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NATURAL GAS EXPORTS: ECONOMIC AND GEOPOLITICAL OPPORTUNITIES

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BEFORE THE

SUBCOMMITTEE ON TERRORISM, NONPROLIFERATION, AND TRADE

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NATURAL GAS EXPORTS: ECONOMIC AND GEOPOLITICAL OPPORTUNITIES

THURSDAY, APRIL 25, 2013

House of Representatives,

Subcommittee on Terrorism, Nonproliferation, and Trade,

Committee on Foreign Affairs,

Washington, DC.

The subcommittee met, pursuant to notice, at 2:13 p.m. in room 2200, Rayburn House Office Building, Hon. Ted Poe (chairman of the subcommittee) presiding.

Mr. Poe. The subcommittee will come to order. Without objection, all members may have 5 days to submit statements, questions, extraneous materials, for the record, subject to the length limitation in the rules.

Five years ago, companies were building terminals to import natural gas at the cost of billions of dollars because analysts agreed that the United States' economy was going to need natural gas from overseas. Today, that scenario has changed 180 percent. Import terminals lie dormant. The Department of Energy has 19 applications waiting to get permission to export natural gas. Thanks to breakthroughs, the United States' natural gas reserves have climbed 72 percent since 2000 and 49 percent since 2005. The amount of natural gas that is technically recoverable in the United States is 97 times greater than all of the natural gas we consumed in 2011. In plain terms, this means we have an abundance of natural gas that we are not using. It is just sitting there, and this is really not smart

policy, or smart business.

A big reason why is the Department of Energy. The Department of Energy has not approved an application to export to a country we don't have a Free Trade Agreement with in 2 years. When the DOE says you can't export, that floods the domestic market with natural gas because producers have no place to sell it. Prices domestically have now dropped so low that it just isn't worth it for producers to even pull any more natural gas out of the ground.

So we have recoverable natural gas that is unused because the government refuses to let it be produced. Let me give you an example. There is one company that has a permit pending with the DOE for 2 years. If the DOE would give the green light, the company would immediately create 3,000 new construction jobs, 20,000 to 30,000 more jobs would also be created for exploration, drilling, and pipe laying. In all, the economy would see an infusion of \$10 billion from the project alone. Jobs are important and it is important that the government understand that we should move forward with jobs in this industry.

It is not just one project; there are others like this one project that can't get started. No matter what economic study someone looks at, even those commissioned by the DOE, the result of opening up our natural gas exports is an economic gain for the United States. Real income and the GDP will all rise. More exports would be a big gain for our business sector; 91 percent of firms in the oil and gas extraction industry have fewer than 20 employees. Many family-owned small businesses really can't wait for 2 years for the Department of Energy to approve a permit. They really don't have that kind of flexibility or money. So the longer the process takes, the harder it is on mom-and-pop companies to survive.

In Europe, countries who rely on natural gas have been held hostage by the Russian energy company, Gazprom. Our friends in Poland, Hungary, and the Czech Republic know this better than anyone. Cheap U.S. natural gas exports would reduce the Russian stranglehold on the European market and give the U.S. more political clout at the expense of Russia. In the Pacific, allies like Japan and Korea pay very high prices for natural gas. They would be immediate importers of cheaper U.S. natural gas if we were allowed to sell it to them.

Perhaps more than anyone, our friends in India have been the most vocal. The current Indian Ambassador to the United States recently wrote in a Wall Street Journal op ed that U.S. natural gas exports to India, ``would provide a steady, reliable supply of clean energy that would help reduce [India's] crude oil imports from the Middle East and provide reliable energy to [India].''

Without U.S. natural gas, the Indians might have to participate in the Iran, Pakistan gas pipeline. We have given the Indians a reasonable alternative. We should use it. Liberalizing our natural gas export policy will provide certainty to allies and economic partners around the world that the United States is an advocate of free trade.

On a side note, we have the problem with the World Trade Organization. The WTO punishes countries that limit exports to keep their own domestic prices down. The U.S. has a World Trade

Organization case against China for doing exactly that with its rare-earth minerals. But here the DOE is limiting our own natural gas exports. If this policy continues, there is a possibility we could be sanctioned by the WTO and our entire trade regime could be hurt.

So the DOE should let the free market work and approve pending applications. The U.S. has the best technology and the safest technology in the world, but our competitors with their own natural resources, like China, are catching up.

The purpose of this hearing is to explore natural gas exports from the United States to other nations.

And now, I will yield to the ranking member, Mr. Sherman from California, for his opening statement.

Mr. Sherman. Thank you, Mr. Chairman. I commend you for holding these hearings. Ordinarily, people don't think natural gas is a focus of the Foreign Affairs Committee, let alone this subcommittee. But the fact is that while the Ways and Means Committee is the primary committee to deal with imports and taxation thereof, it is our committee that has primary jurisdiction over exports, export promotion, and export control. It is interesting that the private sector invested billions in building terminals to import liquefied natural gas and now wants to retool them to export. And it is clear that the price as structured now justifies that. My fear if I was an investor, and I am not, is that by the time we are ready to export, we will have already exported our fracking technology, which we are exporting now, and there will be discoveries of natural gas on the Eurasian landmass that will allow the piping of natural gas to the very people that anticipate buying our liquefied natural gas.

Whether to develop in full our natural gas resources, and whether to export natural gas brings up environmental, national security, and economic concerns. From a national security standpoint, I am particularly interested in vehicle propulsion. Vehicle propulsion is the domain of petroleum worldwide, and it is our dependence on petroleum imports and the world's dependence on petroleum imports that determines much of foreign policy around the world. Right now you can get twice as many miles per dollar with a natural gas vehicle as with a petroleum-based vehicle. If we start exporting natural gas that may change. We may need to have a huge differential between the price of natural gas and the price of gasoline in order to encourage use of natural gas to propel trucks and perhaps even cars.

On the other hand, it is in our national security interest as the chairman points out, to provide secure natural gas supplies for our allies and to prevent India from turning to Iran for a natural gas pipeline.

As to economics, there are jobs involved in developing the infrastructure to export our natural gas. There are also jobs involved in our manufacturers and our petrochemical companies having cheaper natural gas than anyone else. Many countries with a valuable export deliberately prevent the export of the raw material in order to give the processing jobs and the use of that raw material jobs to their domestic market. In addition, we are currently exporting coal. So if we start exporting natural gas, we will be burning more of our own coal,

and if we choose not to, will we simply be exporting more of our own coal?

As to the environmental side, natural gas is the best fossil fuel, which may--environmental-wise, not be a particular compliment. But to the extent that we don't develop our natural gas resources, or that we export them, will we be burning more coal? How will that count against us in the international calculations of carbon emissions, and eliminate our efforts or deter our efforts to be able to get other countries to stop exporting. I believe my time is expired, but if I can go on for a little bit longer, I hope.

Mr. Poe. The gentleman is recognized for a little bit longer.

Mr. Sherman. Okay, thank you. So, and finally on the economic side, we have consumers. The only thing my constituents will understand about these hearings after they get point and counterpoint is that their natural gas bills are lower now than they used to be and they would like to keep it that way.

We want to find out what is the expense of shipping natural gas compared to shipping coal because they are usable by the customer for the same purpose. We will want to focus on what advantages our manufacturers and petrochemical companies will have if they can pay half for natural gas what other people are paying or less than half. So it cannot be said that we are here to make sure that there are jobs in one industry without hearing what jobs might be available through another process.

With that, I think my little bit longer has been exhausted and I yield back.

Mr. Poe. I now recognize the vice chair of this subcommittee, the gentleman from Illinois, Mr. Kinzinger.

Mr. Kinzinger. Thank you, Mr. Chairman, and thank you for holding this important hearing on gas exports. Since the 1930s, we have exported natural gas via a pipeline to Canada and Mexico, and more recently, starting in 1969, the U.S. began exporting natural gas to Japan, at that time a non-free trade agreement country from the Kenai Peninsula in Alaska.

However, given this history of exporting natural gas, the Department of Energy has only granted a single permit to export liquefied natural gas to another non-FTA while approximately 20 remaining LNG export applications remain in limbo. What would approval of these 20 remaining LNG export applications mean for the American economy? I believe that the answer is somewhat simple. It means American jobs. The majority of the economic studies analyzing a wide range of scenarios found increased LNG exports would produce a net economic gain to the U.S. economy, resulting in an increase in U.S. households' real income. At a time when the economy continues to struggle, we need to support policies that encourage domestic job growth.

I do want to, however, say a note of caution. I represent an area of heavy manufacturing, and especially in the Rockford area in Illinois. We have a lot of manufacturing, and cheap energy has actually been very effective in bringing manufacturing back to the United States and making us competitive with the rest of the world. A question that I do legitimately want answered is, what will exporting natural gas do to natural gas prices here at home because I fear that a

skyrocket in domestic natural gas prices would, in fact, lead to a hurt in the manufacturing sector as energy prices skyrocket again.

But that said, the Department of Energy concludes that for every one of these market scenarios examined, net economic benefits increase as the level of LNG exports increase. And I am interested in hearing from our panel about the impact increased LNG exports will have on our national security interest around the world. LNG exports ought to support our allies, and I believe they could provide an important alternative to Middle Eastern or Russian competition that currently dominates the market.

And thank you, chairman, I yield back.

Mr. Poe. Anyone else wish to make an opening statement? Without objection, all of the witnesses' prepared statements will be made part of the record. I ask each witness to keep your presentation to 5 minutes, so that we can move along in this process and have questions and answers.

I will introduce each of the witnesses at this time, and then we will have the witnesses' opening statements.

Mr. Rob Bryngelson is the president and chief executive officer of Excelerate Energy in The Woodlands, Texas. Before helping found Excelerate Energy he worked as managing director in El Paso Corporation's Global LNG Group where he was responsible for LNG infrastructure development, supply, procurement, and downstream marketing for North America. Dr. David Montgomery is a senior vice president at NERA Economic Consulting, and helped lead the study that the DOE commissioned on the economic impact of LNG exports. Prior to NERA, Dr. Montgomery held a number of senior positions in the United States Government, including Assistance Director of the United States Congressional Budget Office, and Deputy Assistant Secretary for Policy in the U.S. Department of Energy during the Carter administration. Dr. Michael Levi is the David Rubenstein senior fellow for Energy and the Environment at the Council on Foreign Relations, and director of the CFR program on Energy Security and Climate Change. Before joining CFR, Dr. Levi was a fellow at the Brookings Institution and director of the Federation of American Scientists Strategic Security Project. Mr. David Mallino is the legislative director at the Laborers International Union of North America. He previously worked for the American Federation of Labor, Congress of Industrial Organizations, and National Environmental Education and Training Center. And Mr. Michael Ratner is a specialist in energy policy at the Congressional Research Service focusing on natural gas and all markets. His recent CRS work has addressed U.S. LNG exports and U.S. natural gas demand and prior to joining CRS, Mr. Ratner was a senior energy analyst at the Central Intelligence Agency.

Mr. Bryngelson, we will start with you. You have 5 minutes.

STATEMENT OF MR. ROB BRYNGELSON, CHIEF EXECUTIVE OFFICER,
EXCELERATE ENERGY

Mr. Bryngelson. Thank you, Chairman Poe, Ranking Member Sherman, members of the subcommittee. My name is Rob Bryngelson. I am the president and CEO of Excelerate Energy. I

appreciate the opportunity to appear before the subcommittee today to share Excelerate's views on the current status of the natural gas industry relating specifically to liquefied natural gas exports, the positive impacts both to Texas and the Nation associated with LNG exports, and finally, Excelerate's views on the Department of Energy approval processing to export LNG.

I have submitted more extensive written testimony for the record, therefore, I will use this time to summarize a few key points. Excelerate Energy was established in 2003 and is based in the Woodlands, Texas. We are the world's largest provider of floating storage and regasification vessels, and are engaged in the development, construction, and operation of liquefied natural gas, transportation and regasification infrastructure worldwide.

In 2009, Excelerate initiated front-end engineering design efforts to construct the world's first floating liquefaction, storage, and offloading unit capable of taking U.S. domestically-produced natural gas and processing it into LNG for export. The project is referred to as the Lavaca Bay LNG project, and will be located in Calhoun County along the Texas Gulf Coast.

U.S. residential, commercial, and industrial consumption is not expected to increase quickly enough to offset the growth of natural gas production which has led to projections of sustained low prices in the U.S. rapid growth in U.S. natural gas production has driven gas prices to historically low levels, resulting in decreased investment by the natural gas industry, and a reduction in associated economic activity. It is our belief that exporting domestically produced LNG will meaningfully contribute to the public interest in a variety of ways including creating more jobs, greater tax revenues, and increased economic activity; introducing new competitive supplies into world gas markets leading to improved economies among America's trading partners and providing better opportunities for U.S. products and services abroad; promoting greater national security through a larger role in international energy markets; increasing production capacity that will better adjust to varying domestic demand scenarios; reducing the volatility of domestic natural gas prices; and improving the U.S. balance of payments by between \$2.4 billion and \$4.4 billion annually per project through the export of natural gas and the displacement of imports of other petroleum liquids.

On October 28, 2012, Excelerate filed its application with the Department of Energy for the export of LNG to non-free trade agreement countries. Excelerate remains in the queue with 18 other companies awaiting DOE approval. In its non-FTA application to DOE, Excelerate included two independent economic studies focused on the specific project area and the U.S. as a whole. The independent studies concluded that the project would have a positive impact on the region surrounding the project site comprising Calhoun and Jackson Counties as well as on Texas as a whole and the Nation.

After receiving approval from the FERC to proceed, Excelerate will begin the nearly 4-year construction process to complete Phase I of the Lavaca Bay LNG project. The construction and operation of the project will stimulate local,

regional, and national economies through job creation, increased economic activity, and tax revenues. Much of the technology, equipment, and material needed to construct the project will be obtained domestically. I have included in my written testimony specific data concerning jobs, tax revenue, and other key benefits of the project.

DOE is required to authorize exports to a foreign country unless there is a finding that such exports will not be consistent with the public interest. We concur with the DOE policy guidelines which emphasize free market principles and promote limited government involvement in Federal natural gas regulation. Previously, other issues considered in making the public interest determination have included local interests, international effects, and the environment.

Excelerate's primary concern is the timing of such non-free trade approvals. As you are aware, there are a multitude of projects around the world offering LNG supplies that are competing with the U.S.; specifically, Australia, East Africa, and the Eastern Mediterranean.

Further delays are likely to result in buyers concluding that other potential LNG sources provide greater certainty and the focus on U.S. exports will diminish. This would be a considerable economic loss for our Nation. In addition, with only authorization to sell to free trade nations, we are limiting the potential pool of potential customers. As one would expect, with a limited customer base, those volumes of natural gas liquefied and exported will see lower prices than if a more expanded pool of purchasers were available.

In conclusion, the overall outlook for domestic natural gas production is promising. Without a significant increase in U.S. residential, commercial, and industrial demand, the current rate of consumption is not enough to offset growth and production, and may contribute to artificially low prices for natural gas in the U.S. This rapid growth without increased demand is already resulting in decreased investment by the natural gas industry and a reduction in associated economic activity.

It is crucial that DOE move expeditiously to act on the pending export applications before other countries lock up customers with their own exports and the U.S. loses this opportunity.

Thank you again for allowing me the opportunity to appear before the subcommittee today, and I look forward to answering any questions that you may have.

Mr. Poe. Thank you.

[The prepared statement of Mr. Bryngelson follows:]

Mr. Poe. Dr. Montgomery, you have 5 minutes, please.

STATEMENT OF W. DAVID MONTGOMERY, PH.D., SENIOR VICE PRESIDENT,
NATIONAL ECONOMIC RESEARCH ASSOCIATES

Mr. Montgomery. Thank you, Mr. Chairman. I am honored by your invitation to appear before the committee today. My name is David Montgomery, and I am the senior vice president of NERA Economic Consulting, and I would like to start by stating that I am speaking on my own behalf today.

Mr. Poe. Is your microphone on, Dr. Montgomery?

Mr. Montgomery. It is not, thank you. I am sorry. I am senior vice president of NERA Economic Consulting, and I would like to start by stating that I am speaking on my own behalf as an expert on the issues being discussed by the committee today, and not representing positions taken by my employer NERA, and I am certainly not speaking for the Department of Energy.

I would like to begin with a quick summary of the key findings of our study that we did for the Department of Energy, and I will talk about economic principles and not numbers at this point. Then I will address some of the controversies that have arisen since the study was issued, and then I would like to conclude with a few observations on geopolitical effects of LNG exports.

In the study we did for the Department of Energy, we examined a wide range of scenarios for export levels. We had

different assumptions in these scenarios about the costs and availability of natural gas in the United States, and also on levels of global demand, and the supply from competing sources in the world market. We found that in some cases the U.S. might not export gas at all, as Mr. Sherman suspected. But in those cases, allowing exports had no effect; they did no harm and did no good.

In all of the scenarios in which the U.S. did export, we found that there were net benefits to the U.S. economy from those exports. The larger the exports were, the greater the benefits were. Limiting exports never produced greater benefits in any of the scenarios we looked at than unlimited exports. This shouldn't be surprising or controversial. It is exactly what the basic principle of comparative advantage that underlies all of international trade theory says will happen. All countries are better off when they specialize in exporting what they are good at, rather, what they are better at, and importing what others are better at producing.

We wanted to be sure of our ground. We asked one of the leading trade economists in the country, Professor James Markusen at the University of Colorado, to advise us on this work and to review the study. He concurred in these conclusions as did studies that were released by the Brookings Institution, and by Rice University. They all apply essentially the same principles of international trade theory and reached the same conclusion about net benefits.

Another way of putting this is that the advent of shale gas creates a new opportunity, and it changes the nature of the United States' comparative advantage in trade. That produces some changes in patterns of imports and exports and industry outlook. But we have never found that shutting off opportunities or preventing change increases national wealth. It works the other way around.

So let me talk a little bit about prices. Since the world won't buy gas from the United States if it costs more than the natural gas that they can get from other sources, there are limits on how large the price increase caused by LNG exports could be. In most of the scenarios that we looked at, U.S. prices increased by about \$0.50 and that is looking out to, say, 2025 and it is on a base forecast of \$6 of what natural gas prices would go back up to even if we had no LNG exports.

In some cases, at most, we had \$1 as the increase in cost that would be attributable to gas exports. In other words, with abundant gas, we can supply ourselves and export gas, and with limited supplies of gas, we can't do either. But even with the largest price increases, U.S. energy-intensive industries will still be getting natural gas for half the cost of their competitors in natural gas-importing industries. That is because the cost of moving gas from where it is produced in the United States to where it is burned in countries like Japan, Korea, China, or even Europe, just about doubles the U.S. wellhead price. So I mentioned some of the importing countries.

I can't believe that the U.S. chemicals industries, for example, is so inefficient that it can't survive if these competitors are still paying twice as much for natural gas as it is even after we are exporting natural gas. U.S. energy-intensive industries no matter what we export of LNG will still

be getting natural gas at perhaps half the cost of the competitors that we worry about, like China, Europe, and Japan.

Overall, the benefits of LNG exports that we found in our study were clear, but they weren't large. And this is instructive. The U.S. is not going to become a one-crop economy. Natural gas is not a large part of the U.S. economy. Natural gas exports won't be a large part of U.S. exports. And I think this is helpful in understanding that the U.S. is not going to become a country like a small African country that is exporting copper and is swung back and forth by commodity markets. This is one part of a large portfolio. Let me see, I am running very short on time, so let me make several other points I would like to cover.

Mr. Poe. Dr. Montgomery, if you would, summarize and then end your statement and then we will file your statement with the record. We have some questions for you, too.

Mr. Montgomery. I will, yeah. I agree with the chairman, LNG exports will help our friends and limit Russia's ability to extract higher prices. I think they will distribute to nonproliferation goals as well as energy security because of the countries like India that need the exports. I don't believe the LNG exports will increase local CO2 emissions. If the gas is burned elsewhere, it will substitute for coal and it is pretty much awash. But mainly my points is, limits will be self-defeating. Free trade areas will receive gas. Canada is a free trade area. If we have abundant gas and don't export it ourselves as LNG, it will move to Canada, and that gas will displace Canadian gas which then can be exported. We will suffer all of the costs of exporting natural gas and get none of the benefits of selling it at the high price as a nation. Thank you, Mr. Chairman, I appreciate your indulgence.

Mr. Poe. Thank you, Dr. Montgomery.

[The prepared statement of Mr. Montgomery follows:]