Remarks by
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Thank you and good morning. First, I would like to thank the Department of Transportation, Sam Bonasso and Stacy Gerard for organizing this Workshop.

I also want to thank all of you who have come from around the country to participate in this important discussion.

The Department of Energy considers cooperative, informed decision-making by the stakeholders in LNG operations to be vital to the safe, secure and successful growth of this increasingly important energy resource.

As a representative of the federal policy-making sector, I am pleased to have this opportunity to answer two of the primary questions about LNG:

Why do we believe an expanding national market for LNG is important to the nation's energy security future?

And, how do we think LNG can continue to be safely and securely transported and processed in increasing amounts at an increasing number of terminals?

We believe our answers to both questions are more than persuasive – they are compelling.

Let's begin with the "Why."

In recent years, LNG imports have grown quietly and rapidly to become an emerging contributor to meeting today's natural gas demand – and growing supplies of natural gas are critical to the energy security that is the basis for President Bush's goal of continued economic growth and prosperity.

LNG's role in our energy system is not a mere concept -- it's a reality today. Here's how much of a reality it has become.

In 2002, LNG imports to the U.S. totaled 229 Bcf, or 6 percent of imported gas. In 2003, imports totaled 506 Bcf, or 13 percent of all imported gas -- more than doubling 2002's total. When the final data for 2004 are released, they will show that last year's LNG imports comfortably exceeded 600 Bcf, a 250 percent increase in just two years. The LNG numbers will increase yet again in 2005, and in the years beyond.

There is good reason for this rapid growth: domestic natural gas production has been flat, and imports by pipeline from Canada have been declining, while natural gas demand remains relatively flat -- and would be increasing if it weren't for the current high price environment caused by tight supply.

Rising natural gas prices have had predictable effects on energy consumers and on our economy:

- Higher energy bills for residential and commercial customers, and

- Higher manufacturing costs for companies dependent on natural gas as an industrial feedstock or as a source of electricity. Those higher costs have resulted in higher prices for manufactured products and a loss in competitiveness for U.S. industry.

Industrial sectors such as the fertilizer industry, which use natural gas as a primary feedstock, have been hit hard.

By mid-2003, rising natural gas prices had either permanently closed down or idled almost 45 percent of U.S nitrogen fertilizer capacity, and shuttered 11 ammonia plants that accounted for 21 percent of U.S. capacity.

America's farmers are increasingly forced to turn to imported fertilizer products as an affordable alternative.

In the chemicals industry overall, experts say that higher domestic natural gas prices encourage chemical companies to either shut down or shift production offshore.

This relocation can have the effect of reducing domestic natural gas use, feedstocks, domestic chemicals production, and domestic investment and employment, while diverting capital from domestic to foreign investments.

Reduced demand for natural gas ... Higher energy bills ... Inflationary pressure ... Industrial layoffs ... Reduced domestic manufacturing and investment ... Lower GDP....

Those are just a few of the effects – none of them good – that come from rising natural gas prices caused by tight supply.

Fortunately, LNG has helped to alleviate some of the pain. Thanks, for example, to average LNG imports of over 40 Bcf a month in 2003, we were able to meet our natural gas storage requirements going into that year's heating season.

And thanks to an average of over 50 Bcf a month of LNG imports in 2004, we were able to meet and actually exceed our five-year average of natural gas in storage for the current heating season.

If you think today's natural gas prices are high at a range of $5.50 to $6.50 per thousand cubic feet, imagine where we'd be without the contribution of LNG.

Here are two dramatic illustrations of LNG's importance to our national natural gas picture:

- Last year's total LNG imports of more than 600 Bcf were the equivalent of almost 20 percent of our peak natural gas in storage, and
- From 2002 to 2004, LNG imports increased by roughly 30 Bcf a month, or 360 Bcf, in round numbers. Without that added gas, we would not have hit

the magic minimum of 3 Tcf of gas in storage entering the current heating season. The result would have been panic in the gas markets.

That is how important LNG is to meeting today's requirement for reliable, affordable supplies of environmentally sound energy.

And its importance will only increase with the passage of time. According to Energy Information Administration forecasts, U.S. natural gas demand could increase by as much as 35 percent over the next two decades, and LNG is forecast to account for fully 21 percent of that demand – about a ten-fold increase in imports from 2004's volume.

All of these forecasts take into account added imports of Arctic natural gas through a future Alaska Natural Gas Pipeline, as well as Canadian Arctic pipeline imports.

Today, four re-gasification terminals -- in Massachusetts, Maryland, Georgia and Louisiana – are destinations for produced gas from those worldwide reserves. The terminals have a combined peak capacity of about 1.2 Tcf a year, and all four terminals have FERC-approved expansion plans that will bring their total capacity to more than 1.6 Tcf.

In addition to the currently operating LNG terminals, Freeport LNG received its final permits last month and began construction of a new terminal on the Texas Gulf Coast, and the Energy Bridge project is set to receive its first LNG tanker in the Gulf of Mexico next month.

There are, in addition, approximately 40 proposals on the drawing boards for new LNG plants in North America, with new ones being added at regular intervals. ConocoPhillips, for example, recently announced that it is applying for permits to build an LNG facility offshore Louisiana, the second terminal it is planning for the Gulf of Mexico.

We are witnessing the beginnings of something big and irreversible – a growing global market in LNG centered on the United States.

Our goal is ambitious, doable and essential: The construction of a system capable of delivering 15 to 17 billion cubic feet of LNG to North American terminals every day in 2025.

The "Why" of LNG is clear and compelling: We need it to meet current and future energy security challenges.

And that brings me to our second question: How are we going to continue to transport and process increasing amounts of LNG safely and securely at an increasing number of terminals?

To answer that question, I'd like to devote the remainder of my remarks to a general consideration of the Sandia National Laboratory's recently released LNG safety study.

We believe the study makes a pivotal contribution to discussions about the siting, safety and security of LNG terminals, and provides a valuable tool for

decisions-makers to use in evaluating and reducing the risks of an accident or a terrorist attack.

There were a number of reasons that led the Department of Energy more than a year ago to commission the Sandia lab to undertake a definitive LNG study:

The first was that then-existing studies were unsatisfactory. They were limited in scope, examining only the consequences of a possible LNG spill and excluding reviews of risk management and mitigation techniques.

In addition, while safety standards had been developed for possible LNG spills over land, there was no equivalent set of standards for a spill over water.

Post-9/11, large scale spill scenarios were being evaluated for LNG, but there was no analysis in these studies of how an LNG spill could occur. In some cases, spill scenarios could not be validated. Moreover, many studies used simplified assumptions to predict the hazards of a large LNG spill, which allowed for significant variability in estimating the overall risks of large LNG spills over water.

Decision makers looking for reliable data were faced with a choice of studies that were generic in nature, tailored to other locations, emphasized different aspects of the problem, and used varying methodologies and computer models.

To clear up the resulting confusion, the Department of Energy asked Sandia to:

- Evaluate potential credible threats to an LNG ship;
- Assess the possible hazards and consequences from an LNG spill, and
- Identify possible prevention and mitigation strategies that could be implemented to reduce the risks of a large LNG spill over water.

After a painstaking, year-long study, Sandia and the Department of Energy last December released a report that for the first time establishes an orderly process for defining the parameters of the problem.

The Study concludes that LNG can be transported safely with appropriate safety measures, based on a comprehensive approach to LNG tanker design and operation, including risk prevention and mitigation systems.

The Sandia study directly addresses the possible impact of terrorist action. The possible consequence scenarios identified and evaluated in the Sandia study proved to be within the boundaries used in previous studies. From a consequence perspective, there is nothing new in the study's findings.

But the Sandia study goes beyond consequences to provide guidance on the use of risk-based management to minimize any threat to public safety. This guidance will be especially valuable in defining and determining site-specific risk for LNG facilities.

Other important conclusions reached by the report's authors are that:

- The risks from accidental LNG spills are small and manageable using current safety policies and practices;
- Risks from terrorist acts can be significantly reduced with appropriate security, planning, prevention and mitigation;
- Multiple techniques exist to enhance spill safety and security management and reduce the potential for a large LNG spill due to intentional threats.
- If implemented, these techniques could significantly reduce the potential for an intentional LNG spill;
- Management approaches for reducing the risks to public safety and property from LNG spills include operational and safety management, improved modeling and analysis, improvements in ship and security system inspections, establishment and maintenance of moving safety zones around LNG tankers, and advances in LNG off-loading technologies.

It should be noted that the Sandia study does not endorse the concept of exclusion zones.

The study notes that the Coast Guard has already taken a number of measures to improve port security, among them:

- Improving control over waterborne traffic;

- Establishing security zones and requiring escorts for tankers;
- Varying shipping schedules and keeping them confidential;
- Pre-screening LNG tanker crews;
- Checking cargo and key safety systems prior to arrival in port, and
- Implementing the procedures contained in the Coast Guard's Area Maritime Security Plan.

The Sandia study recognizes the proven safety record of the LNG shipping industry and attributes it to engineering design, multiple layers of safety and security measures, and the creation of thorough safety, security and emergency response plans.

Throughout the nearly 40-year history of LNG operations worldwide, and more than 35,000 cargo deliveries, there have been no significant releases of LNG related to a breach or failure of a cargo tank.

This excellent record includes regular ship transits of ports in urban areas such as Boston and Tokyo – and consider that in Japan, which relies exclusively on imported LNG for its natural gas supply, one LNG tanker entered the Port of Tokyo every 20 hours in the year 2000.

With the Sandia study in hand, federal and state regulators, local community leaders, safety and security experts and private industry can work

together to provide communities near existing or planned LNG terminal sites with definitive answers to questions about the risks associated with the terrorist threat.

The study will be useful in resolving disputes over differing computer modeling techniques, and provide a consistent, reliable and uniform approach to identifying and mitigating threats.

This tool will be valuable to first responders and other safety experts.

- It will allow them to understand how an LNG spill occurs – and how combustion can occur.
- It will allow for the development of a comprehensive approach to safe and secure spill mitigation, and
- It will allow for the assessment of equipment needs, and the implementation of training programs.

Stakeholders can now engage more confidently in policy and procedural deliberations over the low probability of an LNG incident, giving appropriate weight to:

- Sandia's risk-management recommendations;
- The multiple layers of protection built into LNG carriers – and their remarkable safety record;
- The industry's high operational standards;
- The intensive regulatory oversight directed at the industry, and
- The increased security efforts of both industry and government at all levels.

LNG is not a novel concept or an unknown quantity. It is a long-standing, fast-growing and essential element in our energy portfolio.

It has been proven safe over decades of operations — and with the help of the Sandia study, it will face the new, potential challenge of terrorism and lengthen its already long record of safe and secure operations.

We need LNG's contribution to our energy security – the reliable, dependable supply of environmentally sound energy that will fuel a future of economic growth and continued prosperity.

As a healthy, non-neurotic society, we must and will continue to measure, mitigate and take risks in order to reap an economic benefit and improve our standard of living, just as we have done throughout our history.

It is up to all of us with an interest in the future of LNG operations to understand both the enormous benefit a growing LNG supply will deliver to the American people, and the steps we have taken and can take in the future to reduce the associated risk.

The Sandia study is an important step forward in our progress toward that goal.

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