



# “The Energy Policy Act of 2005 and Its Impact on the U.S. Natural Gas Supply/Demand Imbalance”

## Executive Summary

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The purpose of this American Gas Foundation (AGF) report, “The Energy Policy Act of 2005 and Its Impact on the U.S. Natural Gas Supply/Demand Imbalance,” is twofold. First, the report revisits the findings of a prior 2005 AGF study, “Natural Gas Outlook to 2020” (AGF Outlook Study), in light of recent market conditions. Second, and very importantly, the report performs a “gap analysis” that compares the policy scenarios outlined in the AGF Outlook Study to the potential impacts of the Energy Policy Act of 2005 (EPAct). This analysis measures the progress in implementing policies/regulations that could ease the natural gas supply/demand imbalance and lower energy costs for consumers.

The AGF Outlook Study, released in February 2005, analyzed the U.S. natural gas market to the year 2020 under three alternative public policy scenarios: “Existing, Expected, and Expanded.” These scenarios were used to describe potential market conditions and to emphasize the key policy variables that will have an impact on markets through 2020. The results of the study pointed to the need for public policy makers and industry decision makers to immediately address critical issues that will have a significant impact on the availability and price of natural gas for decades to come.

### *Summary of Findings*

The Energy Policy Act of 2005 represents a significant first step toward addressing some of the natural gas supply/demand issues facing our country. It took more than five years to develop, and was the first major piece of federal energy legislation since 1992. As such, Congress deserves significant credit for its efforts. Nevertheless, ***there remains a supply/demand imbalance, which is having a significant negative impact on the U.S. economy and consumers.***

While EPAct made some headway in key policy areas noted in the AGF Outlook Study, such as demand reduction, onshore supply access and liquefied natural gas (LNG) supplies, there are many more policy actions that still need to take place. Additionally, actions on other important issues such as moving forward with the Alaska Gas Pipeline have yet to be taken. Further, for many of the initiatives in the EPAct, Congress has not appropriated funds. At best, EPAct and other policy measures taken over the past year bring us about one third of the way toward achieving the potential market balance as outlined in the Expanded policy scenario of the AGF Outlook Study. The AGF Outlook Study estimated that if the U.S. followed the path of the Existing policy scenario, consumers could be facing as much as \$1 trillion in additional natural gas cost. ***Without additional efforts beyond the measures taken over the past year, U.S. consumers will continue to bear the burden of high and volatile natural gas prices and can expect to face billions of dollars in additional cost over the next 14 years.***

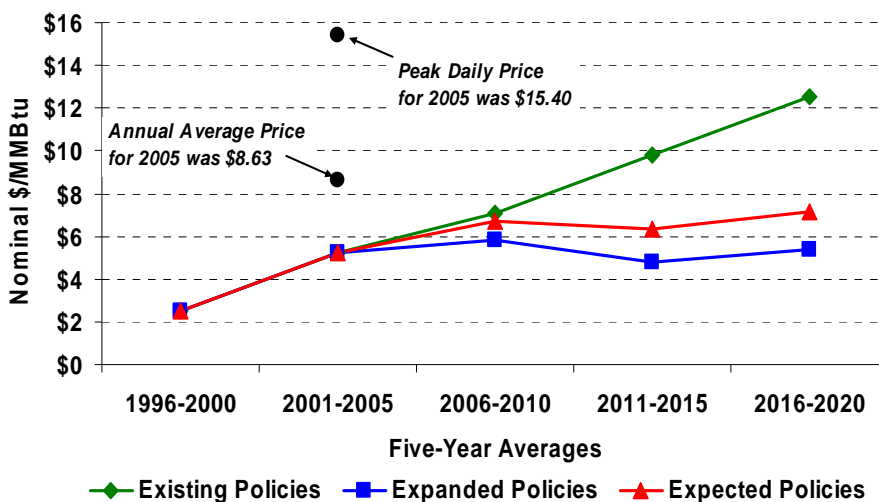
Although the supply/demand balance was much tighter than anticipated in 2005 due to such events as the record-breaking hurricane season, higher crude oil prices, and lower LNG imports, the long-term gas market projections made in the AGF Outlook Study remain the same:

- It is unlikely that the natural gas market will return to the over supply/low price environment of the 1980s and 1990s.
- Without significant policy changes, the North American natural gas market will remain in a tight supply/demand balance, with accompanying high prices, for the foreseeable future.
- The tightness of the supply/demand balance means that short-term supply disruptions can cause prices to rise dramatically.
- LNG imports will depend both on the ability to construct new import terminals and the ability to contract for LNG supplies.

### *Implications for the U.S. Economy and Natural Gas Consumers*

Natural gas is a key commodity in the U.S. economy, used for applications as diverse as home heating fuel and industrial feedstock. The situation facing the U.S. economy in 2007 has certainly not changed significantly. As pointed out in the AGF Outlook Study, ample natural gas resources exist but supply access and infrastructure are being constrained. As demand continues to grow, prices have remained high and very volatile, and are obviously detrimental to the U.S. economy and consumers. In 2005, a U.S. Department of Commerce study estimated that higher natural gas prices between 2000 and 2004 led to lower GDP growth and a decrease in employment of almost 500,000 jobs.

### **Actual and Projected Natural Gas Prices at Henry Hub – AGF Outlook Study**

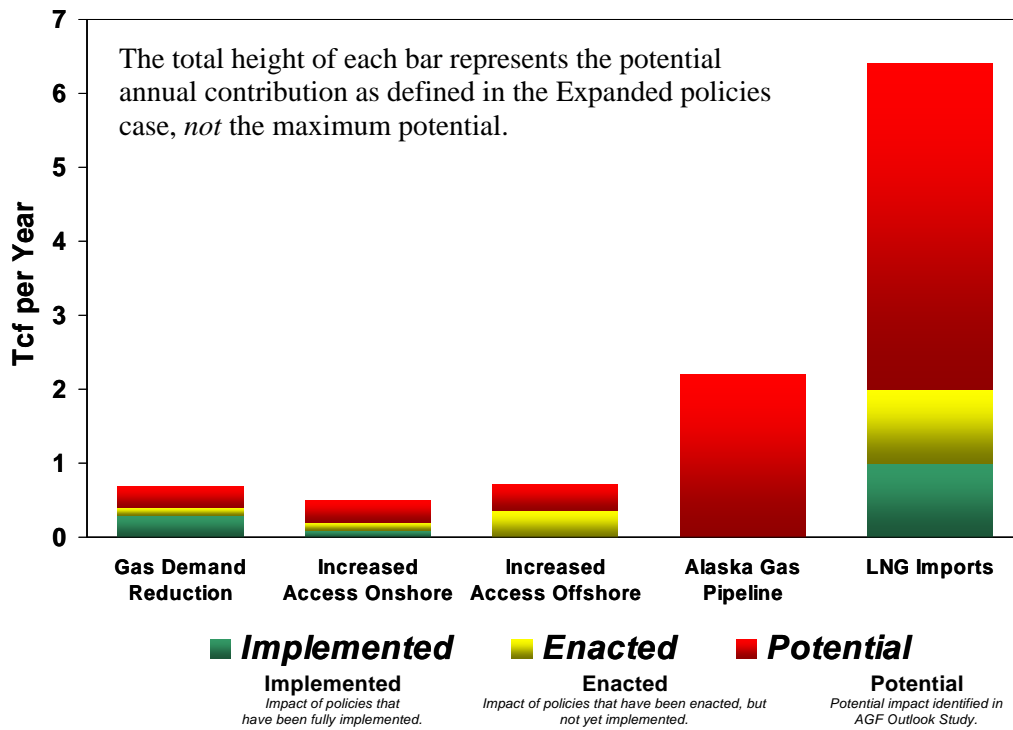


As pointed out in the AGF Outlook Study, natural gas prices in the Existing policies scenario averaged about \$4.00 higher than the Expanded policies scenario – an increase of more than 40 percent. As a result, by the year 2020, consumer expenditures on natural gas are \$200 billion higher in the Existing policies scenario. These increased costs would have a ripple effect throughout the economy, as increased expenditures on natural gas reduce disposable income, slow economic growth and reduce employment.

*Progress Toward Addressing the Imbalance*

The chart below provides a summary of how far the U.S. has moved over the past year toward the favorable market conditions as outlined in the Expanded policies scenario. An estimate of the progress made on the key variables as outlined in the AGF Outlook Study’s Expanded scenario is provided. The progress is expressed in terms of the percent progress with policies that have been fully implemented (“Implemented”), or policies that have been enacted (i.e. EPAAct) but not yet fully implemented (“Enacted”). The percentages were calculated by estimating the impact of enacted/implemented policies on gas supply or demand in Bcf per year, then dividing the impact by the potential supply identified in the AGF Outlook Study. The total height of each bar represents the potential annual contribution of that variable as identified in the Expanded policies scenario (although the maximum potential may actually be much higher).

**Impacts of Policy Changes on Key Variables - Expanded Policies Potential**



	<b>Implemented</b> <i>Impact of policies that have been fully implemented.</i>	<b>Enacted</b> <i>Impact of policies that have been enacted, but not yet implemented.</i>	<b>Potential</b> <i>Potential impact identified in AGF Outlook Study.</i>
<b>Gas Demand Reduction</b>	Currently implemented efficiency and conservation policies could reduce demand by about 300 Bcf per year.	Full implementation of all EPAAct measures could reduce gas demand by another 100 Bcf per year.	The AGF Outlook Study identified potential reductions of 650 Bcf per year by decreasing gas demand in the power sector .
<b>Increased Access Onshore</b>	Policy to streamline the approval and permitting process may increase production by about 100 Bcf per year.	Full implementation of all EPAAct measures could increase onshore supplies by another 100 Bcf per year.	Assuming only modest changes in onshore access policies, the Intermountain West could provide another 450 Bcf per year.
<b>Increased Access Offshore</b>	No new policies on OCS access have been implemented since the AGF Outlook Study.	In December, Congress passed legislation that will provide access to an additional 365 Bcf per year in the Eastern Gulf of Mexico.	Lifting the moratoria on exploration and production off the East and West Coasts could yield another 365 Bcf per year.
<b>Alaska Gas Pipeline</b>	No new policies have been implemented since the AGF Outlook Study.	The Alaskan Natural Gas Pipeline Act provides loan guarantees and other support, and the Alaskan legislature is currently considering an SGA agreement with the Producers Group.	An Alaskan Gas Pipeline could provide as much as 2.2 Tcf per year of additional gas supplies.
<b>LNG Imports</b>	Currently implemented policies that simplify the approval process for new terminals may increase LNG imports by about 1.0 Tcf per year.	Implementation of additional policies to promote long-term supply contracts could increase LNG imports by an additional 1.0 Tcf per year.	The AGF Outlook Study identified potential additional LNG imports of 6.4 Tcf per year.

## Gas Demand Reduction

*Enacted Score: 60%*

*Implemented Score: 40%*

*Potential Identified in AGF Outlook Study: 650 Bcf per Year*

In some respects, EPO Act goes beyond the Expanded policies scenario in that it includes additional measures to reduce natural gas demand, such as new building efficiency standards for government buildings. Although these additional measures toward demand reduction make a positive contribution toward improving the supply/demand balance, their collective impact is small relative to the potential impact of reducing the growth of gas demand for electricity generation. ***EPO Act includes some critical measures to promote coal, nuclear, and renewable generating technologies, but cannot be met without further Congressional action to provide funding.***

## Increased Access Onshore

*Enacted Score: 40%*

*Implemented Score: 20%*

*Potential Identified in AGF Outlook Study: 450 Bcf per Year*

EPO Act made some progress toward improving access to federal onshore lands. Still, barriers remain to the approval and permitting of oil and gas exploration on these lands, particularly in the Intermountain West, which has some of the most promising resources in the Lower-48. A study by the Department of the Interior noted that there are nearly 1,000 different stipulations that can impede the development of oil and gas resources on federal lands. ***An integrated, all encompassing review of restrictions in the Intermountain West would coordinate and rationalize all the regulations governing land access. These regulations, which are often duplicative and overlapping in their scope, continue to be an impediment to increasing production in this area.***

## Increased Access Offshore

*Enacted Score: 50%*

*Implemented Score: 0%*

*Potential Identified in AGF Outlook Study: 730 Bcf per Year*

Unfortunately, EPO Act did not take any actions toward opening the Outer Continental Shelf (OCS) for oil and gas development. However, in December 2006, Congress did pass legislation that will open 8.3 million acres of federal waters in the eastern Gulf of Mexico to oil and gas drilling. While this was a significant step forward, exploration and production is still prohibited in all of the waters off the East and West Coasts. ***There are still abundant supplies in the OCS that remain off limits to development.***

## Alaska Gas Pipeline

*Enacted Score: N/A*

*Implemented Score: N/A*

*Potential Identified in AGF Outlook Study: 2.2 Tcf per Year*

***Unlike other policies, the Alaska Gas Pipeline is an “all or nothing” proposition; even though some policies to promote the project have been enacted, it will make no contribution to the U.S. natural gas market unless it is fully implemented.*** At present, it seems unlikely that an Alaska Gas Pipeline will become operational by the end of 2014. Most analysts agree that the earliest the pipeline could be operational would be in 2015 or 2016. For every year the project is delayed, the risk that it will be displaced by LNG imports increases. While the preliminary SGA contract is a positive development, it still must be approved by the Alaska state legislature before the pipeline project can move forward.

## LNG Imports

*Enacted Score: 30%*

*Implemented Score: 15%*

*Potential Identified in AGF Outlook Study: 6.4 Tcf per Year*

Over the past year, the U.S. has added one new LNG import terminal and several more are currently under construction. While EPCAct's Section 311 provision confirmed FERC's exclusive authority over the approval of LNG facilities, there are still issues over local opposition to new import terminals. The volume of LNG imports will also depend on the ability of terminal operators to secure long-term contracts. In the coming decade, many existing LNG contracts will expire and come up for renegotiation, and many new contracts will have to be negotiated for new import terminals. ***Even if more import terminals are built, the U.S. cannot be assured of dramatically increasing its LNG imports without securing LNG supply contracts.***

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## American Gas Foundation

Founded in 1989, the American Gas Foundation is a 501(c)(3) organization that focuses on being an independent source of information research and programs on energy and environmental issues that affect public policy, with a particular emphasis on natural gas. For more information, please see [www.gasfoundation.org](http://www.gasfoundation.org) or contact Gary Gardner, AGF's Executive Director at [ggardner@gasfoundation.org](mailto:ggardner@gasfoundation.org).