Statement for the Subcommittee on Energy and Mineral Resources
Committee on Resources, U.S. House of Representatives

Hearing on The Growing Natural Gas Supply and Demand Imbalance: the Role that

Public Lands & Federal Submerged Lands could play in the Solution.

July 16, 2002

By Glenn R. Schleede on Behalf of Consumer Alert

Madam Chairman and Members of the Subcommittee:

My name is Glenn R. Schleede[(1)] and I am appearing today on behalf of Consumer Alert, a nationwide, non-profit, non-partisan consumer group committed to protecting consumer choice and promoting economic growth.

Thank you for holding this hearing on natural gas supply and demand and the potential role of public and federal submerged lands. Thank you, especially, for providing an opportunity for Consumer Alert to outline for you some of the interests of real consumers in the adequacy and price of natural gas and to make some recommendations. We believe that the interests of real consumers are often overlooked as the Congress considers matters before it, so we are especially grateful for this opportunity.

In summary, I will be making the following 5 points:

· Natural gas is playing an increasingly important role in supplying the energy that consumers need for use in their homes, including its use in generating electricity.

· Natural gas prices for residential customers and electric generating companies have increased sharply from 1994-95 levels and have been extremely volatile, with negative impacts on consumers and the economy (particularly in late 2000 and early 2001).

· Given the limitations on other energy sources, natural gas now appears to be the only energy source that can be expected to make a significant contribution in supplying the nation's energy needs for the foreseeable future.

· Competition for available supplies of natural gas will increase, particularly the demand for its use in electric generation, portending additional price increases for consumers using natural gas and using electricity generated with natural gas. While consumers' bills are now down from 2001 levels, they are likely to increase in the future due to higher gas prices, higher gas transportation costs and automatic tax increases.

· There are actions that federal, state and local governments can take to increase the availability of natural gas and help restrain price increases that damage consumers and the economy. Perhaps the most important action is to remove unnecessary restrictions on access to public lands and federally submerged lands for gas exploration and development.

The pages that follow expand on these points and provide data to support our findings and recommendations.

High and Volatile Natural Gas Prices

The graph below shows the rise in nationwide average annual prices for natural gas at the wellhead, at city gates, and delivered to electric utilities and to residential consumers as reported by the US Energy Information Administration (EIA). The volatility of prices is shown more clearly in Attachment #1, which shows prices on a monthly basis for the same period.

Prices rose sharply in late 2000 and early 2001 from earlier levels due to:

· Inadequate gas exploration and development drilling in 1998 and 1999 (due in part to low prices and low profit margins).

· High demand for natural gas for electric generation (due in part to low hydroelectric production in the Pacific Northwest).

· High demand by commercial and residential customers due to cold weather.

· Higher taxes on residential gas customers.

Those high natural gas prices (and high electricity prices due heavily to high natural gas prices) were felt throughout the economy and undoubtedly contributed to the recession. Consumers feel the economic impact of high gas prices in several ways: directly through their own monthly bills, and indirectly through higher prices for the goods they purchase and higher taxes. (See page 5 of Attachment #2 for a more complete explanation of the way high natural gas bills adversely affect consumers, particularly those with little or no discretionary income.)

The last point deserves special attention. Some states and many local governments impose taxes on natural gas and often those taxes are imposed as a percentage of a consumer's gas bill. This means that taxes go up when gas prices increase and even when the amount of gas used increases due to cold weather.

States and local governments imposing taxes in this way enjoyed a tax windfall especially during the winter of 2000-2001. The magnitude of that windfall as well as the effects of other factors pushing up consumers' prices can be seen in the analysis presented in Attachment #2 which compares in detail the natural gas bills for December 1999 and December 2000 for a home in the District of Columbia. Each factor contributing to the doubling of the bill is identified.

Fortunately, natural gas prices have moderated somewhat since early 2001 but remain higher than in the past. Clearly, there is the potential for higher natural gas prices in the future. Several actions identified later in this statement could be taken to help restrain those price increases.

Increasing Role for Natural Gas

The graph below shows recent history and EIA forecasts[(2)] of US natural gas consumption through the year 2020. If EIA's forecast is correct, natural gas use by electric generating companies will increase by more than 6 trillion cubic feet - Tcf (143%) by 2020 from 2000 levels. Industrial use is projected to increase by 1.65 Tcf, commercial use by 1.25 Tcf and residential use by .98 Tcf during the same period.

The important points for residential consumers is that they will be facing steep competition for natural gas and the price could rise if gas producers and transporters are unable to keep up with demand. Consumers will see higher costs in their own natural gas bills and in their electric bills as gas use in electric generation

increases.

Natural Gas is the Only Energy Source That Can Make a Significant Contribution for the Foreseeable Future.

The EIA forecasts, summarized in a table later in this statement, make clear that natural gas is the *only* energy source that can make a significant contribution toward meeting the nation's growing demand for energy, in general, and electricity, in particular. This is quite clear from a brief review of the alternatives:

Energy Conservation and Energy Efficiency. The US has made impressive gains in energy efficiency during the past 3 decades. According to EIA data,[(3)] **r**eal US Gross Domestic Product (GDP) increased by 126% from 1973 to 2001 while energy use increased by only 27%. The US accounted for 29.5% of the world's GDP in the year 2000 but accounted for only 25.4% of the world's energy use. Gains in energy efficiency and reductions in energy intensity have largely been the result of:

Energy price-induced measures by businesses and individuals that have found ways to hold down energy consumption.

· Energy efficiencies that were a byproduct of technological changes in electronics, materials, computerization, telecommunications and other areas that did not have *energy* efficiency as their principal objective.

· Spin-offs from R&D supported by the Department of Defense, such as the much more efficient combustion turbines now being used to generate electricity that benefited from DOD sponsored aircraft engine R&D and materials research.

· Changes in the makeup of the US economy with productive activity trending toward less energy intensive pursuits; e.g., computer software and services require less energy than steel and aluminum production.

· Foreign competition and periodically high motor fuel prices that encourage the production of energy-efficient vehicles.

While impressive gains have been made, conservation and efficiency will not offset the increases in energy use that will be necessary for a steadily expanding economy. We must have additional sources of energy.

I should also point out that the much-ballyhooed government-dictated DOE energy efficiency standards contribute very little in improving our nation's energy efficiency. For example, DOE's data show that the recently issued efficiency standards for central air-conditioners and heat pumps mandating a 20% increase in efficiency above current levels will save very little energy while costing consumers hundreds of millions of dollars

Specifically, DOE claims that the new standards will save "about 3 quads" of energy during the period from 2006-2030.[(4)] Three quadrillion Btu sounds like a lot of energy but it really is only 9/100 of 1% of the 3,200 quads of energy that will be used during that period. That tiny amount will undoubtedly be overwhelmed by changes brought about by market forces and private sector technology developments such as those listed in bullets above.

An additional insult to consumers is the fact that DOE admits that about 25% of the 140 million consumers expected to buy the air conditioners and heat pumps during 2006-2030 period would NEVER recover

through energy cost savings the higher cost of the products meeting the DOE-dictated standard. Members of your Committee should note that self-appointed "non-profit" energy efficiency advocacy groups that receive tax dollars via DOE and the National Laboratories have been extremely active in promoting tight efficiency standards that help drive up consumers' costs.

1. Renewables. Many people like the sound of getting energy from "renewable" energy but, again, it is necessary to be realistic and *look at the facts*.

a. Hydropower is the only significant source of economical renewable energy. Advocates of "renewable" energy do not like hydropower despite the fact that it is the one "renewable" energy source that is providing a significant contribution; in fact, over 7% of the nation's electricity. They favor *only* the non-hydro "renewables."

Furthermore, the potential for an increased contribution from hydropower is limited because few sites are available, there is opposition to expansion and the very real possibility that the contribution from hydropower could be reduced in the future. Reductions could come from diversion of water around dams to serve other needs (e.g., fish, recreation), breaching dams in some areas, and the slow pace of re-licensing of existing hydropower projects.

b. Non-hydro "renewables" will provide little usable energy. The non-hydro renewables - wind, solar, geothermal, biomass (including wood and wood wastes) and municipal solid wastes[(5)] are, essentially, niche technologies that are not likely to *ever* make a significant contribution towards supplying US energy requirements. DOE has spent hundreds of millions in tax dollars on renewable energy R&D during the last 20 years.

The small role that non-hydro renewable energy sources can be expected to play in supplying our energy and electricity requirements during the next 20 years is demonstrated clearly in the two tables, based on EIA data, shown on the next page. For example, the tables show that all non-hydro renewables combined (wind, solar, wood, wood, waste, biomass, geothermal, and municipal solid wastes) supplied only:

· 3.67% of US overall energy requirements in 2000 and may reach only a 4.57% contribution by 2020.

· 2.13% of US electricity generation in 2000 and are not expected to reach a 3% contribution by 2020.

These small but realistic forecasts by EIA take into account the enormous federal and state subsidies now being provided some renewables such as "wind energy."

Furthermore, it is important to recognize that all the generous subsidies now being provided for "renewable" energy -- and others being contemplated such as federal "renewable portfolio standards" -- merely shift costs from renewable energy developers to consumers and taxpayers - and hide those costs in tax bills and monthly electric bills.

Some of these technologies have negative environmental implications that are only now being recognized, such as the significant scenic impairment cause by windmills in some areas - even though the huge structures produce very little electricity.

3. Coal. Clearly coal makes a significant contribution in supplying US energy requirements; specifically 22.49% of overall energy demand and 51.6% of electricity generation in 2000. Coal could provide an even larger contribution on an economically competitive basis but environmental requirements and concerns that are well known to this Subcommittee are limiting its contribution.

Petroleum. Petroleum products provided 38.75% of overall US energy requirements in 2000 and EIA

expects that share to remain about constant through 2020. Very little oil is used in electricity generation; in 2000 its share was 2.68% and it is expected to drop to less than 1% by 2020. However, petroleum products account for 97.5% of the energy used in transportation.[(6)] **Substitutes for petroleum (e.g., ethanol) are still expensive and highly subsidized. The cost of the subsidy is hidden from consumers at the gas pump but shows up in tax bills paid by the nation's remaining taxpayers.**

Concern about dependence on oil imports continues to dominate public policy debates and is likely to continue to do so. Oil imports accounted for about 9% of total US merchandise imports in 2001,[(7)] but accounted for about 55% of the petroleum products supplied in the US during 2001.

5. Nuclear Energy. Nuclear energy provided over 8% of overall US energy requirements in 2000 and 19.7% of US electric generation. EIA expects the contribution to decrease somewhat in absolute terms and decline substantially in market share by 2020 as some plants are shut down. While some are still concerned about safety and proliferation issues, the primary obstacle to increased use of nuclear energy and new plants is the continuing uncertainty about long term management of nuclear wastes. Until that problem is solved and the public becomes comfortable with nuclear energy, building new nuclear plants is unlikely.

6. Natural gas. There is much more that could be said about each of the potential energy sources but the conclusion would not change. That conclusion is that with current constraints on traditional energy sources (coal, oil, hydropower and nuclear energy) and the limited potential for non-hydro renewable energy, **natural gas is the only source of energy that can be counted on to supply the nation's growing energy needs for the foreseeable future.**

The Outlook for Natural Gas Supply and Prices

We are not likely to run out of natural gas. However, if the demand for natural gas forecast by EIA (summarized earlier) and by other experts is to be satisfied.

· Additional supplies will have to come from/

· Natural gas from the "Lower-48" onshore and offshore areas that are now blocked from exploration and development.

· Canadian imports.

· Natural gas from Alaska and the Arctic.

· Liquefied natural gas (LNG) imports.

· Additional pipelines will have to be built.

· Natural gas prices will increase.

Consumers (and the US economy) will suffer less if a larger share of natural gas can be obtained from the lower-48 states, since natural gas from Alaska and the Arctic and LNG will cost more. Thus, the greater the share from the lower-48 states and offshore lands the better.

One of the country's most astute experts on natural gas supply and demand, Stephen Thumb of Energy Ventures Analysis, Inc., has summarized the situation as follows:

"In order for the market to increase from the current demand level of 22 TCF to the projected level of 33 TCF at the end of the forecast period, natural gas supply will have to increase 28.5 BCFD from current levels. It is fairly apparent that traditional, conventional supply areas will not be able to achieve this level of increase in deliverability, but instead the U.S. market will have to rely on a series of evolving gas resources

to fill in the projected gap between supply and demand… Key among these is increased LNG supplies from existing and regasification terminals. Also included are these evolving plays within the U.S., namely the subsalt play in the Gulf, 16 emerging coalbed methane basins and deep gas (i.e., >15,000 feet)… At the end of the forecast period Arctic gas from both the MacKenzie Delta and Alaska will enter the U.S. market.

"The potential imbalance between supply and demand appears to be particularly acute during the 2003 to 2005 time frame, as it takes time to develop significant results from these evolving sources of supply."[(8)]

When focusing on the matter of land restrictions, Mr. Thumb points to the following areas and resource estimates[(9)] as key.

· East Coast:

· Grand Banks - 10 Trillion cubic feet, which is 100% restricted.

· Atlantic Offshore shelf and slope - 31 Trillion cubic feet - 100% restricted (including the Baltimore Canyon Trough, Carolina Trough Salt Basin, and Blake Plateau Basin).

· Gulf Coast: Eastern Gulf shelf and slope - 24 to 43 Trillion cubic feet - 100% restricted.

· Rockies: 137 to 346 Trillion cubic feet - 40% restricted.

· Pacific Offshore shelf and slope - 21 Trillion cubic feet - 100% restricted.

· British Columbia - 26 Trillion cubic feet - 100% restricted

I should also note that the costs of constructing, operating and maintaining natural gas pipelines are, inevitably, passed along to consumers. Therefore, government actions that affect these costs, such as the higher cost of steel pipe - as a result of tariffs imposed on imported steel - place additional burdens on consumers.

Recommendations

Clearly, there are actions that the federal government can take to temper the adverse effects on consumers that lie ahead as the demand for natural gas increases. Listed below is a sample of steps that could be taken to benefit consumers. Some may not be within the jurisdiction of this Subcommittee but you may be able to work through other committees or otherwise influence your colleagues on Committees with jurisdiction, in state and local governments, and in the Administration.

1. Recognize that oil and natural gas exploration and production can be carried out in an environmentally responsible manner.

2. Remove unnecessary restrictions from oil and natural gas exploration and production, particularly on federally controlled lands on shore and offshore cited earlier.

3. Reduce any unnecessary barriers to the construction of gas pipelines so that capacity will be available to move gas from areas where it is available to markets.

4. Encourage the Administration to lift tariffs on steel imports that are increasing the price of pipe that will be needed to build pipelines recently approved by FERC. The higher prices of that steel pipe would, of course, increase the cost of building gas pipelines and will be passed on to natural gas consumers.

5. Encourage state and local governments to remove taxes and fees (including so-called "public benefit charges") from natural gas bills, particularly those that vary with the dollar amount of the bill. Such "percentage of bill" charges give consumers a double hit when gas prices rise (i.e., higher price for gas AND

higher tax).

6. Stop the flow of tax dollars to non-profit organizations that work against the interests of consumers, particularly through the US Department of Energy (DOE) and Environmental Protection Agency (EPA).

7. Require all federal agencies to determine the effects of proposed actions on real consumers, assure that the interests of real consumers are represented in agency proceedings and assure that they are taken into account when considering proposed actions.

Attachments:

1. Graph - Natural gas prices on a monthly basis: January 1998 - April 2002

2. High Monthly Natural Gas Bills in the District of Columbia -- Understanding the Causes & Their Economic Impact, March 7, 2001.

1 I am a member of Consumer Alert's Advisory Council. I am semi-retired after working on energy and related matters in government and the private sector for over 30 years. I now devote a significant portion of my time in analysis of and writing about (a) government policies, programs and regulations that are detrimental to the interests of consumers and taxpayers, and (b) government or private sector programs and projects that are presented to the media, public and government officials in a false or misleading way.

2 Energy Information Administration, Annual Energy Outlook 2002, Supplementary Table 95

[3] EIA, Monthly Energy Review, Table 1.9

4 The even more costly 30% reduction standards planned by the Clinton Administration would have saved only less than 4 quads of energy, according to DOE's Technical Support Document.

5 Some environmental and renewable advocates are strongly opposed to the use of municipal solid wastes for energy production.

6 EIA, Monthly Energy Review, Table 2.

[7] EIA, Monthly Energy Review, Table 1.6.

[8] Energy Ventures Analysis, Inc., FUELCAST: 2002 Long-Term Outlook, p. 1-4.

[9] Op Cit., Exhibit 3-15.