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AF&PA Comments for

Department of Energy Report to Congress on

Natural Gas Supply and Demand

As Required by the Energy Policy Act of 2005

EXECUTIVE SUMMARY

The American Forest & Paper Association (AF&PA) appreciates this opportunity to provide comments for the Department of Energy's (DOE) consideration as it formulates its report to Congress required by Section 1818 of the Energy Policy Act (the Act). AF&PA also participated in the DOE Natural Gas Supply and Demand Roundtable (Roundtable), a very constructive stakeholder discussion that considered many of the suggestions in our comments below.

Natural gas supply in the U.S. already was out of balance with demand before Hurricane Katrina. The Hurricane only exacerbated the imbalance and caused even greater increases in natural gas prices. Prices have doubled since the Energy Policy Act was signed this summer, and only last week, hit a record high of over $15 per million BTUs. Meanwhile, competitors in other countries pay much less--many under $5/million BTUs.

For many years, federal policies have encouraged increased consumption of clean burning natural gas to meet environmental objectives. At the same time, other federal policies have restricted access to supplies of natural gas both on and offshore. These conflicting policies have resulted in a serious supply-demand imbalance with natural gas prices rising to levels significantly impacting the global competitiveness of manufacturing in the U.S. and creating concerns about wintertime curtailments.

Actions must be taken to diminish the conflicts between federal policies that are contributing to the imbalance in supply and demand. No single federal action will solve the current imbalance, however. Rather, the federal government must take multiple actions that remove current regulatory barriers to accessing domestic supply while also encouraging voluntary demand reduction measures. Federal policies should also encourage a balanced portfolio of energy resources to help relieve some of the demand pressure on natural gas.

The forest products industry has made great strides in energy efficiency and increasing the use of renewable, biomass fuels. Nevertheless, energy is the third largest manufacturing

cost for the forest products industry, making up 18 percent of total manufacturing costs for pulp and paper mills – up from 12% just three years ago. Twenty percent of the industry's energy is fueled with natural gas, using over 400 billion cubic feet of natural gas per year, or enough natural gas to fuel 4 million homes.

The impacts of rising energy prices on the industry have been dramatic. The forest products industry has closed over 232 mills and lost 182,000 jobs (12% of employment) since 2000 when energy prices started a steep rise. High energy costs contributed significantly to these closures/lay offs. Mills also have suffered supply curtailments.

Due to the already tight supply situation, the industry needs short-term regulatory relief to get through the winter, when prices are expected to increase due to cold weather (that increase has already begun with the recent cold weather in the northeast). Fuel switching is a viable option, as well as ceasing the operation of non-essential gas-intensive controls at forest products facilities. However, these options are precluded at many facilities due to permit and other environmental requirements.

Discussed in greater detail in these comments are the following short and long terms recommendations to balance supply and demand.

Short Term:

1) Fuel Switching at Forest Products Industry Facilities:

Recommendation:

- The EPA and the states should use enforcement discretion to allow fuel switching during periods of supply disruptions or exorbitant prices. EPA should provide short-term waivers, variances, or temporary compliance orders to facilities that are otherwise able to fuel switch during the current emergency created by hurricanes Katrina and Rita.

- Clean Air Act new source review (NSR) requirements should not be imposed on facilities that switch fuel especially in emergency situations. EPA could issue guidance clarifying that NSR would allow units designed to burn alternative fuels to do so.

- EPA should create a method of rapidly responding to state requests for temporary suspension of requirements. Under the Clean Air Act [sec.110 (f)], state governors may request the President to suspend certain requirements for up to four months, and the Administration needs to be prepared to respond immediately to such requests.

- Monitor and reconsider, where appropriate, pending regulatory requirements that have significant negative impacts on natural gas supply.

Potential Savings:

- About 1 billion cubic feet per month could be saved, which represent approximately 3% of monthly natural gas used by the industry per year.

- Over $68 million per year could be saved.

2) Operations of Non-Essential Gas-Intensive Controls at Forest Products Industry Facilities:

- Mills should be allowed to cease operating non-essential gas-intensive controls.

- Wood products facilities could save approximately 7 billion cubic feet per year. Pulp and paper facilities could save approximately 2 billion cubic feet per year.

3) Fuel Switching at Power Plants

- Provide more flexibility in environmental requirements to enable fuel switching by utilities or other electricity generators. Approximately one-third of the electric generation capacity fueled by natural gas in 2004 is physically capable of switching to fuel oil.

- If all of these units were to shift to fuel oil, U.S. natural gas consumption would be reduced by 1.8 trillion cubic feet (TCF) per year or 8% of national gas consumption.

4) Fuel Switching by Industrial Boilers

- Five to ten percent of industrial boilers are capable of fuel switching.

- Due to the number of such boilers, however, potential savings could be as much as 0.2 TCF per year.

5) Continued Aggressive Energy Conservation Campaign

- AF&PA supports DOE's "Easy Ways to Save Energy" Campaign recently announced by Secretary Bodman. At least 10 AF&PA member mills have participated in an existing DOE energy saving program, which provided energy assessments for industrial facilities. On average, implementation of the assessments' recommendations has resulted in millions of dollars in savings per mill. DOE should continue and expand these and the other measures in the campaign.

Long Term:

1) Remove Barriers to Supply of Natural Gas

OCS

- Remove federal restrictions currently limiting access to deep-water offshore natural gas resources in the Pacific, Atlantic, and Eastern Gulf of Mexico Outer Continental Shelf (OCS).

- The National Petroleum Council estimates that there are approximately 300 TCF of natural gas and more than 50 billion barrels of oil on the OCS off the continental U.S. that can be recovered using existing technology but which have yet to be discovered. This is enough natural gas to maintain current OCS production for almost 70 years and enough oil to maintain current US oil production for more than 80 years.

Lease 181

- Lease 181 might represent 20 percent of the entire Gulf gas production for the next six years; it is an immediate source of supply because the pipeline infrastructure necessary to transport the gas to market is already built and operational in the area. Congress and the Administration should take immediate actions to expedite the sale of the lease 181 area.

- **State Empowerment**

Senator Lamar Alexander's "Natural Gas Price Reduction Act of 2005," (S. 726) and Subtitle E (Chairman Richard Pombo's Ocean State Options Act) of the House Resources Committee's budget reconciliation package, provide a workable framework for allowing states to pursue deep water energy production off their shores.

- **Liquefied Natural Gas (LNG)**

LNG is becoming more affordable and practical with recent advances in liquefaction and transportation technology. However, barriers to LNG in the Natural Gas Act and FERC regulations and difficulties in siting new or expanded facilities will make it a challenge for the nation to realize significant increased natural gas supply through increased LNG use. The provisions in the Act to expedite LNG siting and expansion should be aggressively implemented.

- **Generation Efficiency**

Industrial consumers of natural gas have improved significantly the efficiency with which they use natural gas because of the pressures of global competition.

Utilities, however, are not subject to the same competitive forces and have not updated the efficiency of older power plants, in most cases simply passing through to their consumers the increased cost of natural gas. DOE should adopt and support policies that will encourage or require all public utilities to meet a generation efficiency standard for their natural gas-fired generation units.

- **Alaska Natural Gas Pipelines**

The Alaska Natural Gas Pipeline will provide 1.5-2.2 TCF per year that could reach the lower 48 states after 2015. Efforts should be undertaken to expedite the completion of the pipeline.

- **Unconventional Sources of Natural Gas**

DOE should encourage and provide incentives for new technologies to find and tap supplies of unconventional sources of gas. The U.S. already obtains 7 TCF of natural gas a year from unconventional sources, and the EIA projects that production of unconventional gas can be increased by 1.2 TCF within the next ten years.

- **Efficient Permitting**

The oil and gas reserves on federal lands should play a critical role in the nation's energy supply. Congress recognized the impediments to efficient exploration and development of these resources (as well as the OCS) in the Act by directing the Department of the Interior to improve its practices and conduct various pilot projects on more efficient processing of access applications. The Administration and the Congress should fully fund the permitting programs to eliminate the backlog of permitting and expand the pilot project if it proves to be successful. DOE should assist in the implementation of these programs as appropriate, perhaps by providing an independent assessment of whether they actually improve timely access to these resources.

2) Diversify the Nation's Energy Portfolio through R&D and Incentives

- **Coal**

In the U.S., coal is the lowest cost and most abundant domestic energy resource; coal fuels more than 50 percent of U.S. electricity. AF&PA supports the Administration's FutureGen coal initiative that will spend $1 billion dollars over ten years. The initiative will build the world's first zero-emissions fossil fuel plant combining several promising technologies to enhance the efficiency and reduce the environmental impacts and greenhouse gas emissions from coal. The Administration should also aggressively implement the "Clean Coal" provisions in the Act and adopt other policies to encourage deployment of this technology and use of coal as an energy source for the nation.

- **Renewable Energy**

Biomass energy is renewable, and is "carbon neutral." DOE should strongly support the Agenda 2020 program, a key component of which is the *Integrated Forest Products Biorefinery (IFPB)*, a technology platform that includes biomass gasification technologies. The IFPB technologies will give industry the ability to make greater use of renewable biomass energy in its processes, while becoming a net producer of renewable electric power, liquid transportation fuels, and other bio-based energy and products. If fully developed and commercialized, the IFPB technologies could produce enormous energy and environmental benefits for the industry and the nation both, including contributing to a diversified and secure national energy supply.

Deleted:

3) Conservation and Other Demand Reduction Measures

- **Conservation**

Over the long term, energy conservation programs can yield impressive energy savings and DOE should aggressively fund and continue its energy conservation campaign.

- **Better Compliance with Executive Order on Energy Impacts**

DOE should work with the Office of Management and Budget (OMB) and the Administration to ensure rigorous compliance with Executive Order 13211 (Actions Concerning Regulations that Significantly Affect Energy Supply, Distribution, or Use) to clearly identify regulations that are significant energy actions and to require robust, detailed analysis of the effects regulatory actions will have on natural gas supply, use and price. This will allow Congress and the nation to have an informed discussion about policies increasing natural gas demand.

INTRODUCTION

AF&PA appreciates this opportunity to provide comments for DOE's consideration as it formulates its report to Congress required by Section 1818 of the Act. AF&PA also participated in the DOE Natural Gas Roundtable, a very constructive stakeholder discussion which considered many of the suggestions in our comments below.

AF&PA is the national trade association of the forest, paper and wood products industry. Our organization represents approximately 250 member companies and related trade associations that grow, harvest, and process wood and wood fiber; manufacture pulp, paper and paperboard from both virgin and recycled fiber; and produce solid wood products. The U.S. forest products industry is vital to the nation's economy. We employ more than one million people and rank among the top ten manufacturing employers in 42 states with an estimated payroll of more than $60 billion. Sales of the paper and forest products industry top $230 billion annually in the U.S. and export markets. We are the world's largest producer of forest products.

Congress required the report because it recognized that balancing long term natural gas supply and demand is critical to the economic health of the nation. When the Act was passed, the price of natural gas was $7 per million BTUs, which is up from $2.50 per million BTUs in early 2000, and significantly more than the price paid by our competitors around the world. Since then, of course, Hurricane Katrina damaged natural gas production and distribution facilities; the Energy Information Agency (EIA) reports there still is 2.3 million cubic feet per day or almost 23% of the U.S. gas production in the Gulf of Mexico missing from the natural gas market, which is exacerbating the long-term structural imbalance between supply and demand. With the additional demand created by the onset of winter's lower temperatures, we have now seen record high prices of over $15 per million BTUs. The price of natural gas has more than doubled since the Act was signed by President Bush on August 8, 2005.

This report to Congress, therefore, is even more critical than Congress realized when it passed the Act. As we discuss below, despite impressive gains in energy efficiency and increasing use of renewable biomass fuels, the dramatic increase in natural gas prices is having a devastating impact on our industry, contributing to mill closures and lost jobs. Of course, our industry is not alone, and consumers also will suffer from record high prices to heat their homes this winter. Curtailment of natural gas has already occurred and is of greater concern this winter, and not just in the Gulf area.

Below we describe in detail information on energy and natural gas use in our industry, and the devastating impacts of high natural gas prices. We also provide for DOE's consideration a number of recommendations for needed short-term relief and policies to balance supply and demand over the long term. Implementation of these recommendations is critical to helping U.S. manufacturers compete both domestically and overseas.

FOREST PRODUCTS INDUSTRY ENERGY EFFICIENCY AND USE

For decades, the forest products industry has reduced its reliance on fossil fuels and increased its energy efficiency.[1] For example:

- Since 1972, the energy consumed per ton from the burning of fossil fuels at pulp and paper mills has decreased by over 50 percent.
- Pulp and paper mill total energy consumption per ton of product has decreased 24 percent since 1972.
- Biomass fuels, made up of wood wastes, supplied about 60 % of the energy needs of the forest products facilities in 2002.

Much of this improvement can be credited to the industry's use of renewable, biomass energy and the use of highly efficient combined heat and power processes (i.e., cogeneration). This utilization of wood wastes and spent pulping liquors (combined with self-generated hydro-electricity), now supplies nearly 60 percent of AF&PA member pulp and paper mill energy needs. The two largest fuel sources for AF&PA member pulp and paper mills are renewable biomass—bark, other wood wastes, and spent pulping liquors. The forest products industry (which includes pulp, paper, and wood products), according to 2001 data, led manufacturing industries by generating 89 percent of the onsite energy that comes from renewable biomass resources.

Despite these impressive gains in efficiency, energy is the third largest manufacturing cost for the forest products industry, making up 18 percent of total manufacturing costs for pulp and paper mills – up from 12% just three years ago. Twenty percent of the industry's energy is fueled with natural gas, using over 400 billion cubic feet of natural gas per year, or enough natural gas to fuel more than 4 million homes. Today the price of natural gas in the U.S. hovers around $12-15 per million BTUs, including record high prices in the last three months. That is a twofold increase since July and seven times historic averages. This increased price for natural gas also significantly increases purchased electricity and the price of chemicals needed for our manufacturing operations. Higher natural gas prices have the additional effects of increased transportation costs, as pulp is sourced from around the world.

While U.S. gas prices have increased, prices in the rest of the world are noticeably lower. For example, the approximately $12-15/million BTU cost of gas in the U.S. dwarfs gas prices in the U.K ($8.20), Japan ($5.25), Russia ($1.45), Indonesia ($2.70) and South America ($1.65). Many of the mills in direct competition in the global marketplace with U.S. mills are located in these countries. These price disparities put our industry at a significant competitive disadvantage, on top of other competitive disadvantages we already face.

[1] See AF&PA Environmental Health and Safety Verification Program Report for 2002, http://www.afandpa.org/Content/NavigationMenu/Environment_and_Recycling/Environment,_Health_and_Safety/Reports/2002EHSReport.pdf

IMPACTS ON THE U.S. FOREST PRODUCTS INDUSTRY

Plant Closures and Job Losses

The impact on the industry has been substantial. The forest products industry has closed over 232 mills and lost 182,000 jobs (12% of employment) since 2000 when energy prices started a steep rise. High energy costs contributed significantly to these closures/lay offs. For example:

- *Boise-Cascade says natural gas costs are behind a pending shift cut that will cost about 70 jobs at its lumber mill in La Grande, Oregon. The sawmill uses gas-fired boilers to generate steam for drying lumber. Boise reported that the cost of natural gas has nearly doubled in the last month, making it not feasible to operate the shift. Boise-Cascade is Union County's largest employer with 700 workers.*
- *A Pasadena Paper mill, the last paper mill in Houston, closed its mill in early October and blamed high natural gas prices for the decision. The mill employs 250 workers and has been in operation for more than 60 years.*

Supply Curtailment

AF&PA members around the country report that supply and demand are delicately balanced, and companies from Wisconsin to Mississippi report curtailment problems – especially following the recent hurricanes.

Many companies operate with interruptible contracts to save money and allow natural gas to be diverted for high priority uses in the winter. The following examples illustrate the recent difficulties experienced with this type of curtailment.

More Frequent and Longer Shut Downs

- *A Wisconsin company reported experiencing one to two interruptions during past heating periods, but during the 2004 – 2005 winter season, interruptions doubled to three to four shut downs. And the duration of each interruption was much longer – lasting up to seven or eight days in some cases. The company is concerned about the coming winter and actively monitoring the situation.*

- *On September 28, a facility in Zachary, Louisiana was issued an administrative compliance order to cease use of natural gas because natural gas supplies were not available to the facility. If natural gas curtailment becomes necessary, it would be large industrial customers who lose natural gas first. Home heating and other key uses of natural gas will take precedence over uses by industry even if they technically have "non-interruptible contracts."*

Shrinking Supply / Increasing Prices

- *An Alabama wood products facility with interruptible service was notified after hurricane Rita that service would be interrupted for about one week. However, the facility was given the option of purchasing gas at the average daily market price. The*

price of gas for the facility rose from an already high value of $10.99/MCF to a new high of $19.79/MCF. And over the week, the facility spent an extra $57,000 to meet its energy needs.

Ability to Switch Fuels Limited by Permits

In the face of higher natural gas prices and supply interruptions, temporarily switching to less expensive fuels is a very viable and necessary option for mills facing the economic challenge of paying utility bills and remaining profitable. However, this option is constrained by permit requirements:

Permits Limit Options

- *Paper and wood products companies from Massachusetts to Tennessee and Georgia report that permits limit the burning of #6 fuel oil – the more reasonably priced fuel – to 60 or 90 days per year. Several companies report that they are nearing their limit for using #6 fuel oil, and if gas prices go higher, their only option is to close facilities. Clearly, permit waivers during the colder months would avoid this situation.*

Faced with interruptions and exorbitant prices, companies have unpleasant options for continuing business. They can pay substantially more for available energy or shut down the facility. Neither solution is acceptable to the company or to the U.S. economy.

Majority of Gas Used for Emissions Control Units

Members operating wood products facilities report that the control unit required to remove emissions of volatile organic compounds (VOCs) consumes by far the majority of gas at the facility. As an industry, paper and wood products facilities combined use 9 BCF of natural gas – approximately the amount needed to heat 90,000 homes – to fuel control units.

And the percentage of natural gas used to fuel control units is increasing as facilities improve energy efficiency elsewhere in the plant.

Emissions Control Consumes High Percent of Natural Gas

- *Several companies report that VOC control units can consume from 50 to 99% percent of all natural gas used at wood products facilities.*

With rising gas prices and interrupted supplies, the cost to remove emissions of volatile compounds – mostly methanol – is staggering.

Control requirements for these facilities were based on far different gas-price scenarios. At many facilities, the economic analysis used gas prices in the range of $2-3/MCF. With gas prices of $12 - $13/MCF, the results are dramatically different and call into question whether the controls should be required while prices are so high. The following two examples illustrate this point.

	Cost of VOC Removal ($/Ton VOC Removed)	
Wood Products Facility	**Time of Permitting**	**Current Conditions**
Door Finishing Facility, MS	$532	$20,00
Average Oriented Strand Board facility	$1,500 – 12,000	$4,500 – 38,000

VOC Control Units Facilitate Foreign Competition

In the south, companies are facing increased competition on some wood products from South American suppliers. With higher natural gas prices, companies estimate that it is the cost of operating the VOC control units that makes it feasible for foreign competitors to enter the market. Skyrocketing gas prices exacerbate the problem.

VOC Control Costs Burden US Manufacturers

- *One company estimates that on average it costs $1.25 – 1.75 million per year to operate a control unit at today's gas prices. For a facility with three units – which is typical – total costs are on the order of $3.75 to $5.25 million per year.*

RECOMMENDATIONS FOR SHORT TERM RELIEF AND ASSOCIATED SAVINGS

Manufacturers need immediate action to allow them to operate through the winter months. This action should include the ability: 1) to use other fuels in the face of natural gas curtailments or prohibitively expensive gas and 2) to temporarily cease operations of non-essential gas-intensive controls that primarily control emissions of methanol. Similarly, electric utilities use the most natural gas in terms of industry sectors and fuel switching could result in huge natural gas savings. Other short term recommendations include more aggressive consumer conservation programs. Each is discussed below.

1) Fuel Switching at Forest Products Industry Facilities:

Recommendation:

- EPA and states could use enforcement discretion to allow fuel switching during periods of supply disruptions or exorbitant prices. EPA should provide short-term waivers, variances, or temporary compliance orders to facilities during the current emergency created by hurricanes Katrina and Rita.

- Clean Air Act new source review (NSR) requirements should not be imposed on facilities that switch fuel especially in emergency situations. EPA could issue guidance clarifying that NSR would allow units designed to burn alternative fuels to do so.

- EPA should create a method of rapidly responding to state requests for temporary suspension of requirements. Under the Clean Air Act [sec.110 (f)], state governors may request the President to suspend certain requirements for up to four months, and the Administration needs to be prepared to respond immediately to such requests.

- Monitor and reconsider, where appropriate, pending regulatory requirements that have significant negative impacts on natural gas supply.

Potential Savings:

AF&PA has surveyed its members to determine the extent to which they could switch to alternative fuels if permit limits and regulatory constraints did not limit or prevent switching. In the survey, we specifically requested respondents to consider physical plant, pricing and other potential practical issues when answering. Our objective was to obtain an accurate estimate of the amount of fuel switching that actually could occur if the permit and regulatory constraints were removed.

Based on responses to our survey, it is clear that removing barriers to fuel switching could result in savings of significant amounts of natural gas and economic relief for industry mills. Specifically, responding mills producing pulp, paper, paperboard and paper products indicated potential savings of about 1 billion cubic feet per month. These savings represent approximately 3% of the monthly natural gas used by the industry. These mills would realize cost savings of almost $ 6 million per month by switching to other fuels. These resources could be better spent on retaining high paying industry jobs or investing to make the mills more efficient and competitive.

We should note that these figures are based only on the responses we have obtained to date from our members. They likely understate the potential conservation of gas because the responding mills account for a small portion of the mills that make up the forest products industry.

2) Operations of Non-Essential Gas-Intensive Controls at Forest Products Industry Facilities:

The forest products industry operates some mandatory pollution controls that require considerable amounts of natural gas to operate, while producing questionable environmental benefits especially during cold weather months. Permit requirements mandating full time operation of regenerative thermal oxidizers (RTOs) serve as an example. Many of these RTOs are designed to burn primarily methanol emissions for ozone abatement even though methanol is not a major contributor to smog formation. In addition, ozone is not a pollutant of concern during the winter months, yet operating permits require year-round operation. For the forest products industry, RTOs consume about 10 billion cubic feet of natural gas annually at a cost of over $100 million. Finally, these controls produce hundreds of tons of nitrogen oxide emissions that contribute to the ozone problem making the cure cause more harm to the environment. Therefore, mills should be permitted to cease operating these non-essential controls as

the effect on public health would be negligible and substantial gas savings would result.

Recommendation:

- EPA should allow amendments to current permits to address energy emergencies. At current gas prices of $12 -15/million BTUs, emissions controls are not cost effective.

- Clean Air Act sec 110 (f) authority could also be used to temporarily suspend the operations of gas-intensive controls.

Potential Savings:

The wood products segment of the industry has the potential for the greatest savings from ceasing operation of non-essential gas intensive controls—approximately 7 billion cubic feet per year. With regard to the paper segment of the industry, potential savings are lower at approximately 2 billion cubic feet per year.

3) Fuel Switching at Power Plants

Recommendation and Savings:

As with the forest products industry, some electric generators that use gas have the potential capability to fuel switch. Data compiled by the EIA suggest that approximately one-third of the electric generation capacity fueled by natural gas in 2004 is physically capable of switching to fuel oil. If all of these units were to shift to fuel oil, U.S. natural gas consumption would be reduced by 1.8 trillion cubic feet per or 8%/year. However, more than half the generators that are able to fuel switch indicated that they are restricted from doing so by environmental requirements. While we are not able to say with a high degree of certainty how much fuel switching actually would take place absent the regulatory barriers (as is the case with industry facilities), the magnitude of the potential savings indicates that DOE should give this recommendation serious consideration and additional analysis.

4) Fuel Switching by Industrial Boilers:

Recommendation and Savings:

Today, only 5-10% of industrial boilers are capable of fuel switching, down from 25% in the past. Nonetheless, due to the number of such boilers, potential savings could be as much as 0.2 trillion cubic feet per year. Again, this may be an optimistic estimate because there could be other, non-regulatory impediments to fuel switching for these boilers, such as the siting of fuel back up tanks. Nonetheless, due to the magnitude of potential savings, it is worth additional consideration and analysis by DOE.

5) Continued Aggressive Energy Conservation Campaign

AF&PA supports DOE's "Easy Ways to Save Energy" Campaign recently announced by Secretary Bodman. The campaign includes actions directed at consumers, businesses and government agencies. We support the comprehensive nature of this campaign, with its recognition that all societal sectors must contribute to conservation efforts

At least 10 AF&PA member mills have participated in an existing DOE energy saving program, which provided energy assessments for industrial facilities. On average, implementation of the assessments' recommendations has resulted in millions of dollars in savings per mill. DOE should continue and expand these and the other measures in the campaign.

RECOMMENDATIONS FOR LONG TERM BALANCE OF SUPPLY AND DEMAND

An adequate supply of energy at a reasonable price is needed for vibrant economic growth. Long-term solutions are essential to addressing this critical problem. Ultimately, we believe that balance can only be achieved if action is taken in each of the following critical areas:

1) **Remove federal regulatory barriers preventing new natural gas supply;**
2) **Diversify the nation's energy portfolio through R&D and incentives; and**
3) **Implement conservation and other demand reduction measures.**

1) Remove Barriers to Supply of Natural Gas

There are numerous areas in and around the continental U.S. that contain more than enough natural gas to accommodate national demand for years to come. Barriers to access to these areas should be removed as well as other barriers to increased supply discussed below.

OCS

Lasting relief from high prices for natural gas can mainly be achieved by increasing the supply of natural gas. Federal restrictions currently limit access to offshore natural gas resources in the Pacific, Atlantic, and Eastern Gulf of Mexico Outer Continental Shelf (OCS). AF&PA believes that the OCS is critical to America's energy security. It contains huge, untapped resources of oil and natural gas that are critically important to sustaining our national economic growth and maintaining much-needed jobs in virtually every sector of the economy.

For years OCS development has been limited to the Central and Western Gulf of Mexico. This has been a vital area – supplying almost 30% of the oil produced in the US and about 20% of the natural gas. Nonetheless, Hurricanes Katrina and Rita have reminded us that disruptions in supplies from this area have major national implications affecting residential, commercial and industrial consumers throughout the country. While this area will remain very important, it is clear we must expand access to supplies in other parts of

the OCS. Expanded access to new OCS areas is needed to ensure adequate future domestic energy supplies.

The National Petroleum Council estimates that there are approximately 300 TC of natural gas and more than 50 billion barrels of oil on the OCS off the continental U.S. that can be recovered using existing technology but which has yet to be discovered. This is enough natural gas to maintain current OCS production for almost 70 years and enough oil to maintain current US oil production for more than 80 years.

Lease 181

Some estimates indicate that Lease 181 might represent 20 percent of the entire Gulf gas production for the next six years. Most importantly, it is an immediate source of supply because the pipeline infrastructure necessary to transport the gas to market is already built and operational in the area. For this reason, AF&PA supports opening the remaining Lease 181 area. It has substantial energy resource potential and access to existing infrastructure that could help speed delivery to energy users.

State Empowerment

AF&PA also supports empowering states to explore and develop new natural gas sources and find ways to increase U.S. production. Specifically, we are in favor of the kind of approach outlined in Senator Lamar Alexander's "Natural Gas Price Reduction Act of 2005," (S. 726) and Subtitle E (Chairman Richard Pombo's Ocean State Options Act) of the House Resources Committee's budget reconciliation package. In these legislative vehicles, states are granted permanent authority to decide whether to pursue deep water energy production off their shores or to extend the ban on development. Further, the proposals take the needs of neighboring states into account when determining the boundaries for gas and oil leases. The legislation also provides coastal states some share in the revenues to manage better the onshore impacts of development.

Liquefied Natural Gas (LNG)

LNG can play a significant role in increasing supply, but a real increase in LNG imports will take time, and will be a challenge considering the difficulties inherent in siting these facilities. The four existing LNG terminals in the U.S. have announced plans to expand capacity, and a number of new facilities (including both onshore and offshore terminals) are under consideration. Expedited FERC review of these projects will help. Recent advances in liquefaction and transportation technology have brought down the price of processing to a level that is competitive with domestic production. Additional discoveries of natural gas resources are bringing these worldwide resources into the domestic planning horizon. In addition to helping the supply situation, increasing LNG import capacity in the U.S. will also help level out volatility in the market due to the ability of these facilities to quickly ramp up/down production. Barriers to LNG in the Natural Gas Act and FERC regulations need to be reduced or eliminated altogether. The provisions in the Act to expedite LNG siting and expansion should be aggressively implemented. Additional LNG capacity is an important part of the solution, but it will not solve the supply and demand imbalance in the near-term, nor will it be the complete solution.

Generation Efficiency

One of the primary causes of the current natural gas crisis is the huge increase in demand for gas to generate electricity. Given the projected growth in demand for electricity and the fact that over 90% of new electric generation facilities are gas fired, this situation is not likely to improve. Steps need to be taken to ensure that utilities using natural gas for baseload power generation do so in the most efficient manner possible.

In some regions of the country, very old, inefficient, single-cycle natural gas plants are being used as baseload generators. These older power plants can use 40 to 50 percent more natural gas to produce the same amount of electricity as newer, more efficient, combined cycle power plants. This situation is unacceptable when the nation is losing hundreds of thousands of manufacturing jobs because of the high price of natural gas.

Forest and paper products manufacturers, chemical manufacturers and other industrial consumers of natural gas have improved significantly the efficiency with which they use natural gas because of the pressures of global competition. Utilities, however, are not subject to the same competitive forces. To the contrary, they in most cases, utilities have the ability to simply pass through to their consumers the increased cost of natural gas. As such, utilities have little or no incentive to make the investments necessary to improve generation efficiency.

We recommend that DOE adopt and support policies that will encourage or require all public utilities to meet a generation efficiency standard for their natural gas-fired generation units.

Alaska Natural Gas Pipeline

Alaska is the third largest gas producing state after Louisiana and Texas. However, supplies cannot reach the lower 48 states. The Alaska Natural Gas Pipeline, a $20 billion project, has been proposed to fill that need. It is estimated that with construction of the pipeline, 1.5-2.2 TCF per year could reach the lower 48 states, after 2015.

Unconventional Sources of Natural Gas

The U.S. already obtains 7 MCF of gas a year from unconventional sources. The ultimate supply within the continental U.S. may be as much as 760 TCF, according to Advanced Resources International. This is enough to satisfy 35 years of U.S. gas needs at its current rate of consumption. The EIA projects that production of unconventional gas can be increased by 1.2 TCF within the next ten years. DOE should encourage and provide incentives for new technologies to find and tap supplies of these unconventional sources of gas.

- **Efficient Permitting**

The oil and gas reserves on federal lands should play a critical role in the nation's energy supply. Congress recognized the impediments to efficient exploration and development of

these resources (as well as the OCS) in the Act by directing the Department of the Interior to improve its practices and conduct various pilot projects on more efficient processing of access applications. DOE should assist in the implementation of these programs as appropriate, perhaps by providing an independent assessment of whether they actually improve timely access to these resources.

2) Diversify the Nation's Energy Portfolio through R&D and Incentives

The price of natural gas has not increased in a vacuum. The prices of other fuel sources (e.g., oil, coal) also have increased, although not to the same extent as natural gas. To ensure an affordable energy supply in the future, we must diversify and increase utilization of all viable energy sources. Increases in the use of other fuels will reduce the demand and price pressure on natural gas.

Coal

In the U.S., coal is the lowest cost and most abundant domestic energy resource. In 2004, the recoverable coal reserves for the U.S. were over 18 billion short tons. Coal fuels more than 50 percent of U.S. electricity; coal use has tripled in the past 30 years, while emissions have been reduced by about one-third.

AF&PA supports the Administration's FutureGen coal initiative. The initiative will spend $1 billion dollars over ten years to build the world's first zero-emissions fossil fuel plant, with integrated sequestration and hydrogen production. The initiative combines several promising technologies to enhance the efficiency and reduce the environmental impacts and greenhouse gas emissions from coal use: gasification, combined cycle electricity generation, carbon sequestration and hydrogen production. The prototype plant will establish the technical and economic feasibility of producing electricity and hydrogen from coal while capturing and sequestering the carbon dioxide generated in the process.

The Administration should also aggressively implement the "Clean Coal" provisions in the Act and adopt other policies to encourage deployment of this technology and to encourage the use of coal as a key energy source for the nation.

Renewable Biomass Energy

An important factor in diversification of fuel sources is improving our industry capabilities for energy self-sufficiency, while simultaneously reducing demand for natural gas and imported fossil fuels. The industry works through AF&PA's Agenda 2020 Technology Alliance to support and conduct research, development and deployment (RD&D) that address both of these objectives, with a focus on energy efficiency, energy security, and environmental performance. Through Agenda 2020, AF&PA members partner with DOE, USDA, NSF, other federal agencies and academia on collaborative, pre-competitive RD&D to address both industry and societal needs

The *Integrated Forest Products Biorefinery (IFPB)* is a key Agenda 2020 technology platform. The IFPB will give industry the ability to make greater use of renewable biomass energy in its processes, while becoming a net producer of renewable electric power, liquid transportation fuels, and other bio-based energy and products. If fully developed and

commercialized, the IFPB technologies being pursued by the forest products industry, which include biomass gasification technologies, could produce enormous energy and environmental benefits for the industry and the nation both, including contributing to a diversified, more secure national energy supply. This can be done while co-producing existing product lines.

A portfolio analysis performed by our industry in collaboration with DOE's Industrial Technologies Program (ITP) in 2003-2004 quantified some of key potential benefits, including energy savings of 175.72 MM bbl/year, positively impacting the carbon balance by 153.7 MM tons/year, and creating up to 166,700 new jobs**.**

AF&PA recommends that forest products biorefinery research and development be fully funded. This research is essential to maximizing energy production from non-fossil fuels and also to the achievement of new manufacturing opportunities for additional products that can help secure the competitive future of the U.S. forest products industry. In addition, AF&PA supports the industrial gasification initiative that was included in the Energy Policy Act.

3) Conservation and Other Demand Reduction Measures

Conservation

Secretary Bodman's energy saving campaign and other aggressive conservation measures will yield long term as well as short-term benefits. Some of our member companies have already taken advantage of the "Energy Savings Expert Teams" to find additional ways to save energy, and we expect more facilities will take advantage of this program in the near future. We support long term funding and implementation of those efforts.

Better Compliance with Executive Order on Energy Impacts

One reason for the long-term imbalance between supply and demand for natural gas is that for years, government policies have restricted access to supply of U.S. energy resources while simultaneously encouraging increased consumption of natural gas for environmental reasons. Environmental regulations have also fueled the demand for natural gas by manufacturers. Policy makers must reconsider many of the approaches that drive manufacturers toward natural gas. While this is an issue that ultimately must be taken up by Congress, DOE should work with the Office of Management and Budget (OMB) and the Administration to ensure rigorous compliance with Executive Order 13211 (Actions Concerning Regulations that Significantly Affect Energy Supply, Distribution, or Use). That EO requires agencies to prepare and submit a "Statement of Energy Effects" to the Administrator of the OMB Office of Information and Regulatory Affairs (OIRA). The Statement must examine effects on, for example, supply and price of a proposed regulatory action as well as potential alternatives.

We suggest that DOE work within the Administration to ensure the agencies clearly identify regulations that are significant energy actions and to require robust, detailed analysis of the effects regulatory actions will have on natural gas supply, use and price. In order for Congress and the nation to have an informed discussion about policies increasing

the use of natural gas, they need to have a better understanding of the extent to which proposed regulations will exacerbate the already imbalanced supply and demand equation.

CONCLUSION

We urge DOE in its report to Congress to make aggressive policy recommendations that will address the fundamental imbalance in natural gas supply for both the short-term and the long-term. Our nation's economic growth and the ability of U.S. manufacturers to regain their competitiveness can be greatly enhanced by implementation of a strong and balanced energy policy that will reduce natural gas costs for all consumers.