

THE BROOKINGS INSTITUTION

THE FUTURE OF ENERGY TRADE:  
A CONVERSATION WITH SENATOR LISA MURKOWSKI

Washington, D.C.

Tuesday, January 7, 2014

**Featured Speaker:**

THE HONORABLE LISA MURKOWSKI (R-AK)  
Ranking Member, Energy and Natural Resources Committee  
U.S. Senate

**Introduction:**

WILLIAM ANTHOLIS  
Managing Director  
The Brookings Institution

**Moderator:**

CHARLES EBINGER  
Senior Fellow and Director, Energy Security Initiative  
The Brookings Institution

\* \* \* \* \*

## P R O C E E D I N G S

MR. ANTHOLIS: Welcome, everyone, to Brookings. I'm Bill Antholis. I'm the managing director here and we're delighted that we're joined today by Senator Murkowski.

One of my favorite Johnny Cash songs growing up was called "Springtime in Alaska." And if you remember the chorus, he sings, "When it's springtime in Alaska, it's 40 below." And by that standard it's downright balmy outside here in Washington, D.C. We're delighted that Senator Murkowski is here today. We wanted to make her feel at home, so we dialed up some summer weather for her, and I'm sure she's wondering what the big deal is all about.

As most of you all know, the senator is the top Republican on the Senate Energy Committee. From the largest state in the nation, nearly as big a territory as the U.S. west of the Mississippi, she thinks in large terms about issues like energy, in particular energy, and she has a big track record on this issue. So today, we're here to discuss the implications on the domestic economy, on our national security, and our energy security. And with the polar vortex being all the rage, we've almost forgotten about the polarization that often chills Washington. And in that sense, Senator Murkowski is a particularly important voice because of her ability to work across party lines.

She's the only Republican senator from a West Coast state and only one of three U.S. senators ever elected by write-in ballot, which means she speaks to a nonpartisan groundswell of support for pragmatism. Senator Murkowski has exhibited the independence of mind that we hope makes her feel warm here at Brookings today on a cold day.

She's been a consistent supporter of sensible, pragmatic energy policy,

and that means taking a stand against subsidies for oil and gas companies when warranted, but also for the right kinds of investment in infrastructure and policies that connect us to the wider world. She understands the vital role of energy in our economy, not just oil production in Alaska, but, increasingly, natural gas and renewable production across the country. She's been a support of oil production and exploration in Alaska, of course, but also Outer Continental Shelf oil and gas leasing, horizontal drilling into the coastal plain, and developing technologies for renewable energies and carbon sequestration.

She understands that this takes place in a global context. Alaska, of course, not only borders Canada to its east, but, as Sarah Palin reminded us, Russia to its west. And she is focused on the role energy exports can play, both the potential economic benefit as well as the impact on energy prices, production, and the broader economy back at home. Secretary of Energy Ernie Moniz has said these issues are all worth reexamining, so we're really delighted that Senator Murkowski is here to have a conversation with us about these topics today.

As Americans consume less oil, but produce more of it, it's a good time to revisit energy policy. But energy, of course, is not just about how we get and use fuel. It's also about what happens when we use it, including the environmental consequences. And in that sense, again, Senator Murkowski is a terrific guest for us.

She's one of the few Senate Republicans who has argued that we need to take climate change seriously. And on a day when many of us are wishing for a little bit more climate change and warming around here, we also look ahead to a coming January weekend, this coming weekend, where temperatures are predicted to be back in the 60s. Understanding that the science is real, but also emerging and evolving, the senator has supported energy efficiency legislation and a greater understanding of the

need to adapt to a warmer world. Actually beforehand we were talking about the fact that one of her favorite ski resorts near Anchorage is starting to lose its base at the bottom because it's been too warm out there. We'd be happy to trade places with them today, I'm sure.

At the same time, she's also focused on making sure the climate and energy efforts do not burden middle class families unduly. And she has been firm in asking other countries, such as India and China, to take a similar stand when dealing with carbon emissions.

There are opportunities for rethinking energy trade, which will be a focus of today's conversation, and we all look forward to hearing from Senator Murkowski on how our country will answer these important questions about the changing global energy landscape.

So with that, we're delighted to have Senator Murkowski. (Applause)

SENATOR MURKOWSKI: Bill, thank you for the introduction. For those of you that may be standing in the back, there are some seats up front. This is not like church. And I'm not going to ask you the questions; you'll have an opportunity to ask me after that.

I am pleased to see so many of you here this morning; very grateful to the Brookings Institution for the opportunity to be here today on a good, brisk Washington morning. I'm not going to comment on the weather other than to say we'll take that polar vortex back. We like it cold. We want to keep it that way. And if you don't like it, send it on back north where, quite honestly, it belongs.

I'd like to go straight to the heart of the matter that I wish to discuss with you today. And this is where we are as a nation when it comes to our energy production. According to the Energy Information Administration, last July saw U.S. domestic energy

production reach over 7 quadrillion BTU. This is the highest monthly total on record. Let me repeat that. We are producing more energy today than ever before in this country. And this dramatic increase in production from all sources of energy has resulted in a dramatic sea change in our nation's energy trade. In the process, we're creating jobs, we're lowering prices, we're reducing our trade deficit.

Think about where we are right now. We are selling coal to the Netherlands, Morocco, and Germany; distillate fuel to France, Chile, and Argentina; petroleum coke to Turkey and China; gasoline to Colombia, Brazil, and Panama; jet fuel to Britain, Israel, and Nigeria; natural gas to Canada and Mexico; and natural gas liquids to Switzerland, Honduras, and Aruba. And I could go on. I know that you probably know these facts well and I didn't come here today to simply recite facts. I'm here because as good as this story is, these developments have transpired in spite of the federal government, not because of it, as the President frequently seems to imply.

The rules of engagement on energy trade, quite honestly, were written long ago for a now-bygone world in which scarcity, not abundance, were the prevailing mindset. A hodgepodge of regulations has accumulated over the better part of a century, kind of like barnacles on the hull of a ship. So let me briefly sketch out the maze that we're dealing with here.

The State Department reviews cross-border oil pipelines, such as Keystone XL, but petroleum products -- crude oil and condensate -- fall under the Commerce Department. The Energy Department grants export licenses for natural gas, but then the Commerce Department permits exports of natural gas liquids and the FERC -- the Federal Energy Regulatory Commission -- regulates cross-border natural gas pipelines. Coal and renewable energy products flow with ease to our trading partners while nuclear exports are tightly regulated, as they should be. Even many professionals

in the energy sector are unaware of the role federal trade promotion agencies play within this area. For instance, the Export-Import Bank, the Overseas Private Investment Corporation, and the Trade and Development Agency, and other entities, all advances the U.S. energy trade. In legal terms what we're talking about are laws such as the Natural Gas Act of 1938, the Atomic Energy Act of 1954, the Energy Policy and Conservation Act of 1975, and then Executive Orders that stretch all the way back to the Eisenhower administration.

At a recent workshop at the Center for Strategic and International Studies it encouraged participants to think about the regulation of energy exports in terms of the underlying chemistry. The chemical formulation for methane is CH<sub>4</sub>. So you've got one carbon atom and four hydrogen atoms. This natural gas can be sold to Canada and Mexico through a pipeline without much of a regulatory hurdle. But if you want to build a facility that liquefies gas for seaborne transport to Japan, then you need a license from the Energy Department to export it and another approval from the FERC to build your facility. That process, we know, can take years.

If you're absolutely determined to build an LNG facility, you're pretty much in luck. Go to Australia and get involved with one of the liquefaction projects that our federal government is helping to finance over there.

On the other hand, if you take a methane molecule and you attach two carbon atoms and four more hydrogen atoms, giving you C<sub>3</sub>H<sub>8</sub>, also known as propane, then the Commerce Department will grant you an export license without much of a delay at all. But you don't want to fiddle with the formula too much or you might end up with a barrel of crude oil, the export of which is generally prohibited unless, of course, you can process it through a refinery, in which case you can export it as diesel. You can also ship the crude to Canada, where apparently the laws of chemistry don't apply.

The regulatory edifice that governs the export of American-made energy is antiquated and at times I would suggest even absurd. And while there is not perfection under the sun, we surely can do better than this.

Today, I'm releasing a whitepaper. This is a second that I have released. It's called "A Signal to the World: Renovating the Architecture of U.S. Energy Exports." And it follows on the *Energy 20/20* blueprint and the LNG whitepaper that I released last year. It was just about this time last year that I had the opportunity to release *Energy 20/20*. We have since done one whitepaper. This is now the second whitepaper and there will be a third coming out soon.

But I have two goals with this particular paper. And the first is to highlight the facts. Consensus about the facts is the basis for productive dialogue. And my second goal is to help frame a conversation about the state of U.S. energy exports, the architecture of the energy trade. And although certain aspects of the energy export stories have been in the public eye for quite some time now, I'm not aware, quite honestly, of another report that really shows the full picture through a single lens. And alongside this paper I'm releasing a number of reports from the nonpartisan Congressional Research Service. They contain a great deal of information, some of which is not generally available, about various aspects of the U.S. energy trade. The facts tell me that we must modernize the regulations that govern energy exports, demonstrating to the world that we are committed, committed to leading on issues of energy, the environment, and trade.

Now, I am not proposing comprehensive energy export legislation. I believe that the Executive Branch has the statutory authority to implement most of these ideas on its own. And if the President does need help from the Legislative Branch he will always have an open partner in me on the Energy Committee. I'm willing to introduce

small targeted bills to move the ball forward as needed, but I do want to today advance several key principles here, and they're threefold. To assess, again, this energy architecture that we're talking about here, particularly where we have seen exports banned. The second principle is really to do no harm where the regulations that we have in place are working. And the third principle is to look to efficiencies within our regulatory framework and see if we can't work to do better.

So first, there are parts of this antiquated architecture where exports are effectively banned. And I think we should think carefully about the conditions in which those bans were put into effect and consider whether or not they still serve the public interest, if they ever did. Two energy sources in this area, of course, come to mind and that's crude oil and condensate. I raised the prospect of crude oil exports this past summer at EIA's annual conference. And at the time, I said that the debate could come sooner than expected, and here we are today.

The basics are pretty simple. The shale plays in the Bakken and the Eagle Ford are yielding so-called LTO, or light tight oil. Our refining capacity is concentrated in the Gulf Coast and is geared primarily towards heavier grades of crude. Now, as many analysts have pointed out at the EIA, at IHS Global, and elsewhere, various mechanisms exist for moving LTO out into the market. It can be shipped to lighter grade refineries on the East Coast, for example, or blended with heavier grades. It can be shipped to Canada. Refineries, of course, can also be modified to accommodate lighter grades.

With minimal exceptions, the export of crude oil is prohibited by law. It's my understanding that right now we're exporting about 65,000 barrels per day to Canada, but that's essentially it. There will come a time, however, when we will have an unsustainable glut of this light crude. It may be next year. It may be sooner than that. It

may be a matter of months. The free market works wonders, but it can't work magic here.

Now, condensate is a byproduct of oil and gas production. These hydrocarbons are extremely light oil and come out of plays like the Eagle Ford. They can be refined and exported as natural gas liquids, but, otherwise, trade is prohibited.

Most commentators assume that Congress and the administration will be slow to address these issues. Opponents of oil exports will, of course, raise the specter of rising gasoline prices, I think to scare off elected officials.

Now, as many of you here in this room, I've spent at least a good several months thinking about this export issue, but the point of deliberation is eventually to arrive at an answer. Hung juries may be the default here in Washington, but they don't sell well in Alaska. So I am calling for ending the prohibition on crude oil and condensate exports. The current system is inefficient and may lead to supply disruptions that we can ill afford. Lifting the ban will send a strong signal to the energy markets that as a nation we're serious -- we are serious as a country -- about our emerging role as a major hydrocarbon producer.

Now, I believe that the administration retains enough statutory authority to lift the ban on its own. Although the President has the authority to declare it in the national interest to lift the ban, another path is for the Department of Commerce to approve an application for export of crude oil or condensate under a provision in the law permitting the applicant -- or permitting the application if it can be demonstrated that those fuels cannot reasonably be marketed here in the United States. A mismatch then in our nation's refining capacity has already emerged and common sense suggests that the mismatch should meet these qualifications. Now, if the administration is unwilling to act on its own or if that statutory authority needs further modification, I'm prepared to

introduce legislation to modernize the laws.

Now, opponents of trade will be quick to assert, too often without citing any evidence, that exports of crude oil will raise gasoline prices for American consumers. This claim is wrong, but it must be dealt with immediately and it must be dealt with head on. I've said repeatedly and I firmly mean it that the goal must be to make energy more affordable. If we want to bring down gasoline prices, then we should be opening up federal lands to energy production, not closing them off. And I can think of a few places in Alaska that could be opened up immediately for new oil production, which would help to lower gasoline prices.

Small but rising amounts of crude are already being exported to Canada, as I noted. It's permitted by statute. But we've seen no crisis in gasoline prices here at home as a consequence of that. Modernizing the export architecture would reduce volatility by making world energy markets more efficient. We don't see a looming run on the crude oil bank out there. Lifting the prohibition on crude oil exports will serve to increase domestic oil production and the entry of this oil onto the global markets will put downward pressure on international prices. And all things equal, this combination will help the American consumer.

I want to be abundantly clear here this morning. The status quo, in my view, is not beneficial to the American people. I believe that we need to act before the crude oil export ban causes problems in the U.S. oil production, which will raise prices and, therefore, hurt American jobs.

Now, the second principle that I mentioned is doing no harm. It is important that we do no harm. These are the areas where regulatory review is already effectively streamlined. Thus far coal exports appear to be keeping pace in world markets and although efforts to forestall this expansion in trade must be opposed, I also

see no problem with the regulatory structures surrounding renewables, natural gas liquids, and petroleum products. The Commerce Department already covers those and, I believe, is doing a commendable job.

And then the third principle, we should be looking for efficiencies in areas where existing regulations could be more effectively implemented. So whether the State Department is the appropriate agency in which to vest authority for cross-border oil pipelines is certainly a fair question to ask. The course of its review of the Keystone XL has been counterproductive and, frankly, I think it has unduly strained our relationship with Canada.

The Department of Energy's slow walking of LNG export licenses is another area that I think is worthy of examination. Secretary Moniz appears to have quickened the pace of approvals, which I appreciate, but the queue is still quite full. Licenses still take far too long to review, especially when, as appropriate, the project still must go through a rigorous safety review at the FERC.

The U.S. has long been a leader in the nuclear technology trade, and I'm particularly excited about small modular reactors which have received a great deal of attention in terms of research and development. Current designs can provide strong nuclear safeguards and maintain our commitment to international security.

So renovating our export architecture will strengthen our global posture and send a strong signal to the world that must be heard. Already you have policymakers in Riyadh who speak of the Bakken and the Eagle Ford. In Tokyo and New Delhi, they watch the Marcellus and the Permian. In Budapest and Moscow, they wonder about the potential within the Utica and the Monterey.

It's hard to put a price on that. Inaction, though, also has a cost. Failing to renovate the crude oil export architecture could very well lead to disruptions in supply

and production. Ultimately, we can only have this conversation because of our energy resurgence, an opportunity, an opportunity born of technological prowess and true American grit. American-made energy is the safest and most environmentally responsible energy on Earth. And if any nation is exporting energy to the world, bringing electricity to those without power, heat to those in the cold, the United States then should be that leader.

With that, I thank you for the opportunity to present my thoughts with you, to share my new whitepaper on the energy architecture. Happy to take questions about where we may go from here. Thank you very much. (Applause)

MR. ANTHOLIS: Thank you, Senator Murkowski. That was a terrific and provocative set of comments and recommendations. The whitepaper, which I had a chance to look at last night, is really quite an important piece of work. It covers a wide range of sectors as did your remarks.

I want to introduce Charlie Ebinger. Charles Ebinger is a senior fellow at Brookings and the head of our Energy Security Initiative and our Foreign Policy Program. And Charlie will ask a question and I'll get one myself, and then we'll turn it over to the audience for further Q&A.

MR. EBINGER: Thank you, Bill, and thank you, Senator Murkowski for, I think, one of the most important speeches certainly I've heard in Washington in a long time. I think the complexities of the regulatory process that you outlined are probably not known even to everyone in this room and certainly maybe not to all your fellow members on Capitol Hill. I think you've done a great service by doing this.

And I'd also like to recognize Tristan Abbey on your staff, who coordinated very closely with my own staff in putting this event together. I think a lot of hard work went into making this happen.

Let me begin by asking perhaps an unfair question because, as you know, each energy source is different and probably requires different regulatory processes. But would you see any merit in the whole gambit of federal regulations governing the approval of various export projects for putting a reasonable timeframe on the regulatory process by which the respective federal agencies would have to come up with a yes or no answer rather than this great limbo we sometimes see, as we've seen, for example, on Keystone?

SENATOR MURKOWSKI: I think it's one of those areas that we can look to for a possible solution to the delay, the impasse, the lack of certainty that you have within an industry. And I think one of the things that we recognize back here in Washington, D.C., is when we don't have certainty within our policies it costs dollars, it costs jobs, it costs us when it comes to our competitiveness. So when we think about ways that we can improve the regulatory process, reasonable timelines, to me, are one area that we can and should be looking to.

Now, you have recognized that there may be situations where you have to extend it out, that you have to do a bypass, if you will. But right now, for instance, within the approval process for LNG export license, there's no certainty whatsoever out there. It could be one month, it could be two months, it could two years, it could be never. And, in the meantime, you have investors that are waiting, you have those who are seeking these jobs, you have those that are looking for the product to purchase, but no certainty within our process. So I think it's one of those areas that we should look to, to provide a little more certainty.

MR. EBINGER: Thank you. Bill?

MR. ANTHOLIS: I was struck in your remarks how you both took a step back from calling for a comprehensive piece of legislation just on the exports piece and

really calling for executive action in some of these regards and it makes me wonder how you see the broader political landscape. It suggests a sense of caution and not high expectations for what can get accomplished 18 blocks east of here.

SENATOR MURKOWSKI: Well, I would just remind you that we are on Tuesday of the first workday back in January of 2014, which, shall I tell you, let the races begin.

MR. ANTHOLIS: Right.

SENATOR MURKOWSKI: We are already into full campaign season in terms of the 113th Congress, and when that happens it's just more difficult to advance legislation. And not only move it through one body, but move it through both and bet it signed by the President. So I'm trying to be practical about where we are.

And as we have looked at this issue, well, I have suggested in my comments that I am prepared to introduce legislation if necessary. I am not certain that it is absolutely necessary. I do believe that the authority currently resides with the Executive Branch, that they can make these actions in the national best interest, within the Department of Commerce. But it takes initiative by the Executive to do just that. So if they need some encouragement, I'm happy to provide that.

But I do think it's also fair to recognize that some of the acts that I noted in my comments have been around since the '30s, the '50s, the most recent is, you know, the mid-'70s. So, in fairness, it is appropriate to review these, to see if they are as current as they need to be. My suggestion is that they're not. So maybe we approach it on two fronts. Maybe we advance legislation that will allow for a modernization while encouraging the administration to act on its own with the authorities that they currently have.

MR. EBINGER: Okay, ladies and gentlemen, the floor is open. We ask

that you identify yourself when you ask a question and please ask a question.

We'll go here. And please speak up because this room has terrible acoustics.

MR. TUBMAN: All right. Good morning. Michael Tubman with the Center for Climate and Energy Solutions.

In the natural gas export discussion, there's been a balance between the desire to export natural gas and also the benefits of using more natural gas at home to increase manufacturing and increase crackers, et cetera. I'm wondering in the crude export debate what are your views on the balance between exporting more crude and perhaps increasing refining capacity in the United States, taking advantage of some of that increased capacity to export more value-added products?

SENATOR MURKOWSKI: Michael, thank you for the question. I do think that we can do more to increase refining capacity. We have seen those adjustments, if you will, or reconfiguration within many of our refineries to accommodate to the LTO, the light tight oil. But I do think we get to a point where it is this mismatch that I've talked about. We're not able to gain alignment because we cannot continue with the retrofit of those refineries. We've got to be honest in terms of our ability to bring any new refineries online. You know, the last time we had a refinery built in this country was decades ago, so I think we've got to be cognizant of that.

In terms of doing more to build out those value-added products for exports, we've certainly seen that here in this country. And it got the attention of many in this country who didn't understand how much we actually export in terms of those value-added products.

So when I'm talking about the ability to export our crude, I think it's important to recognize that when we're talking about an all-of-the-above energy policy, I'd

like to see it relate to all forms of our energy products, whether it comes from crude oil, from natural gas, from renewables, the refined products that we are able to do. Let's allow for a level of trade that is full and across the board.

Can we be doing more to create the jobs here in this country through our refining capacity and advancing value-added products? Yes. But will we be able to do even more as we increase production domestically, increase the opportunity for jobs, work to address our trade imbalance? This is where I think we have opportunities with the export of our crude.

MR. EBINGER: Kevin?

MR. MASSY: Yes, thank you. Kevin Massy with Statoil, a company that has production in the Bakken and the Eagle Ford, so this is an issue of great interest to us.

My question's about the whitepaper and the extent to which it was produced in coordination with input from other members of the committee. And if not, what reaction have you gotten from other members of the Energy and Natural Resources Committee? Do you get a sense that there is a sense of consensus around this issue or that you're aligned with other members?

SENATOR MURKOWSKI: As with my *Energy 20/20*, which I advanced last year, that was the work of my Energy Committee staff working -- we worked with committee members in terms of where are your priorities. But in terms of actually putting pen to paper, that was the work of a pretty strong team on our Energy Committee.

The whitepaper that is being released this morning will be shared with not only all members on the Energy Committee, but I want all of my colleagues within the Senate to have a copy of what I feel is a pretty important document, really kind of shining a spotlight in a very readable format -- 20 pages -- to bring them current. So I can't give

you the reaction from my other colleagues. I would ask you to ask them in a few days after they've had an opportunity to review it.

MR. EBINGER: David, did you have a question? Oh, I'm sorry, behind you. Yes?

MR. WINGFIELD: Hi, Senator. Brian Wingfield with Bloomberg news. This is kind of a follow on the first question you were asked. Are you giving the administration a deadline to act? And at what point would you introduce legislation this year?

SENATOR MURKOWSKI: I'm not going to suggest that by July 1, if we haven't seen something, then I'm going to advance one thing or another. What I would certainly hope is that with this discussion that I think really kicks off today, the administration will start looking critically, although I believe that they already have started to look more closely at this issue and that's certainly evidenced by Secretary Moniz' comments last month about the need to review some of our policies as they relate to export of oil. So in terms of a deadline to the administration I'm not prepared to do that.

But I am very concerned about the signals that we may be seeing in the not-too-distant future here. As I suggested, we might see this mismatch become more apparent in six months. It may be sooner than that. But I don't want us to be sitting around and waiting until such time as things really do get out of balance because then it's more difficult to jump in and make those adjustments. I think we need to be looking at it now. I want to move this conversation and I want to move it aggressively. So I'm hoping that the administration will engage with me and really begin to act.

MR. WINGFIELD: Do you think that new leadership on the Senate Energy Committee will help move that legislation along?

SENATOR MURKOWSKI: Well, we don't exactly know when we might

see some changes there. I will suggest to you that Senator Landrieu made a comment just this week also suggesting that it was timely to look at our export policies. So I think that that's a good indication that she would be willing to take a good, hard look at where we are today and just, again, how we might be able to modernize the energy architecture.

MR. EBINGER: We have a question back by the wall.

MS. CERRETANI: Hi. Alicia Cerretani with *21st Century Science and Technology* magazine.

I know that the whitepaper that you wrote is specifically on exports of natural gas reserves, et cetera, that we've recently discovered in the United States, but I wanted to ask you something about nuclear power and the future of nuclear power being eventually, hopefully, a predominant source of energy production in North America and the rest of the world. I know that the IEA is looking at nuclear power specifically this year as a world energy source. And despite the fact that there is a lot of hype in North America about these natural gas reserves, there's also a lot of discussion about moving away -- and this is 20, 30 years down the line -- moving away from an extraction economy. And I was wondering if you could share, you know, whatever discussion there is in the Senate and the Congress about this view of nuclear power. And I hope we're not going to be left behind in that because I think there's a lot of promise with that as an energy source.

SENATOR MURKOWSKI: Well, count me as one who coming from a state that produces oil, natural gas, fossilized fuel, coal, we don't have nuclear in my state yet, but there are many who are looking with great interest at the small modular reactors; great promise there. And I have long been one that has suggested that to have any level of what we call energy independence that nuclear must be a strong piece of that energy portfolio. And as aggressive as I will be on domestic production, including

renewables, I want to see an equal focus and really urgency when it comes to doing more with nuclear in this country. I think that that's too important to energy equation.

As you know, there are efforts in the Senate currently to deal with the issue of nuclear waste. And we all know that that's kind of the elephant under the rug, or whatever the expression is, that has been causing a hold-up within the Congress to try to advance nuclear within the energy portfolio. We have, I think, made great strides with the joint efforts between the authorizers and the appropriators on the Energy Committee and the Energy and Water Appropriations Committee in building legislation that we think is responsive and could enjoy support in both the House and the Senate. I am hopeful that we will be able to continue that effort going into this new year. I think that that will help us as we try to advance nuclear.

But again, as I suggested earlier, this is a hard environment at this juncture of this Congress to pass freestanding legislation, particularly on something that generates as much discussion as nuclear waste. I'm not so naïve to think that just because we think it's a good bill that we're going to be able to snap our fingers and make it happen. But I think you've got strong commitment from a good group of folks to try to advance that. And if we're not successful this year, I'm hoping that we will be in the next Congress.

MR. EBINGER: Bill?

MR. ANTHOLIS: I was struck -- again, I like how you're thinking and talking about both what can be accomplished now, particularly by the administration, and then longer term how you build various coalitions for support of various energy things. And I was struck in the whitepaper really, which is beyond the sort of narrow regulatory things that were central to the speech, but talking about all the different sectors, that in each of the pieces there's an infrastructure dimension to them, you know. And on the oil

and gas side there's pipelines.

Charlie and I were up in North Dakota, and we were struck by the amount of flaring that's going on up there of natural gas because there's no pipeline, and for the oil that's coming out of there, it's all being shipped by rail. Talk a little bit about that looking forward in the whitepaper where you see the most important infrastructure investments and what kind of support you think might be on the Hill on both sides of the aisle, where Senate Republicans tend to have been more focused on infrastructure, House Republicans a little less so, I think.

SENATOR MURKOWSKI: It is. It's absolutely an essential part to the discussion when we're talking about our energy architecture. It's one thing to discuss the availability of the resources going from a position of relative energy scarcity to one of true abundance, particularly when it comes to our natural gas and as we're able to utilize our technologies to access oil resources as well. Everybody wants to talk about that, but unless you can move that, you're stranded.

And Alaska is a perfect case in point. We have more of everything. Let's just leave it at that. (Laughter) We have more of everything. We are the Saudi Arabia of coal, of natural gas, of oil. Honestly, we have it all. But we don't have the ability to move it. We've been trying now for 40 years to advance our natural gas coming off the North Slope, and we're still working at it. Our oil resources, you know, we were successful in the mid-'70s, thank goodness, of getting the Trans-Alaska Pipeline, but that really has been our only infrastructure corridor is that 800-mile pipe from north to south. When you think about our coal reserves, we export very little of our coal and that's because we lack that infrastructure.

Here in this country, while you may have the infrastructure, it is aging in infrastructure, it's insufficient to meet the demands that are out there. I, too, have been in

North Dakota and, quite honestly, the folks up there are saying, well, you know, we can wait all day for more pipelines, but, in the meantime, let's just put it on rail. But we will not be able to access these incredible reserves unless we've got the infrastructure to move it. And this is not just limited to our fossil fuels. It's how we move our wind, our solar, our renewables. This is going to be our big challenge moving forward and it's going to be expensive. But if we don't make these investments in the infrastructure, all the oil that we have, all the wind and sun that we have, everything that we have just sits.

MR. ANTHOLIS: And do you think there's a coalition of Republicans within the Republican Party that are willing to pay for it and figure out where to get the resources to pay for it?

SENATOR MURKOWSKI: I think we have to. And I don't think that this is -- this can't be Democrats supporting, you know, the integration of renewables into the grid at the expensive of everything else or Republicans saying, nope, these are just going to be pipelines for oil and natural gas. As Americans we've got to be looking at this and saying how do we move these resources to benefit our country? Whether you are coming from Alaska or whether you're from Florida, how are we going to benefit Alaskans? How are we going to help with jobs, allow energy resources to be affordable to all? And this has got to be our challenge.

So I am pushing colleagues to not think about it from a partisan framework. That's not going to advance us. You have other countries that are looking at us as a nation and saying, wow, I can't believe you're just sitting on the resources that you have. Why aren't you moving them? Why aren't you doing more for yourself? And that's a good question. Why aren't we? So we need to figure out how we're going to make those investments in our resources.

As I mentioned in my comments, we have U.S. agencies, institutions,

which are helping to finance energy infrastructure and projects in other countries. Why aren't we making that investment in ourselves here?

MR. EBINGER: I think we have time for two quick questions. Kevin, you've been patient, and then we'll go to this lady. I'm sorry for the rest of you, but the senator's on a quick timeframe.

MR. BOOK: Kevin Book from ClearView Energy Partners. I'll be fast. Thank you for a thought-provoking report, another one.

You mentioned, you just alluded to it a moment ago, the international dimension, but it wasn't one of the three sorts of forums for reform of crude oil exports that you mentioned: the agency, the Executive Branch, and Congress. Do you anticipate any sort of international negotiation, like the TTIP talks or something else that could provoke a discussion of crude exports in a different forum, in an international or WTO forum? Thanks again.

SENATOR MURKOWSKI: Do I anticipate it? Certainly. Certainly, because we can't have these conversations here in isolation in this country. As I mentioned, everybody's talking about it in other places, where it's Riyadh or Moscow or Budapest. They're talking about what is happening within our country. There's no closed secret here about the resources that we have.

And so is that going to prompt conversations that will be part of negotiations? I would think so. There's already been some discussion out there as to whether or not export restrictions or limitations somehow violate WTO rules. As I say, these conversations are happening with our without us. Maybe we need to be part of those conversations.

MR. EBINGER: Ma'am?

MS. NGUYEN: Thank you very much. My name's Genie Nguyen with

Voice of Vietnamese Americans. Thank you, Senator, and thank you, Dr. Ebinger.

I follow the question about infrastructure to the international level, which is connectivity. So you talk about the federal agencies, including DOE, DOD, especially the Commerce Department. And you expect the admin to take their executive authority to move forward, take the leadership in it. My question to you is the transportation of our own resources into the global arena. And also, how do you connect that with the many FTAs, TPPs that our administration has a strong focus on, especially the TPP?

Now, given that I know that you're a strong advocate and also Dr. Ebinger is a strong advocate for our (inaudible), the United Nations' conventions under the Law of the Sea Treaty. And at this point in time, freedom of navigations and freedom of connectivity globally is significantly crucial to our market globally. Where do you see your colleagues in the Republican Party can share your keen vision of we get the ratifications of the (inaudible)? Thank you.

SENATOR MURKOWSKI: Well, you've laid out a lot of different things there, but let me speak very briefly to Law of the Sea. As you know, I am a proponent, a supporter of ratification of Law of the Sea. I think it is well past time, for a host of different reasons, not the least of which the Arctic, where I am from and where you all feel like you are from today, it's a changing world up there. And some of the arguments that were being discussed decades ago, when Law of the Sea first came to the United States Senate, really do not hold true today because we have navigation in areas that we've not been able to navigate before. So, again, for a host of different reasons I am a supporter of ratification.

I would like to suggest to you that, of course, we're going to be able to see passage this year, but that, too, is extremely difficult given the political environment. I've had a conversation with Secretary Kerry as recently as last month about this. And,

as you know, when he was in the Senate and chairman of the Foreign Relations Committee he worked very hard to try to advance that. I think in his current position he's obviously going to continue that, but I am not overly optimistic that we will see that in the second half of the 113th Congress, as much as I would like.

MR. EBINGER: Well, I'd like to thank the senator for choosing Brookings to make such an important speech and thank you, Bill. And again, thank all the people on the senator's staff and my own who made this event possible.

The senator's on a tight schedule, so if you would not mind remaining seated while she is escorted out, so she can get to an important vote. Thank you.

SENATOR MURKOWSKI: Thank you. Appreciate it. (Applause)

\* \* \* \* \*

CERTIFICATE OF NOTARY PUBLIC

I, Carleton J. Anderson, III do hereby certify that the forgoing electronic file when originally transmitted was reduced to text at my direction; that said transcript is a true record of the proceedings therein referenced; that I am neither counsel for, related to, nor employed by any of the parties to the action in which these proceedings were taken; and, furthermore, that I am neither a relative or employee of any attorney or counsel employed by the parties hereto, nor financially or otherwise interested in the outcome of this action.

Carleton J. Anderson, III

(Signature and Seal on File)

Notary Public in and for the Commonwealth of Virginia

Commission No. 351998

Expires: November 30, 2016