
Mr. Poe. Dr. Levi.

STATEMENT OF MICHAEL A. LEVI, PH.D., DIRECTOR, PROGRAM ON
ENERGY SECURITY AND CLIMATE CHANGE, COUNCIL ON FOREIGN
RELATIONS

Mr. Levi. Chairman Poe, Ranking Member Sherman, members of the subcommittee, thank you for inviting me to speak with you about the geopolitical implications of U.S. LNG exports. As you know, in order to export LNG to countries with which the United States does not have a special Free Trade Agreement, companies must be granted permits by the Department of Energy. Approving some or all of those permits would benefit U.S. economic and security relationships. The United States has long been a promoter of open international energy markets as a way of separating commerce from diplomatic intrigue. In particular, in recent years it has challenged Chinese restrictions on exports of various raw materials at the World Trade Organization. A U.S. decision to disallow LNG exports would undermine Washington's strength when challenging Beijing and when promoting open markets more generally.

Some have gone further and argued that the United States should abolish even the current permitting process for LNG exports. Doing this, however, would remove valuable U.S. leverage in international trade negotiations. Maintaining some limited uncertainty about U.S. openness to exports, does create useful incentives for other countries to enter Free Trade Agreements with the United States.

Now, what would actually happen if the Department of Energy approved a substantial number of export permits? It is entirely possible that few or no export facilities would ultimately be built and used. Export facilities cost several billion dollars each and take years to build, and their economics only work if gas prices stay well below overseas ones. Many analysts, nonetheless, project that small but nontrivial volumes of U.S. natural gas will be exported. Those exports would give large LNG buyers, including Korea, Japan, and India, an alternative to Middle Eastern and other producers for part of their supplies. That would provide those countries some leverage in negotiations with the traditional suppliers, who have long insisted on rigid contracts that link the price of natural gas

to the price of oil and that entangled gas trade with international relations as a result.

It would also provide them with some protection from economic damage that can result from volatile prices. It is unlikely, however, that U.S. LNG exports alone will fundamentally transform the highly politicized world of natural gas trade.

The prospect of U.S. LNG exports would also help Europe maintain leverage against Russia, even if, as it appears likely, little U.S. natural gas is actually shipped to Europe. Europeans are increasingly forcing Russia to sell its natural gas on transparent market-based terms rather than through opaque politically-charged contracts. And even the possibility of U.S. exports will help sustain pressure on Russia to sell natural gas on European terms.

Now, analysts have raised two major geopolitical risks that might result from natural gas exports. Some argue that the United States will be better off using its natural gas to replace oil in its transportation system. But the best way to make that happen is not to block exports. It is to create incentives that directly encourage the use of natural gas in our cars and trucks. Similarly, efforts to promote natural gas as a lower carbon substitute for coal in power plants, while important, would be far better pursued through direct incentives to electric utilities rather than through export restrictions.

Others warn that allowing exports would link the price of U.S. natural gas to volatile world markets. Such an outcome is unlikely, though not impossible. U.S. natural gas prices will remain well below overseas ones due to the high cost of liquefying and transporting the fuel, and in addition, as long as U.S. export facilities are fully utilized, fluctuations in overseas prices will not influence the price of natural gas within the United States.

Despite the geopolitical and macroeconomic benefits of allowing exports, there remains substantial domestic opposition on other grounds. Congress would be wise to address opponents' legitimate concerns in order to maximize the odds that the country will capture the benefits of allowing exports.

Two areas are critical here: First, while the impact of exports on U.S. natural gas prices would likely be small, it could still be significant for low-income consumers. Congress can help address this by ensuring that the Low Income Home Energy Assistance Program, or LIHEAP, is fully funded.

Second, natural gas exports would boost U.S. gas production. That would be good news for the economy, but it would increase environmental risks. The prospect of exports makes it all the more important that Congress makes sure that strong rules are in place to ensure that shale gas development is done safely.

Members of the subcommittee, I thank you for the chance to speak with you today and look forward to answering any questions you have.

Mr. Poe. Thank you, Dr. Levi.

[The prepared statement of Mr. Levi follows:]

Mr. Poe. Mr. Mallino, you have 5 minutes.

STATEMENT OF MR. DAVID MALLINO JR., LEGISLATIVE DIRECTOR,
LABORERS INTERNATIONAL UNION OF NORTH AMERICA.

Mr. Mallino. Thank you, Mr. Chairman. I am going to beg your indulgences for my loss of a voice. Washington, DC, pollen, and a loud, raucous rally yesterday in support of the Keystone XL Pipeline has left me a little bit wounded so I apologize, but I am going to croak through this as best I can.

Mr. Chairman, on behalf of the 500,000 members of the Labors International Union of North America, I would like to thank you and Ranking Member Sherman and the members of the subcommittee for allowing us to testify today. As you know, too many Americans are out of work. Within the construction industry, the unemployment rate reached over 27 percent in 2010, and joblessness in the sector still remains far higher than any other industry with over 1 million construction workers currently unemployed in the United States.

However, one bright spot for LIUNA members has been the growth in work hours associated with natural gas pipeline construction. As you know, the production of North America's natural gas supply has increased dramatically in recent years through the development of shale gas reserves, which is largely the result of the development of hydraulic fracturing for the extraction of natural gas. The development of these domestic reserves of natural gas has dramatically increased work opportunities for our members, and the continued development of these resources will not only lead to job creation and expanded economic opportunities for America's workers, but will also help put the United States on a path toward energy independence.

Affordable domestic natural gas supplies have the potential to be an economic game changer across many sectors of the economy. However, in order to realize the full economic benefits of the expanded U.S. gas resources, the industry must be able to find a price for its product that makes continued development profitable.

In 2012, LIUNA members worked over 11 million hours on pipeline projects under the National Pipeline Agreement, and we are just one of four crafts that are signatories to that agreement. America workers need the access to the good paying jobs, family-sustaining wages, and the kind of jobs that the oil and natural gas sector provide. In addition to the drilling operations to recover the gas, there is extensive pipeline and compressor station infrastructure required to move the gas to facilities for processing or export.

Often, in an attempt to kill new domestic energy sources, the enemies of job creation call these jobs dangerous and dirty. The fact of the matter is, construction is, in fact, a dangerous occupation, but when performed by trained workers it can be less dangerous. It is also less environmentally damaging when done by properly trained construction workers.

Opponents of the industry also try to disparage these jobs by passing a value judgment that holds these jobs to be of lesser value because by its very nature, the construction project has a completion date and therefore, that individual job will come to an end at some point. They call these jobs temporary in order to diminish the importance, and they recruit others to join with them in a course of negativity in the mistaken belief that these jobs have no real value to society.

The report issued by the Energy Information Administration, the statistical arm of the U.S. Department of Energy, predicts that shale gas production will continue to increase, while expected natural gas consumption and the industry power generational sector is to increase significantly.

In order to find a price point that makes extraction of these tight gas reserves economically feasible, gas producers must be able to move natural gas to international markets. A number of LNG facilities' liquefied natural gas terminals have been proposed for construction, which will themselves be economic engines that will create good jobs and other benefits. These are large-scale projects that cost billions of dollars to build and employ thousands of workers for several years during the principal construction.

One of these proposed LNG export terminals, the Jordan Cove Energy Project in Coos Bay, Oregon, is expected to be built under a project labor agreement which will maximize the quality of the jobs for the construction trades on that project. This PLA will ensure that the workers on this massive project will possess the highest skills and best training while ensuring that the workers receive fair wages and working conditions.

This project is expected to provide millions of work hours for the buildings trade crafts and will invest approximately \$5.7 billion into the local economy. Natural gas development also produces needed government revenues at the Federal, State, and local levels. The Coos Bay Project is expected to generate \$20 million in revenue for local and State governments in the first 3 years of operation, and \$30 million to \$40 million a year thereafter. These resources can help our State and local governments protect their communities from harmful budget cuts that have led to layoffs and the elimination of much-needed services.

I will try to wrap up. I am sorry, guys. Responsible development of our natural gas resources is essential to the United States and is going to fully maximize the economic benefits of our oil and natural gas reserves. Best industry practices based on innovation and technology, combined with a highly-trained, skilled workforce represents an important step in addressing public concern. Through our affiliation with the Building Construction Trades Department of AFL-CIO, LIUNA is a partner of the Oil and Natural Gas Labor Management Committee. This joint business and labor committee has developed a set of principles that we believe companies engaged in the extraction

and transportation of natural gas and oil should adhere to. They are in my formal submitted record. I will not read them to you.

To be clear, LIUNA is also committed to helping advance policies that reduce our greenhouse gas emissions. We believe that an aggressive, science-based approach to emissions reduction is not only necessary from the perspective of achieving a sustainable environment, but that it will, in itself, be good for our economy and for working families. However, we reject the notion that natural gas resources should be abandoned or constrained as a path toward greater sustainability. We believe that responsible development of natural gas is essential for the future economic prosperity of the United States, and we will continue to advocate for policies that foster growth in this sector.

We look forward to working with the members of the committee and other policymakers who want to see our economy recover and produce American jobs that can foster middle-class families. Once again, the laborers thank you for this opportunity to testify before you today.

Mr. Poe. Thank you, Mr. Mallino.

[The prepared statement of Mr. Mallino follows:]

Mr. Poe. Mr. Ratner.

STATEMENT OF MR. MICHAEL RATNER, SPECIALIST IN ENERGY POLICY,
CONGRESSIONAL RESEARCH SERVICE

Mr. Ratner. Thank you, Chairman Poe, Ranking Member Sherman, and members of the subcommittee. My name is Michael Ratner, and I am a specialist in energy policy at the Congressional Research Service. CRS appreciates the opportunity to testify on the important issue of liquefied natural gas exports. Additionally, in accordance with our enabling statutes, CRS takes no position on any related legislation.

Prior to the advent of shale gas in 2007, the United States was viewed as a growing natural gas importer. Terminals were built in the 2000s to import LNG from overseas and prices were rising. The success of shale gas production has reversed these trends. Prices have come down since peaking in 2008, and the U.S. price for gas is lower than other regional markets. Natural gas imports are down and LNG imports terminals sit idle with many having applied for export permits. This brings us to where we are today, weighing the benefits and costs of LNG

exports. I will touch upon four components of the debate: Economic impacts, trade issues, environmental concerns, and the Department of Energy's approval process.

First, all else being equal, LNG exports should raise domestic prices because they increase total demand. However, whether LNG exports are good or bad for the economy in part depends on one's perspective. Most gas producers who have faced low domestic prices would like to export to expand their market and access higher international prices. Some large industrial consumers of natural gas argue that allowing exports will raise domestic prices and stifle the economic benefits of having a low-cost input.

For the Federal Government, LNG exports may or may not lead to a net increase in Federal revenue. Taxes paid by LNG exporters because of higher gas company profits could be offset by a decline in taxes paid by large consumers of natural gas because of higher domestic prices. Federal royalties would only increase if new natural gas production comes from Federal lands. Meanwhile, directly taxing exports raises constitutional issues. Natural gas is used for three primary purposes: Electricity generation, residential and commercial heating, and industrial processes. The specifics of each of these market segments will determine the effect of LNG exports. For example, the price of natural gas is just one component of the total cost of residential heating.

While LNG exports may raise gas prices, new supplies may reduce transit costs. In addition to current uses, there has been discussion of using natural gas as a transportation fuel. Although some progress is being made, it is more a long-term prospect because of the infrastructure and technological changes that would have to occur. Price is just one factor that companies and consumers would consider before investing in natural gas-fueled vehicles.

Second, the decision to permit or restrict LNG exports also raises trade considerations. As a member of the World Trade Organization, the United States could be subject to cases under the general agreement on tariffs' and trades' general prohibition against quantitative restraints if exports were limited. While certain exemptions from this prohibition may apply, export restrictions may put the United States in a contradictory position vis-a-vis cases that it has brought to the WTO.

Third, as shale gas came to market, it was hailed as a way to reduce emissions from dirtier fossil fuels, but environmental concerns were also raised, primarily because of the industry process known as hydraulic fracturing or fracking. Environmental groups against exports assert that additional production from shale for export implies more fracking.

Finally, to deny an LNG permit to non-Free Trade Agreement countries, DOE must determine that exports would not be in the public interest. To make its determination, DOE evaluates many factors: Domestic need, previously approved capacity, adequacy of supply, the environment, geopolitics, and energy security, among other things.

DOE commissioned two studies as part of its evaluation. One by the Energy Information Administration on price effects, and one by NERA Economic Consulting on macroeconomic impacts of LNG

exports. Both studies have received praise and criticism by various stakeholders. For example, EIA scenarios were viewed as unrealistic because of the high volumes considered, but those are now well below the level of export applications. NERA's use of data from EIA's 2011 Annual Energy Outlook was considered dated. The data did not include potential domestic industrial demand, nor did it include recent improvements in shale gas extraction. However, EIA bases its projections on existing policy, technology, and data, not possible changes in any of these.

Despite recent testimony, DOE has not laid out a clear timetable for approving pending permits, nor how it weighs each input in its decision. Some stakeholders have faulted DOE for a lack of transparency.

Thank you for the opportunity to appear before the committee. I would be happy to address any questions you may have.

Mr. Poe. Thank you, Mr. Ratner.

[The prepared statement of Mr. Ratner follows:]

Mr. Poe. I want to start the 5-minute questioning by each member. I will start with Mr. Bryngelson. How many jobs will the Lavaca Project create?

Mr. Bryngelson. During construction, it is approximately 2,500, and in long-term operation, Phase I would be about 200. Phase II would double that to about 400.

Mr. Poe. How long have you been waiting for the Department of Energy approval?

Mr. Bryngelson. We filed in October of last year.

Mr. Poe. When do you expect a decision? Do you know?

Mr. Bryngelson. We don't know. We are hopeful soon, but a lot of the project is depending on that at this point. We have no clear idea.

Mr. Poe. How much does it cost you a day or a month while you wait for that permit?

Mr. Bryngelson. Well, right now, we are moving through the permitting process, so it is not impacting our costs specifically. What is impacting us is our ability to secure customers, and that could jeopardize the whole project.

Mr. Poe. What does that mean?

Mr. Bryngelson. That means if we can't sign up non-free trade customers, we don't have customers. We don't have a project. And every day that goes by it is harder and harder to keep just the baseline spend to get permitting, which over the next year is approximately \$10 million.

Mr. Poe. Let me ask you this, and all of the members of the

panel will weigh in, why does the permitting process take so long to get approved by the Department of Energy? How come it takes so long?

Mr. Bryngelson. I wish I had an answer to that question, sir.

Mr. Poe. You don't know. Dr. Montgomery? You are the expert. Do you know?

Mr. Montgomery. No, I don't know what DOE is doing.

Mr. Poe. Dr. Levi?

Mr. Levi. I trust that because this is such a new area, this country has changed from being very much a consumer into also a major energy producer, that it is taking time to analyze the cost and benefits and ins and outs, just like this committee is. But I agree that time does matter, and that there is a limited market, and different companies around the world are trying to do contracts, particularly with key buyers in Korea and Japan, and so the timing of our approvals will have consequences.

Mr. Poe. How long does it take normally to get a DOE approval for a permit?

Mr. Levi. We don't know because we have had only one experience.

Mr. Poe. And that took how long?

Mr. Levi. Anyone else know?

Mr. Poe. No one knows. Mr. Ratner, do you know?

Mr. Ratner. I would say probably about a year or so. I can't remember exactly when Cheniere applied for it. But one thing I would also add that I find interesting, I mean, everybody, for good reason, is focusing on the DOE process, but the FERC process, which also takes over a year to 2 years, people aren't complaining about in part because they know the FERC process. You know, Excelerate knows what it needs to do to apply to FERC in order to move that application along.

Mr. Poe. Can do both processes move together, or does DOE have to finish theirs before FERC starts?

Mr. Ratner. They can move together.

Mr. Poe. All right. Let me ask you this, Dr. Levi. When I was in India, I talked to the foreign minister. The only thing they wanted to talk about was getting natural gas from the United States to India. They made it really simple for me; the cost of their production and transportation in India is higher than for us to produce it in the United States, transport it, make a profit, and they still get a good deal in India.

And the question was, why aren't we exporting natural gas to India? Can you help me out with that a little bit?

Mr. Levi. Well, it will take time to build terminals and export to India, but the way you describe the economics is correct. Natural gas production in India is expensive. There are barriers to production, and so there will be incentives to export natural gas to India. It would help them reduce emissions relative to building more coal-fired capacity. That said, it is not clear to me that it will be an alternative to other sources of natural gas. India has rapidly-growing demand for energy, and it will probably try to bring in resources from wherever it can.

But there is no doubt that the more we are engaged in a positive way with them on natural gas, the more influence we

will have on the other decisions they make.

Mr. Poe. Politically, for the United States, wouldn't it help the relationship to have India look to the United States instead of look to China, or Pakistan, or somewhere else, even Russia for natural gas? Would this help us politically with this nation?

Mr. Levi. There is no doubt that being open to natural gas exports to India would help the United States politically. There is a long history in the U.S.-India relationship, as least as the Indians see it, of the United States interfering with free trade to India's detriment, and this goes back a long way in the Indian political memory.

So when we talk about trade restrictions on a commodity that India cares about, this isn't just an isolated issue, it speaks to a broader set of concerns and a broader set of trust issues with the United States. So certainly allowing those exports would help. Of course, whether natural gas went from the United States to India would be the decision of private companies based on where they thought the contracts were most attractive.

Mr. Poe. I understand there was a contract signed today with India and a Houston-based company for a 20-year contract and there is also a contract with a Maryland corporation for the same thing.

Last question. Mr. Ratner, if you could answer really quick. The WTO, we have got them sitting over here. Is the United States going to be in court if we don't fix this problem with the WTO?

Mr. Ratner. Very possibly. It will depend upon, you know, some of the countries that we discussed. I mean, the odds of Japan suing us in international court is possible, but how likely it would be, you know, remains to be seen.

Mr. Poe. I hope the Department of Energy knows that that is a possibility as well. I now will yield 5 minutes to the ranking member, Mr. Sherman from California, who is also the timekeeper.

Mr. Sherman. Of three major fossil fuels, the one that is most versatile is petroleum because you can move it from one continent to another rather cheaply. We export coal, India and China don't really care very much about whether they create twice as much carbon for every kilowatt they generate.

Mr. Ratner, why are you even talking about exporting natural gas to China and India when instead, they could purchase our coal? That has to relate to the cost of shipping. Can you provide some estimates as to what it costs to export an MCF of natural gas, that means liquefy it and move it across oceans, versus what it costs to move coal that would have the same number of BTUs? And if you don't know, just answer for the record.

Mr. Ratner. I am not sure of the cost of shipping coal. I know relative to gas, it is a lot cheaper and a lot easier than liquefying gas and putting it on a cryogenic tanker which, I mean, some of the numbers I have seen to liquefy is about \$3 per thousand cubic feet, and to ship it to Asia would be about \$2, or \$2.50.

Mr. Sherman. So maybe \$6 per MCF. I have no idea. You know, coal is heavy. It is not as dense in its energy so I have no

idea what it would cost, but I know CRS is great at research and I know you will get an answer for the record.

[Material submitted to the subcommittee by Mr. Ratner after the hearing follows:]

Mr. Sherman. We have heard from both Dr. Levi and Dr. Montgomery about economic theories. I will just point out first that while the economic theory is that free trade works perfectly, and will enhance everybody, no one has been able to explain why we have a \$600 billion trade deficit. It is theoretically impossible, and economists are in the same position as those aerospace engineers who said we have got a great theory, but we can't explain how a bumblebee can fly. There is nothing the matter with the bumblebee. And the fact is that we do have a huge trade deficit.

The other thing I will point out to Dr. Levi is, you said okay, if we want to adjust for this, we could provide more funding for low-income consumers, and we could provide incentives, which would mean subsidies for natural gas vehicles. We don't have any money. So if we want both vehicles and low-income consumers to get cheap natural gas, we are going to have to keep natural gas cheap. The other way to do it from an economic perspective would be to provide an incentive for natural gas vehicles by taxing gasoline. And I see you nodding because you are an economist. If you were a political consultant, you would not be nodding.

Mr. Mallino, you talk about jobs, but what we really need are good jobs at good wages. You are looking at certain applications that have been filed. They are just the tip of the iceberg if we open this. With the ones that you are focused on, you have got project labor agreements or expect them, so those will be good jobs.

Mr. Mallino. Correct.

Mr. Sherman. But the vast majority of the focus on where to build these facilities, they are all in Right to Work States with the exception of Oregon. Can you give us an idea of what, you know, what right to work, or what I call right to work for less will mean in terms of the wages and working conditions of those who work on these projects?

Mr. Mallino. As you know, Congressman, sometimes we also refer to it as a so-called right to work because it is everything except for an actual right to work. Right to Work States generally have, and I will have to look up the specific number, but generally have a wage and benefits scale about 30 percent less than those States that are not Right to Work States. And I will get the specific numbers for you. But there have been a number of very good studies that show that in Right to Work States workers have a much lower standard of living, and wage and benefit package. We like to believe that there should be a right to prosperity, not just a right to work.

Mr. Sherman. Or at least a right to organize according to the U.N. Declaration of Human Rights.

Mr. Mallino. Right.

Mr. Sherman. Finally, I will point out, because my time is

nearly expired, that I don't think congressional action just opening this will pass by itself through the Senate, but if we marry any legislative fix to this to nationwide standards for fracking, designed to assure environmental safety, it is much more likely to pass.

I would have said also, perhaps, some revenue from an export tax, but unfortunately, the Constitution was written at a time when we were worried about the export of cotton and corn and seems to have prohibited that. I will go back to my office and try to find a loophole in what Mr. Ratner points out to be in the U.S. Constitution--not loophole, provision applicable to these modern circumstances, and I yield back.

Mr. Poe. Well said.

Mr. Levi. Can I briefly address the question of cars and trucks because I think it is important.

Mr. Poe. Okay.

Mr. Levi. Prohibiting exports and creating new incentives to get natural gas for our cars and trucks aren't alternative options for achieving the same goal. Prohibiting exports would not get a lot of natural gas into our cars and trucks. And we do have ways of encouraging natural gas use that don't require new spending on the part of government. We are already encouraging it through new corporate average fuel economy standards. We could further encourage it by modifying the advanced biofuel part of the Renewable Fuel Standard which is not being met and is repeatedly waived each year in a way that encourages the use of gas to liquid fuels.

So there are creative ways to do this without incurring additional debt or having everyone lose their congressional seats by trying to pass a gasoline tax.

Mr. Montgomery. Could I also respond, I think, to a question that was addressed to me? I think there is a general consensus among economists that we understand exactly where the trade deficit comes from. It is the observation of the twin deficits, which I, unfortunately, remember going all the way back to the 1980s and colleagues at Brookings explaining it to me, simply meant that the trade deficit comes from our huge budget deficits, that when the government borrows, the borrowing leads to a differential between what we are importing and what we are exporting.

Mr. Sherman. Let me just note for the record, when we had a budget surplus in the latter years of the Clinton administration we had a huge trade deficit, and Japan runs a much larger national deficit than we do and they have a huge trade surplus. Once again the bumblebee is flying, but the theory doesn't work.

I yield back.

Mr. Poe. I thank the ranking member. Just to follow up on the question to Mr. Mallino, in Texas until recently, until Mr. Weber took over some of my congressional area, I represented all the energy industry down in southeast Texas. My understanding is in the energy industry and Right to Work States you have a lot of union workers and you also have nonunion workers.

Mr. Mallino. We do.

Mr. Poe. I would ask Mr. Ratner, can you find out the percentage of union and nonunion workers in the energy industry