubic feet of natural gas per day, or about 180 billion cubic feet (bcf) per year.
- Continued expansion of wind power through 2010 - at a conservative pace - could double the amount of natural gas saved, to 365 bcf per year, or about 10 percent of the total annual gas production in the entire Rocky Mountain region.
- WRA recognizes that the Rockies are the one gas-producing region where production is likely to increase over the next decade. However, even though current prices are five times higher than they were at the beginning of the decade aggregate U.S. production declined at least two percent last year, and roughly that the year before.
- Figure 4 in WRA's Gas Report shows one big reason for that trend: even as we punch more and more wells in the United States, natural gas well productivity has taken a very steep dive in the last quarter-century. Offshore gas production in the lower 48 states is projected to peak around 2010, while lower 48 onshore production outside the Rocky Mountain region is expected to decline slowly. Net imports from Canada are also expected to decline, in part because increasing amounts of gas will be diverted to tar sands development.
- WRA's research shows the difficulty of reversing these larger trends with production from the Rockies. The industry is already working flat out. More than 42 million acres of federal public lands are under lease. In the last fiscal year, a record 6,130 drilling permits were issued. Even then, a significant number of leases have gone undeveloped and permits unused because the industry is already pedaling as fast as it can.

- WRA's Gas Report – which was based on a number of analyses done by the national labs and others – show that the single biggest thing we can do is embark upon a national, regional, and state initiative to take advantage of every cost-effective energy efficiency opportunity that remains untapped. Collectively, these efficiencies would reduce aggregate demand by 2 trillion cubic feet (tcf), and in the process save consumers money and make our industries more competitive. They would also relieve the pressure on federal land managers to lease ever more acres and issue ever more drilling permits.
- Part of the solution will require more use of liquid natural gas (LNG) imports. Domestic and North American production alone will not keep pace with supply. Accordingly, the Department needs to plan for the infrastructure necessary to make LNG a reality. Federal Reserve Chairman Alan Greenspan has been advocating an increased role for LNG for several years.
- Congress has recognized the need for LNG imports. Facilities should be designed and constructed with full participation by other agencies, state and local governments, and the public in order to assure adequate environmental and other safeguards. Although some communities might resist siting of facilities, they need to bear in mind that they are also gas consumers – and producing regions alone should not bear all the costs of supplying natural gas.
- Similarly, national policy needs to do more to foster growth of the wind, solar, geothermal, and biomass industries. Siting should similarly be based on good science and local participation. Congress should resist the temptation to exempt “green energy” projects from the National Environmental Policy Act (NEPA), because poor design or siting decisions can set back the wind industry by eroding public support. NEPA is our best tool to assure good decision-making, and federal agencies should comply regardless of whether it is analyzing development of a gas field or a wind farm.

The Role of Efficiency and Renewables

- WRA's Gas Report shows that, by implementing aggressive energy efficiency standards, the U.S. could reduce gas consumption in the residential, commercial and industrial sectors by 11% by the year 2020. Overall consumption in these three sectors would drop from 19 trillion cubic feet per year to 17 trillion cubic feet per year.
- Efficiency standards that reduce electricity consumption are likely to have an immediate impact on gas supplies. The reason is that when consumers use less electricity due to efficiency measures, utilities will react by “turning down” their gas-fired generators first in order to save the most money.
- Another way to save gas on the electricity side is by relying on more renewable sources, such as wind, for power generation. As the New York Times wrote in an article in February 2005, “With every turn of the giant blades of the 136 windmills here on the

edge of a mesa, the stiff desert breeze is replacing expensive natural gas or other fuel that would have been burned in a power plant somewhere else.”

- By 2008, combined electric and natural gas energy efficiency and renewable energy measures could reduce gas consumption by 5.5%, and result in gas price decreases of up to 22%. Such a drastic decrease in gas consumption and price could bring many proposed and current gas-drilling activities in the Rockies to a grinding halt.
- Standards enacted to date are having a significant impact on U.S. energy use while saving consumers and businesses billions of dollars. Appliance standards rank with automobile fuel economy standards as the two most effective federal energy-saving policies.
- In 2000, according to analyses by the U.S. Department of Energy and ACEEE, standards reduced U.S. electricity use by approximately 88 billion kWh and reduced U.S. total energy use by approximately 1,200 trillion Btus. These savings are 2.5% and 1.3% of U.S. electricity and energy use in 2000, respectively.
- In 2000, standards reduced peak generating needs by approximately 21,000 megawatts (MW) — equivalent to displacing seventy 300 MW power plants. Without these savings, current electricity shortages would be significantly worse.
- Over the 1990–2000 period, standards have reduced consumer energy bills by approximately \$50 billion. Under standards, equipment prices have risen modestly, but estimates by the Lawrence Berkeley National Laboratory and ACEEE indicate that the benefits are more than 3 times the costs on a net present value basis.
- As old appliances and equipment wear out and are replaced, savings from existing standards will steadily grow. By 2010, savings will total more than 250 billion kWh (6.5% of projected electricity use) and reduce peak demand by approximately 66,000 MW (a 7.6% reduction). Over 1990–2030, consumers and businesses are projected to save approximately \$186 billion (1997 dollars) from standards already adopted.
- To meet standards, manufacturers often make investments in improving products but fiscal impacts on manufacturers are generally modest. For example, in its 1990 Annual Report, Mor-Flo (a major water heater manufacturer) noted that since NAECA: (1) "we no longer have to produce models to address the varying state energy efficiency standards;" (2) "price increases on ... minimum standard models have more than offset the corresponding cost increases resulting in an improved gross profit margin;" and (3) since the standards took effect, "the Company has been selling a larger number of 'step-up' models."

Recommended Next Steps

- Adopt standards for products not currently covered including residential torchiere lighting fixtures, building transformers, commercial unit heaters, traffic lights,

illuminated exit signs, commercial refrigeration equipment, residential furnace fans, residential ceiling fans, vending machines, and consumer electronic products that "leak" electricity when not in use.

- Standards on the above-listed products would save approximately 73 TWh of electricity in 2010 and 164 TWh in 2020. The savings in 2020 amount to about 5% of the projected residential and commercial electricity use for that year, and would reduce peak electrical demand by the equivalent of approximately two hundred power plants (300 MW each). These standards would also result in substantial economic savings to consumers and businesses with discounted net benefits (benefits minus costs) of more than \$80 billion and a benefit-cost ratio of more than 5:1.
- Finalize a new residential air conditioner standard at the SEER 13 level. Relative to a SEER 12 standard, SEER 13 will displace the need for sixty new 300 MW power plants and save consumers billions of dollars.
- Continue current rulemakings to set appropriate new standards for commercial cooling and heating equipment, and residential furnaces and boilers.

The Rocky Mountain Region - Doing It Right:

- The Rocky Mountain Region is touted as an important growth region for more drilling and production in coming years. Additional development is inevitable, but it needs to be sited and regulated to minimize impacts to the natural and human environment.
- Streamlining, fast-tracking and otherwise cutting corners to expedite approvals of energy projects will result in long-term costs that far outweigh the short-term benefits. As this boom runs its course, all levels of government need to consider the legacy it will leave behind and plan to ensure that healthy, vibrant communities, economies and natural environments will survive the drilling explosion.
- The Farmington Resource Area in the San Juan Basin of northwest New Mexico is an example of poorly planned development that has unacceptable consequences. Poorly regulated development threatens the future of local communities. Sadly, high-density development in areas like the Powder River Basin, the Upper Green River Basin, and the Piceance Basin could leave similar legacies unless checked by good planning based on sound science and local input.
- Recent studies are documenting that natural gas development directly impacts the health of big game and other wildlife herds that rely on habitat being increasingly encroached by gas development. See Sublette Mule Deer Study Phase II, Long-term monitoring plan to assess potential impacts of energy development on mule deer in the Pinedale Anticline Project Area, by Hall Sawyer et al, Western Ecosystems Technology, Inc., October 2005, available from the Wyoming Bureau of Land Management.

- Some federal legislators have proposed waiving timing and other stipulations in federal mineral leases that were imposed at the urging of state and federal wildlife biologists and others. This is another short-sighted proposal that would have little or no immediate impact on supply and could have great costs to wildlife, local communities and rural economies. The Sawyer Study is the best recent science and it leads to the firm conclusion that stipulations are necessary and they do work if enforced. The economic health of the rural West is increasingly dependent on amenity values that flow from a clean environment, and robust tourism and recreation sectors.
- With regard to calls for waiving stipulations and otherwise relaxing essential environmental protections, there is a danger that agency processes will be unduly influenced by political considerations. Accordingly, WRA recommends that the Department and Congress consult with the National Academy of Science before making any changes to existing law and policy that could have unintended results. Credible, independent science is an absolute necessity before tinkering with environmental protections. Unfortunately, the federal government has recently indicated a proclivity to rely on unsubstantiated scientific theories to support a political agenda. That's bad public policy.
- Although it may be tempting to advocate more drilling as a short-term strategy to address supply issues, this will only exacerbate shortage issues over the medium and long-term. Natural gas is needed to play a major role in meeting demand for the foreseeable future. Maximizing production in the short-term will only make it more difficult to meet demand in ten or twenty years when more accessible supplies are tapped out and new wells hit declining production curves.
- Accordingly, policy recommendations should take into account the need for a steady supply of gas production, rather than seek immediate spikes. Tradeoffs will be more difficult in future years, not easier.
- Congress needs to very carefully evaluate gas industry requests to be exempted from regulations intended to protect public health and safety. A recent case in point is the provision in the new energy bill exempting the oil and gas industry from compliance with EPA's stormwater program. Colorado reacted by exercising its independent authority under state law to regulate stormwater runoff from oil and gas construction sites, by a 9-0 vote of the Colorado Water Quality Control Commission in January, 2006.
- Colorado is a headwaters state that largely controls its own destiny on water quality issues. But the Congressional exemption endangers water quality of states that are downstream from producing basins. On one hand, it sets the stage for conflicts between upstream and downstream states as is currently occurring between Wyoming and Montana in the Powder River Basin. On the other hand, it fosters conflict and disagreement between the federal government, state agencies and local governments.

The unintended consequence of Congress' action is that standards will differ by state. This issue won't go away because of the importance of water quality in the arid West.

- Phased development is a cornerstone of responsible energy policies for developing a given mineral basin. Oversight agencies should guard against the rush to issue the maximum number of permits across a field without regard for other values or competing land uses. Instead, field development should be carefully planned to minimize the footprint and the impacts to other values and users. The decision of the Montana Federal District Court in the Powder River litigation recognized this key concept. See Northern Plains Res. Council v. U.S. Bureau of Land Mgmt., No. CV 03-69-BLG-RWA (D. Mont. Feb. 24, 2005) (requiring BLM to analyze a "phased development" alternative).
- Some places are too special or valuable for other uses to be drilled or leased in the first instance. Over the long-term, improved directional drilling technology offers the prospect of win-win solutions. Gas reserves are not going anywhere but technology is constantly improving. A decision not to drill in the next few years because current methods would have unacceptable impacts is a wise course that preserves the options of future generations. Federal policies targeting all known mineral provinces on public lands for immediate production have lost sight of this important concept.

Thank you for the opportunity to submit comments on this timely report. We look forward to working with the Department, the Western Governors Association, and other federal, state, and local agencies to design and implement energy policies that will put the country on course to solve our energy challenges while revitalizing the economy and protecting the environment at the same time.

Very sincerely yours,

/s/

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