

Center for Strategic and International Studies

TRANSCRIPT

“A Conversation with Senators Murkowski and Manchin: Energy in America”

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SPEAKERS

Senator Lisa Murkowski (R-AK),

Chairman,

Senate Committee on Energy and Natural Resources

Senator Joe Manchin (D-WV),

Ranking Member,

Senate Committee on Energy and Natural Resources

HOST

Sarah Ladislaw,

Senior Vice President;

Director and Senior Fellow, Energy and National Security Program, CSIS

Transcript by Rev.com

Sarah Ladislaw: Well, good morning, everybody. Welcome to CSIS. My name is Sarah Ladislaw. I am the senior vice president and director of the energy and national security program here. We are delighted to have all of you here today. And just as a reminder, as is my duty to say, we care about your safety and security here at CSIS. So if an alarm goes off, I will be your security captain. We will help you evacuate the building. But people just keep in mind where the emergency exits are so that you can be aware of that. We don't anticipate anything happening, but we do take your security very seriously.

It is my great pleasure to have with us Senator Lisa Murkowski and Senator Joe Manchin. Joe, I think this is – Senator, this is your first time at CSIS, I believe. And –

Senator Joe Manchin: I believe it's the first time in this room, for sure.

Sarah Ladislaw: Yeah, absolutely. And then – and you've been here before, Senator Murkowski.

Senator Lisa Murkowski: We have had many Arctic conversations here.

Sarah Ladislaw: Many Arctic conversations.

Senator Lisa Murkowski: And they've been great. So it's good to be back. Thank you.

Sarah Ladislaw: Great, great. Thank you for being here.

So one of the reasons why we wanted to have this conversation today in particular is CSIS, the Energy Program, has been spending the last couple of years doing a project called Energy in America. And it's really meant to capture the way in which the strategic landscape for energy in the United States has changed so fundamentally over the last decade. Not only are we producing more in the way of oil and gas resources, largely hydrocarbon producer in the world, but we've also dropped the cost of renewable energy technologies. And this is not just some abstract sort of, you know, policy conversation, it's something that's changing the social and economic fabric of people around the country.

And so we've spent a lot of time talking with people in different parts of the country about how the energy landscape is changing, what does it mean for them in terms of their own expectations of the energy sector? Do they rely on it for economic growth? How do they think about U.S. energy security? How do we think about it in the context of global climate change and the need to manage those challenges? And so we've done a couple of different reports on the topic. And quite frankly, what we've realized is that the U.S. has a really advantaged position across the board on energy. We're really in a very positive position. It doesn't really detach us from the global community in ways that people, you

know, often talk about. We're not energy independent necessarily, but we certainly have a lot more options on the table.

And then when it comes to creating economic development out of energy resources, we found that there's kind of a mixed story. You know, in places where you produce a lot of oil and gas or coal resources, depending on how those communities reinvest those resources and think about it as part of their broader economic-development strategy, sometimes that goes well. Sometimes it doesn't go well. In places where we've talked a good game about creating innovation clusters or manufacturing centers, sometimes that's gone well. Sometimes it's not gone so well.

And so what we wanted to do was sort of tie together the experiences that you all bring to the table as being from Alaska and West Virginia and thinking about, you know, what your job is as it relates to what your constituency hopes to see for energy for the United States with some of these bigger and broader, you know, challenges and opportunities that are part of your job as the leadership of the Energy and Natural Resources Committee. So hopefully we'll have a good conversation about some of those things.

But I wanted to start where I just started, which is if you could each share a little bit about what is the perspective from Alaska and West Virginia with regard to energy. Is it one of pessimism? Is it one of optimism? How do people in your states and your constituencies talk to you about energy when you talk with them?

Maybe we'll start with you, Chairman.

Senator Lisa Murkowski: Well, energy is – it's kind of like Toys "R" Us – Energy "R" Us in Alaska. It is just such a focal part of our economy, of certainly our state's budget. We're a state – 85 – some 85 percent of our state's budget comes from oil. Think about what that means in terms of dependency on one resource.

Now, having said that, we've seen the price of oil go down. We've seen production in the older fields in the North Slope go down. And so that has had substantial impact on our state's budget. It's put our governor and his administration in a pretty tight space. So there's pessimism there. But you have great optimism with what is happening in terms of exploration and production in the National Petroleum Reserve.

In the 2017 tax bill, we included the provision that will allow us to advance in the 1002 area of ANWR. So those lease sales will be coming up in the near future, so there's a level of optimism there.

But there's also a recognition in Alaska that as significant as this oil resource is to us, we are still the state that has, if not the highest energy

cost in the country, maybe the second-highest, because our communities are so remote. We're not part of an energy infrastructure grid, so to speak. And so it's required us to really be innovative and push out in areas that you might not expect when it comes to renewable energy resources.

We have been leading the country, and some would say leading the world, in terms of microgrids. You've got a small community of, say, 500 people. There's no natural-gas pipeline that's getting to you. The oil comes to you, yes, but it's produced – it's produced up north. It's shipped down to the lower 48 and then it's sent back to Alaska, so that by the time it gets to your community on the Yukon River, you're paying eight, nine, 10 bucks a gallon.

That's not sustainable. These communities are diesel-generated communities. So getting themselves off that and moving towards what they have on site is really kind of an innovative, pioneering, exciting place for them to be. So there's a level of optimism in that space; so a little bit of a mixed bag.

Sarah Ladislaw: Yeah. What about West Virginia?

Senator Joe Manchin: First of all, who all stayed up and watched the Nats game last night? (Laughter, applause.)

Senator Lisa Murkowski: I didn't finish the end of it. (Laughs.)

Sarah Ladislaw: That's why everyone looks a little tired.

Senator Joe Manchin: I'm reading all the sleepy eyes. I can tell.

Sarah Ladislaw: Yeah, yeah.

Senator Joe Manchin: I'll tell you. Go Nats!

Anyway, West Virginia, we've had a transformation, if you will. Of course, we've been a leading energy producer for a century or more. And coal has been abundant, and quality of coal has been excellent in West Virginia. And so we – I look back at it, because I grew up right in the coal fields in north-central West Virginia; had four of the largest mines in the world right around me, and everybody I knew worked there. And my family depended on it, because my grandpa had a grocery store. My dad had a little furniture store. And basically it was the economy that kept all of us going.

We always rode the highs and lows. The energy markets were always depending on what the world market was and what the demand and the national market was for steam coal and for metallurgical, because we were blessed with two high-quality, steam and metallurgical coal.

When I was governor – fast forward clear up to the 2005, 2010 era, we were still producing 150 million tons of coal. When I was younger, it was – we were always in the 200 million tons a year. So we pretty much did depend on that – the economy and the market was based around that.

We're down – we went down to as low as 76 million tons just recently, under the Obama administration, and then we're back about 90, 91 million tons. People are coming to realize it's not just all policy, and it's not because – they thought that, in my state, that the Democrats were, in revenge, trying to shut them down for fossil – but it was market.

We were also blessed with a notion of energy under us with all the natural gas we have. We have the Marcellus Utica; now we have the Rogersville, which is much deeper. But we have an ocean of wet properties, which is butane, propane, and ethane.

What we haven't seen from gas – the people in West Virginia – is a job, the opportunities. The opportunities that came with coal was you were either working in the coal mine or you were basically supplying for that, whether it be a cable shop and battery shop, machine shop. There was an – six or seven, eight jobs went with every one job on the front line mining coal. So it was a tremendous economic boom.

And then when things had changed, and the previous administration was putting more efforts towards renewables, we have one of the largest wind farms east of the Mississippi. People would never believe that. In West Virginia, Mount Storm, 17 acres of a wind farm on top, so we're for everything – we're all in. We just don't see the bump as far as employment that had gone with coal, so they're having a hard time with that.

So what we're hoping for, we had a tremendous – during the World War II and all that, and up to the last 20 years – petrochemical industry. The Ohio River, the Kanawha River, which is one of the most – next to the southwest – concentration of petrochemical, the plants. And they could be revitalized. I mean, they are down to maybe 50 percent of a footprint of what they had. If we could use the wet properties that we have coming out – so I keep talking to people about we have a chance to reinvigorate our manufacturing base, but we have to have crackers, we have to be – petrochemical has to come back so we could be able use this raw product.

And with that, we'll talk about China's intervention into West Virginia trying to buy up every ounce of wet property to take it back to China to keep us out of the economic market. That's exactly what they're doing. So we're watching that very carefully.

Anyway, we'll get into that. But West Virginia has been blessed, but still yet we're challenged, and our terrain makes it a little bit more challenging, too, but we're beautiful – (laughter).

Senator Lisa Murkowski: You certainly –

Sarah Ladislaw: Especially this time of year –

Senator Joe Manchin: And so we hope you come and enjoy us.

Sarah Ladislaw: Yeah, so I want to go – I want to move – and we will get into sort of China in a little bit, but one of the things I want to move to is, you know, for as long as I've been doing this, right, the mantras around energy are affordable, reliable and clean, right? But over the last, you know, 10 years or so, there's been sort of different requirements put on the energy sector; either, you know, a creator of jobs, as we just, you know, heard you talk about or, you know, help save the planet, right? We've got sort of this climate change challenge as well.

I was just wondering, Senator Murkowski, if maybe you would reflect on how things have changed under the period of time you've been in the leadership of the Energy and Natural Resource Committee, and like, what are we asking the energy sector to deliver for the United States; you know, not just for Alaska, but in terms of our strategic priorities.

Senator Lisa Murkowski: I don't know if you recall – it was a few years ago now – we did our Energy 2020, our blueprint for the country, and my blueprint had five components within the energy space. It was affordable, accessible, clean, diverse, and secure. And that was – yeah, that was probably about 10 years ago that we laid that blueprint down.

Those five words, I think, are still key today, but perhaps what you are seeing is greater emphasis on clean over affordable as you talk about those who are trying to advance something like a Green New Deal, that it has to be clean at the expense of affordability. Well, that doesn't work in a state like mine, again, where you are paying eight, nine, 10 bucks a gallon.

You know, it can't continue to go up because then it's not accessible at all. So I think you have seen a shift and a greater focus on clean and renewable, but also the resilience side. And this kind of factors into what Senator Manchin and his constituents in West Virginia have seen. But making sure that we have this level of resilience. People want to make sure that, yes, their energy is affordable, but they also expect it to be there on demand. And so when we are made less resilient, whether it is because of severe weather events or it's because you've taken offline some of your more baseline, just kind of chugging away every single day – the coal facilities out there – and moved it towards renewables that are

not baseline power, what that presents in terms of uncertainty to the consumer.

And so I think that's much of what we've seen with the shift. Being in a situation where we are now, and you started this out in your introductory comments, where it might not be energy independence, but when you are the number-one producer of oil and natural gas in the world, it gives you a space and a position – certainly from an energy security position – where we can play a much greater role than we ever have before. That is also a factor that is new. It was – it's just been in the past decade that we have gone from a nation that was building import terminals to LNG to now figuring out, how can we move our LNG to export more rapidly? So there's been a lot that has changed. It's come about in a very short period of time. But we are – we're truly enviable around the world because of that part of it.

Sarah Ladislaw:

Senator Manchin, how have you seen some of the challenges or the sort of strategic imperative change for the energy sector?

Senator Joe Manchin:

Well, you know, the thing I was going to say, and I should have said earlier, but if you're in my state, who's been a tremendous producer of energy for this country for every war we've ever had and for the industrial might we have now, and the role that coal has played, people in West Virginia and most families have been intertwined in the coal industry in one way or another. Grandfather worked in the mines, an uncle, an aunt, mom, dad, or somebody worked and related to the mine. They felt like the returning Vietnam veteran: We've done everything our country's asked us to do, and you left us behind. Now you don't like us. We're not clean enough. We're not green enough. We're not good enough. So just throw them away.

And we can't do that in America. So whatever tradition – or the oldest Alaska's producing, and if we move away and we're not demanding industrial oil and we might not be producing much another decade or two decades from now, you can't leave Alaskans behind for the work they've done for us, unless you give them other opportunities. Well, that's where your tax policies come in. If we're moving and shifting towards new maturing and new – and new opportunities in energy markets, if you will, then you have to make sure the incentives are going to the states that had the energy reliance that we've depended upon.

So if West Virginians would have in, let's say, 2-9, 2-10, 2-11 said, OK, we're shifting. A lot of tax credits are going to renewables. But you have to use the tax credits in the states that lost the energy jobs, traditional energy jobs, there would have been no disruption – political disruption at all. But it just flip-flopped everything in our state because no one cared and left them behind. I just think that in the next decade or two decades we're all going to be energy producers. Now the grid delivers, how – metering back, what we do, how energy gets into the system – we're all

going to be much different than what we see today. What that's going to do, I really can't tell you, because we have traditional baseload plans.

I just came back from Saudi Arabia. I saw what happened and could happen in disruption, and how we escaped and basically dodged a catastrophe – a worldwide catastrophe, globally, economically. There were direct hits, and it was unbelievable how it was done. But they were – acted quickly, got them back online. So baseload up until, what, the last 10 years, has been coal and nuclear – 24/7, rain or shine. It's not anymore. We're depending on gas for baseline. Gas can be disrupted a lot easier than coal and nuclear can be disrupted. So reliability, where are we?

And when you talk to the Aramco people, I said: Aren't you concerned about espionage here for someone to have all of these pertinent information on your operation here, to be able to pinpoint and hit with accuracy? And he looked at me, he says, Google Maps. He says, look how accurate Google Maps are. So now we're looking in an Energy Committee, wait a minute. How vulnerable are we with our strategic that they can get right off of the internet? So we've got to make sure that we're doing everything we can to protect what we have.

But the baseload is going to be delivered differently. Does that lessen our reliability? That's something that we have to look – and the grid, is the grid going to be modernized enough to be able to handle it?

Senator Lisa Murkowski: To handle it.

Sarah Ladislaw: So I want to pick up on a couple things that came out in your comments. One is resilience, which I want to get back to in a second, but the other is the sort of – you both recognize that the energy system is changing pretty fundamentally, right? And that there is this sort of imperative to deal with climate change and to sort of reduce emissions, but that we have to be able to watch how we choose –

Senator Joe Manchin: So let me just say one thing right here. First of all, for a committee to work you have to have two members that like each other. (Laughter.)

Senator Lisa Murkowski: We like – we have a big problem on that front. (Laughter.)

Senator Joe Manchin: We are good friends and we like each other. On top of that, that makes – we have both great staffs. We both have been blessed with good staffs, and it makes it easier for the staffs to work together if the members are working very close and are good friends. So we have an unbelievable opportunity for this next year with this Congress we're in to really make something happen –

Senator Lisa Murkowski: Yeah.

Senator Joe Manchin: – to get a comprehensive energy that has not meeting – I mean, meeting the needs that we have but also looking at the future. And that’s a tremendous opportunity we all should be taking advantage of. But can you imagine when on my side of the aisle they thought, Manchin’s going to be the ranking member?

Senator Lisa Murkowski: With Murkowski.

Senator Joe Manchin: Woo!

Senator Lisa Murkowski: Mr. Coal, Ms. Oil? Ugh.

Senator Joe Manchin: That was a tough – that was a tough pill.

Senator Lisa Murkowski: What did we start with? What did we start with? We started focusing on climate change.

Senator Joe Manchin: That was the first thing, the first climate – the first climate change meeting that we had, hearing, was – in seven years. And there’s no one in West Virginia wants to breathe dirty air or drink dirty water. I mean, we’re all for climate change. We know it’s happening; we know that we’re responsible and we can do better. But with that, I’m – I’ve said this – I’m for innovation, not elimination. Because elimination’s not going to work. It’s not the way the world’s going. And if you think that that’s going to change the world, by us eliminating they’re going to follow us, well, shoot yourself in the leg and see if I’ll do it. OK? Not going to happen.

Sarah Ladislaw: (Laughs.) So you preempted my question, which is you guys have chosen to focus on innovation, right?

Senator Joe Manchin: Right.

Sarah Ladislaw: Which is both a very bipartisan thing, we’ve seen lots of support for additional levels of innovation. The question I have is, is innovation just in investing more in R&D enough today? Right? And I – so this is where I like to sort of bring in the idea of competition with China, competition with other players that are not just investing money in R&D, but they’re organizing themselves around industrial strategies to compete in the energy sector.

And so one of the questions I’ve had is you guys, you have had a number of climate change hearings; you’ve had a number of hearings that have focused on innovation. I’ve been privileged to testify at a couple of them and they’re really good discussions about these serious questions. But it is – it does strike me that we are having a conversation about trying to innovate, to drop the cost of technologies, to make dealing with climate change easier, to make all of these issues that you’ve talked about resilience and reliability easier. But mainly what I’m concerned about is

whether there's sort of the political will in Congress to sort of organize around being competitive in these spaces.

So you've both done a lot on nuclear, you've both done a lot thinking about critical minerals and batteries. How are you – do you think that there's the appetite, whether it's through comprehensive legislation or through some other sort of initiative to be able to really put forward not something that just sort of invests on the R&D side, but says, no, we'd actually really like to compete in these spaces and be competitive? Or does our sort of, you know, adherence to a free-market economy kind of idea kind of pull us back from having conversations like that?

Senator Lisa Murkowski: I don't think that innovation on its own is enough. You can have all kinds of great ideas in the basket, but if you can't – if you can't put them into implementation, if you can't modernize that grid to accommodate what you have innovated, if you can't translate it out to the consumer, then what you have are just a bunch of good ideas in the box.

And so we have always, I think, performed well in the good ideas category. This is American ingenuity. We love to talk about it. We are great at it. But what we need to do better is to figure out how we facilitate it. We talk a lot about in the ARPA-E space how you get from the good ideas section, past the valley of death where all good ideas go to die, and into the true implementation. We have a ways to go with that, and some of it is our own regulation. Some of it is those who would say I don't care what gains you have made in efficiencies; you're still dealing with a fossil-based energy source, and so I don't want you to move it anywhere in any way. And so you've got those naysayers that hold you back.

So innovation on its own is not the sole answer. It is – it is really working throughout the full – the full panoply of how you make these transformational measures happen.

But in terms of competition, I think this is where we have a lot of room to grow. And it's not just competition here within this country; it's making sure that we can help lead with other nations in cooperative partnerships.

And nuclear is a good example. We used to own this space, not so much anymore, in terms of the manufacturing, in terms of the skilled workforce. And you know, we have seen what has happened to nuclear in this country. I'm seeking – we're seeking to revitalize this. We've got NELEA bill, the Nuclear Energy Leadership Act. That, I think, can help us again in this competitive sense.

But another thing that we have just recently introduced and is out there is what we call our Strategic Energy Initiative. That will help facilitate an opportunity, a role for some of our financing institutions – Export-Import Bank – to help – to help facilitate a project in another – in another

country. Right now, if you're – if you're in the nuclear space in another country, the entities that are out there that are helping are Russia and China, not because Russia and China are so great, it's that they have state-run enterprises that are there to help make it happen. So we're not competing globally that way, and I think that there is an important space for us to step up as a country.

Sarah Ladislaw:

Yeah. Senator Manchin, where do you see the opportunities where we can be competitive, not just relative to China but certainly in technologies that we want to promote?

Senator Joe Manchin:

Well, I mean, everything we're talking about – we have the EFFECT Act. We're all looking for innovation. We're looking for the next big – the big – the big bang, if you will. But the big bang is basically in energy efficiency. If you really want to make a difference, it's in efficiency. That's the low-hanging fruit. And they're telling me that if we were able to truly dedicate ourselves to the efficiency of how we're using what we've got, then we can continue to grow up to 2040 and not have that much more energy needed to come online basically because we're using it much smarter and much more efficiently.

Those are things we should be looking, low-hanging fruit. And we have a hard time sometimes with some of our constituents who say, oh, don't force me to do this, I don't want to have that regulation, I can't take this. Well, someone's got to push you somewhere, so that's where the carrot and stick comes in. And you've got to be willing to use it. Incentives – you know, we have to use incentives for other countries.

We can't – I've been told that if we quit using – and let's say that our friends who are pushing a New Green Deal, if we quit using every drop of oil, every MCF of gas, and every lump of coal, you wouldn't change the environment 15 percent, OK? Now, if you believe – if you're trying to say it's all North American climate, not global climate, then that's a whole 'nother story, you know. But on the other hand, if you want to say, OK, how do I get India to start using scrubbers, low NOx boilers, and baghouses for mercury, and carbon – and clustering carbon capture and utilization, how do I get them to do that? Well, you give incentives, entry into your market for trading. We incentivize them to do things.

But if we're not willing to do that, you can't penalize them and say – they're going to look at you and say, wait a minute, I recall back at the turn of the 20th century y'all used everything you had, you didn't care how you were using it. You used it basically to energize your country to be the superpower of the world. Now you don't want me to have someone in rural India who's never had electricity?

You think my grandmother in 1930 cared where that energy came that she could flip on the switch and turn the lights on, or have a washing machine for the first time, or a refrigerator? Not at all. So we got to put

ourselves basically where they are today, developing nations and what they're coming on. How do we help them?

Sarah Ladislaw: So really – please, go ahead.

Senator Lisa Murkowski: I just want to add one more thing on the technology and the efficiency, because I think it is – it's an important part of the discussion, because Senator Manchin is absolutely 100 percent right, that we've got so much space to do more on the efficiency side. But we're so captivated with the next cool idea, you know, how we're going to – how we're going to direct-capture carbon from the air, that is cool. You know, how we're going to do more with storage. We all want these great ideas so that we can say we did this.

It is not sexy, it's not cool to, like, change out your lightbulbs. And yet, we do that in a little town like Yakutat, Alaska, population just around 1,000, maybe a little bit less in the wintertime, and they're saving \$70,000 a year. You say, \$70,000, that's not much. Seventy thousand dollars going to get you a teacher in that community. They've saved, just through simple things. And I think – I think sometimes we get caught up that we have to do it – it's the big – you know, it's the big bang theory. It is that –

Senator Joe Manchin: But what we do with the utilities? Here's what I'm saying, the utility company basically has always had – I mean, they've had control of the grid, OK? And they're putting a line into your house, or to your business, or to your store, whatever. And now you're able to be more efficient, but also you're able to maybe have metering back if you have enough excess energy. And they're going to say, well, we can't take that. We don't take that. It's not cost-effective to use because we already have – I mean, somehow the grid system has to develop also to accept the ability for all of us to get in the market.

Sarah Ladislaw: So I want to ask you two more questions sort of based on that line of thinking. One is on this idea of resilience, which you brought up earlier. The very notion of what is energy security and what is resilience for the United States is something that I fear we're losing touch with, right, because we typically think of attacks on Abqaiq and Khurais, right, you know, big global oil supply shocks as being energy security.

But more and more these days we're seeing that the real threat to the delivery of energy to people is because we haven't properly maintained infrastructure, because we're not keeping up with the way that it's changing, because we're not thinking about the impacts of climate change on energy infrastructure in different places. How should we have a more honest conversation? I mean, especially in light of what's going on in California, or the repeated sort of, you know, incidents that we see with hurricanes in the Gulf of Mexico, and on very critical energy infrastructure there?

Senator Joe Manchin:

Sarah, speaking on that, Rick Perry. Rick Perry and I were governors together and we've become very good friends. And with him as secretary of energy we were talking. And I said, Rick, I said, we're vulnerable. My goodness. He said, Joe, I've seen it. I've seen the model of a class five hurricane coming up the Houston channel, what it does. I mean, we're crippled, boy, as a country, because we have all our eggs in one basket. So of course, I'm pushing the North American – I mean, the Mid-Atlantic what we call storage hub. We could be a backup because of all new energy in West Virginia, Pennsylvania, Ohio, Kentucky even. And if New York ever gets in the game at all to become part of that it would be unbelievable. We could do that to give us energy security. We can't even get that going.

But right now, I will say, President Trump has been very receptive to that. Rick Perry has pushed that very hard. So we're looking at that and trying to be that backup that we think the country needs, but also the ability to restart and reboot manufacturing. That's what we really need. So there is – there is a system there. But I'll never forget, T. Boone Pickens, god rest his soul. T. Boone one time came, and we were talking. And he – remember, he was diversifying into wind. It was all about wind. He says, Joe, and he's showing me the maps and all the wind. I said, T. Boone, nobody lives there. And he says, no, the wind blows all the time. So he was trying to explain to me why he picked this corridor. But there was no way – he had no grid system, couldn't get it out. And – but he put all his eggs in it. He went after it. Got to give him credit.

Senator Lisa Murkowski:

Part of the problem that we're dealing with right now, and your example of what we're seeing in California is just spot on, until something bad happens there's not a problem. There's not a problem. The lights come on. You know, I get my utility bills. It's not so bad. We're lulled into this kind of sense of complacency. And it's part of the – you know, it's really hard part of this job to say, wait a minute, we have to be prepared for the what-ifs. And it's like trying to get funding for the bridge that you know is structurally not sound, but every day cars go over the bridge, and every day the cars don't fall into the water. And you spend money to fix the bridge. And people are, like, for God's sakes, how can you spend so much money to fix the bridge? It wasn't a problem.

Well, it was a problem, but we saved you from having a problem. And we have a real difficult time with this in the energy space, because these investments – the modernization of the grid, dealing with capacity – as long as we are not interrupted, our lives are not disrupted, we're totally happy.

And so I want to – I'm the last one that wants us to be in a situation where we're seeing rolling brownouts because we haven't prepared. But I fear that that's the direction that we go if we cannot get around some of the obstacles that we face.

There's some things that – FERC right now is looking to PURPA reform. And I think that that's an important part of the discussion that goes on with the really policy wonky people who think about things like this. We need them to be thinking about things like this. But it is a real challenge for us to deal with an aging energy infrastructure, and in many ways an infrastructure that is not sufficient to meet the demands and the resiliency of today. But we're keeping it together with band-aids.

Senator Joe Manchin:

California is going to be a perfect example, because I need to learn more about this. But, you know, they've taken all different types of precautions, thinking by having forced electric shutdowns, trying to prevent the forest fires and all that. And what's going on there basically with the way they deliver power, the grid system, things of this sort, there's got to be a change. And I'm anxious to find out what the utilities in that area and the government are going to come up with, a recommendation.

So from a committee, we're going to probably look at that very hard to find out how to prevent – how we can prevent that, because the weather patterns are changing. It's a – it's a normal event now. It's almost like certain rains and monsoons and floods and hurricanes and everything else with the fire season in California, what the poor people are enduring out there.

Sarah Ladislaw:

Climate change, yeah.

Senator Lisa Murkowski:

I'll just add to that with the situation in Alaska. We faced some pretty significant fires this summer as well; hottest summer that we have seen. And we had significant fires in an area of the state that supplies basically baseload hydropower that feeds into the one energy grid that we have. That fire wrapped up mid-September. That powerline that comes off of Bradley Lake is still down today because of the damage to the transmission line.

So all the way up, you're going to have impact throughout this fall and into the winter for folks who are now going to be paying much more for their utility costs. But we just think about, oh, well, the fire is over. All is well. Turn back – you know, turn everything back on. Well, you can turn everything back on to a certain extent, and then if you look at your statements you're going to realize how much more it's costing you because of what has happened.

California, I think, is in a frightening place right now in terms of not only the immediate situation with their loss of power, but then going forward, the damage to infrastructure and what that means to them as ratepayers.

Sarah Ladislaw:

Yeah, yeah. So I want to ask one more question, because you brought up FERC, which is just another – we don't have all day, so we're going to

make a targeted question here. In my observation, right, so FERC is basically in a really tough position because there's a lot going on at the state level, right; a lot of energy policy at the state level, a lot of very aggressive and interesting energy policy at the state level that adds additional sort of challenges to sort of organized markets, in addition to all the ways that, you know, the energy system is changing just sort of, you know, on its own.

Is FERC going to be able to deal with all of these issues itself, or are they going to require legislative fixes at some point? Like, do you see a role for Congress and sort of changing the structures within which FERC operates, or do you think everything that's on their docket, so to speak, is going to be something they can handle? Because these are pretty profound changes in the way we've thought about, you know, dealing with electric power markets around the country.

Senator Joe Manchin:

Well, let me just say that first off we just get a full working FERC it would be a miracle. So we're trying to get back up to five members. We've had three for quite some time and we should have five. And we're going through a situation now where there's two openings and there is going to be a hearing, I think, next week on one, the Republicans. Of course, the Democrats are saying that we've had a lady that's been teed up since January of last – this past year, Allison Clements, that's gone through all the traps, FBI and everything. She has been brought up, but hasn't been sent up. So Lisa can only deal with what she has in front of her, and we're trying to get that because that's the way the committee has moved.

With that, yeah, you're going to have to – they're going to have to look at everything with their responsibilities. Before it used to be PJM – I'm in the PJM system, which is the largest delivery, I think, in the country. And with that, we were always concerned about reliability. And we had rolling blackouts and brownouts because the East Coast and the demand that we would have there and the surges that would go on, and coal was always the baseload. When the coal plants started coming down exponentially and kind of left us kind of vulnerable with the derecho – what do they –

Senator Lisa Murkowski:

Derecho.

Sarah Ladislav:

Derecho, yeah.

Senator Joe Manchin:

That put us within what they said, how many percentage of – I mean, it was very near of what we had margins to keep the grid energized, and that would have been catastrophe for the whole East Coast PJM system. And then they started looking at it, is FERC going to be going into it? Is reliability the number-one thing, or is it cost? Or cost and reliability, how do they weigh this out? What comes online, what type of fuel they take off and bring on? And all the things. I mean, it's a much different market

in what they're dealing with than what they ever did before. So I'm interested in finding out what pathway they're going to take and if it's going to take legislation to put a pathway for them.

Senator Lisa Murkowski: I do think that you have an agency that has so much more on their plate than they ever have and that many could have even anticipated all the things that Joe has mentioned? I mentioned PURPA reform. But think about it just from the perspective of cybersecurity.

Senator Joe Manchin: Oh no. (Laughter.)

Senator Lisa Murkowski: How do we wrap our –

Senator Joe Manchin: Google.

Senator Lisa Murkowski: – our head around all of this? And that is also part of their consideration. So it is considerable. I think we need to – from the congressional perspective, from the legislative perspective, I think we need to be looking to see where we can help to facilitate, where legislation may be required.

I think that FERC as it was established was sound at the time, but a lot has changed. So making sure that they have the level of expertise, this is – these types of reviews are not for the timid, somebody who's looking for the easy, cushy job, man. What they have to go through from a regulatory review perspective is really pretty intense. So let's give them the resources.

As Joe mentions, they need a full compliment. We do have the hearing coming up on Mr. Danly next week, but we still haven't gotten a name out of the White House. When Cheryl LaFleur stepped down in August it opened that up. But it's like, OK, we can't have a hearing on somebody until you are sent to us from the White House. So we're continuing to wait on that.

But it is – it is such an important regulatory agency that I look at it with great frustration that we can't get these folks moved through more quickly. When Kevin McIntyre passed tragically last year, we thought, OK, we're going to – this is – this is a Republican slot, we're going to see this moved really quickly. And it was a nine-month wait to get through that process. That's frustrating from our perspective, but even more so from the other side.

Senator Joe Manchin: But you know, you look at the pipelines and all that, we can't get pipelines built right now. My state's been shut down from all the Marcellus and Utica shale right now coming out, because we are going to hopefully supply I think it was three BCF a day or more than that maybe, but anyway into that line that would have gone down and energized North Carolina, South Carolina, the bases we had in the industry and things

going on in South Carolina. Jim Clyburn was fighting for it. We had everybody working for it.

And I've come to the realization, I tell people, I said, people aren't opposed to the pipeline they are opposed to what's in the pipeline and how it gets there. And that's what we're dealing with. And we got to come to the realization. You know, if we're going to have a country that's going to be the superpower and the model for the whole world, and hope of the world, and we're basically going to be able to energize and keep this economy moving, you got to have the energy. And we got to use it in the most efficient way and move it in the most efficient way. Just trying to get a powerline. Try to get a 500-kV or a 750. Try to – you know. And so anything I'm asking my energy friends, I says: Start thinking about sharing the revenue a little bit on transmission. Start thinking about sharing the revenue a little bit on pipeline transmission. If you do that with the states, and the counties, and all that, no problem. No problem at all.

Sarah Ladislaw: So I wanted to ask one more question, and then we've got a huge audience here, so I just wanted to take a couple questions from the audience for you as well.

But, you know, next year is going to be a busy year. It's going to be a very interesting year for a whole host of –

Senator Joe Manchin: A good year?

Sarah Ladislaw: Busy. I can't say good. I'll go with busy for right now. (Laughs.) But you've both expressed optimism and the potential to, you know, get some sort of, you know, energy legislation package, you know, passed. You're right. You guys are sort of odd ducks. You know, you're bipartisan, you like enough other, the committee functions, it works well. I'm a little more of a pessimist. Like, I tend to think that, you know, it's going to be hard for us to put together the views that we have in Congress into some sort of meaningful legislation. I have a lot more hope that we're going to see a lot of energy policy moving at the state level. It's going to be really hard for us at the federal level to just keep up with it. Why am I wrong? And why are you guys hopeful that that's going to –

Senator Murkowski: I'll tell you why you're wrong, Sarah. (Laughter.) Remember the beginning of the year, longest government shutdown that we had had – 35 days. What happened legislatively during those 35 days, when we were supposed to be in such an incredible state of dysfunction we couldn't even – we couldn't even get in the building together. What we did is we passed probably the most significant land and water conservation package that we have seen as a country in a decade.

We took 120-some-odd bills, land and water bills and conservation-related measures that had gone through committee process – and when I

say committee process, I mean committee process over a period of years. And we worked through all of the things that were bogging particular things down. We made sure that we had good input from Republicans, and from Democrats, from urban, from rural. We built this package that moved through a Senate that was supposedly in lockdown mode.

Senator Joe Manchin: Ninety-two to eight. Was it?

Senator Lisa Murkowski: Eighty – hate to correct you – but it was 85. Eighty-five. Eighty-five votes. Eighty-five to 12. And we not only moved it through the Senate on that strong bipartisan vote, but then we sent it over to the House. We all know that the House gets up in the morning to spit on the coffee of the senators.

Senator Joe Manchin: And the House just changed.

Senator Lisa Murkowski: And the House looked at it –

Senator Joe Manchin: But the House just changed because the Democrats just took control of the House.

Senator Lisa Murkowski: They had just – they had every reason –

Senator Joe Manchin: Reason to kill it. Every reason.

Senator Lisa Murkowski: – every reason to say, well, wait a minute, we want to put our stamp on it. And they didn't change a comma. They took it up –

Senator Joe Manchin: Chairman was unbelievable. Unbelievable to work with, so good.

Senator Lisa Murkowski: He was – he was unbelievable in terms of the level of cooperation.

But it passed out 366 affirmative votes. It's then signed into law. All of the – you know, we're not sure if this is a good thing or a bad thing. Everybody and their mother wanted to take credit for passing into law these significant bills. And we were able to do it because we were ready. We had worked through a level of process in a strong and a bipartisan way, and then when there was vacancy, the leader looks around and says: What do we got? Do we have anything out there that could possibly be bipartisan. I'm like, I'm in the back, I got 120 bills that are ready to roll. And you're given the opportunity and you go.

But you can't do that if you haven't worked it cooperatively. And this is where Joe's comment is just so important, because we've taken a perspective in the committee that things are only going to be enduring if we worked them together. We can move things – as Republican chairman, I can move things through committee if I just want to strongarm it. But I don't have any guarantee of success on the floor, and I don't have any guarantee of success that it will endure beyond the

Republican majority? So why not try to build something that is good for everybody, Republicans and Democrats, and will enduring policy that everybody can rely on. That's the approach that we take in our committee.

Senator Joe Manchin: There's no appetite – there's no appetite for a fight.

Sarah Ladislaw: Uh-huh.

Senator Joe Manchin: That's the difference. So if it comes out and we're not in sync on this, and it comes out – her having the majority – if I had the majority and it came out on one side or the other, then you have to defend and fight it on the floor.

When you have something that is so agreed upon – and we had this worked out, then they had something that said – we shouldn't have much pushback, let's go.

Sarah Ladislaw: Yeah.

Senator Joe Manchin: And we think we'll be ready for the energy bill also, so –

Sarah Ladislaw: Well, if the recipe is a chaotic environment through which you can, you know push a big bill, I think you might get your – I mean, you might get that.

Senator Lisa Murkowski: Yeah –

Sarah Ladislaw: OK, we've got about –

Senator Lisa Murkowski: – not that we're going to ask for a chaotic environment –

Sarah Ladislaw: No, no. No, no.

Senator Lisa Murkowski: I think it just might be delivered to us.

Sarah Ladislaw: Perhaps. Yeah, that's a pretty solid bet.

OK, we're going to take three questions really quickly because I think we only have about five minutes, and then you can answer them quickly. We'll go one, two, three, so I'm not – well, so I'm not – yeah, well, so I'm not accused of room bias. (Laughter.)

Allison Johnson: I work for DOE's Water Power Technologies Office.

I have a question for Senator Murkowski in particular. I'm wondering if you have any thoughts – I'm sure you do – about how R&D programs can responsibly work with communities with high energy costs?

Sarah Ladislaw: That's a great question.

Senator Lisa Murkowski: Well, it's a great question. You want me to answer –

Sarah Ladislaw: Can I take all three –

Senator Lisa Murkowski: Yeah, sure, sure, sure.

Sarah Ladislaw: – just because we'll get through it faster than that, and I don't want to disabuse your schedule.

Where was the hand here that I called on? Right there. Sure.

Paul Murphy: First, thank you so much for the comments. Maybe you could come back in another two months and do this again. This was just fantastic.

But Senator Murkowski, you mentioned the Strategic Energy Initiative. Do we also have to look at maybe the OECD rules that sort of bind the OECD countries and say, we all won't compete on financing when the Russians and the Chinese aren't part of the OECD rules?

And then a lot of countries are also asking for equity, and we really don't have a good vehicle. DFC really doesn't have enough money on the equity side. Other countries have sovereign wealth funds; we don't in the United States, and that's probably a bridge too far, but do we need to be more aggressive maybe on the equity side to be able to offer something from the U.S. government in that respect, beyond just the debt that we have through U.S. EXIM.

Thank you.

Sarah Ladislaw: A good set of questions. And who is it on this side? There we go.

Peter Semler: Senator Manchin, you said you just got back from Saudi Arabia, and Aramco, and the strike – and also to Senator Murkowski, who has been very closely monitoring the Strategic Petroleum Reserves – Iraq is going through meltdown. We've had hundreds killed in protests. This is the fourth largest producer of energy in the world, an oil producer, and it seems like everybody is sort of missing the ball. You know, it would be great to have a comment from you, sir.

Senator Lisa Murkowski: OK, so let me speak to the first question here about how, within the DOE space, we can be working with these communities that have high costs. You've just kind of thrown the softball up to me because I was out in a coastal fishing community – Cordova, Alaska, population a couple thousand – where working with Department of Energy, working with our national labs, what they have done as a community to tap into the storage component of their small hydro – so what you had was a community that is pretty innovative in this space. They're small hydro, but they are a

significant fishing community, so they have high energy needs during the summer, but again, low population – how do you not build a system that is too big during the winter and not enough during the summer type of a thing?

And so what they have – what they have done in partnership with the Department of Energy, with our partners at the national labs, is really something that is being viewed not only as a win for this community, but as an example – a prototype – of how we can, again, structure these microgrids that are unique to that space, to those assets that are there. This community is probably going to be 60 to 70 percent renewable throughout this whole winter, throughout the summer now because of what they have been able to facilitate: taking them off diesel power generation which, in this community, is probably – I don't know – four-and-a-half, five bucks a gallon.

But just to share with you their level of innovation, this is a community that's not attached to any road system. And the mayor, who happens to also run the utility coop, decided that he wants to get EVs into the community of Cordova, but he doesn't have any charging stations. Well, you're never going to get EVs there unless you put charging stations, so he's got four charging stations now. And they've got their first Tesla in Cordova, Alaska. Go figure. It must have been a good fishing season.

But it's an example of a community that has branched out on their own to try to find how they are able to take the good ideas and implement them, but they're doing it in conjunction with Department of Energy, who has been a fabulous partner in this. And our national labs, NREL, has been a great partner there too.

Sarah Ladislaw: That's great.

We've got a question about the export financing and equity stuff, and then also the one about – it's a SPR question, but oil security in general. Are we missing the boat just because we didn't see a price response and see what's going on in Iraq right now?

Senator Joe Manchin: Well, Ex-Im Bank, we can't even – I mean, I think you all have been following that, right? We ain't got much going there. And we just – I think the administration is not committed to the Ex-Im Bank. I don't know what else to say.

Senator Lisa Murkowski: Well –

Senator Joe Manchin: You might be able to talk about it. I can't –

Senator Lisa Murkowski: It is a – what do we call it? These are – these are tools of statecraft, is how we refer to them in our Strategic Energy Initiative, that can and

should be utilized to assist, whether it's Ex-Im or whether it's the development –

Sarah Ladislaw: The new OPIC.

Senator Lisa Murkowski: The new OPIC. And so how we are able to structure them in such a way, in a manner that they are effective – and your point about the equity piece is something that I think we need to look at critically, because, again, you can come in and say we want to be of help, but if we can't deliver because we don't have – you know, we don't have the sovereign wealth fund, for instance – we're kind of a lot of talk and not a lot of support, so how we're able to structure this. But the fact that we're even having the conversation about it now is an important –

Senator Joe Manchin: But you could have an offset on that.

Senator Lisa Murkowski: – important step forward.

Senator Joe Manchin: The criticism we have on Ex-Im Bank when it was going through different discussions in committees and things of that sort, and people that – they thought, well, it was just basically a supplement for the Boeings of the world, if you will, and they were against that. So we had an offset for small business.

We can do an offset for the energy sector because they got to the point in the Obama administration they stopped financing for any fossil. They wouldn't finance any fossil. So this type of stuff – I mean, some common sense and responsibility and reasonability, but some offsets, whether it's going to be 10 or 15 percent – a slice of that's going to go to the energy market – gives us a big, big jump on it. That'd be great.

On yours, on what you talked about with Iraq, I've got to be honest with you. We know what happened with Aramco and we know what the world effect would have been on global markets and the world economy. I think we've become so insulated with all the war that's been going on in the Middle East that somehow we're just discounting that. We're not putting that in the mix. And we've come on so strong now as a country as far as our energy opportunities and availabilities and what we're producing now, and we haven't seen the ticker, if you will, change that much.

And you have Syria right now. It doesn't make sense to me that we're now into Syria trying to protect an area that doesn't have a great infrastructure. It's been deteriorated over a period of time and doesn't have the ability to produce. If you want a dormant – we can do many things to make that area dormant right now rather than the risk of what we're involved in. I mean, I can't give you that. I don't know. It doesn't make – I can't sit here and defend it and make sense.

With Iraq, we thought we could stabilize that. Well, that hasn't worked out very well. With Iran, we know what we're doing there, the embargoes that we have going on and the sanctions and all that. To give you what's going to happen in the future, I can't. I can say we've discounted it to the – we know that war is going to continue. We know that fighting. And they're not going to be producing what they had in the past under any type of stability because it's not going to be there for a while.

Senator Lisa Murkowski: I think one of the things that we have seen – you know, you asked the question earlier, you know, since I've been on the committee, you know, what have we see in terms of this space? The fact that you had that strike, that takeout at Abqaiq; what we have seen with the disruption, the attacks in the Straits of Hormuz; at any other point in time this would have just sent the price of oil through the roof, just the markets would have gone crazy. And yeah, we saw –

Senator Joe Manchin: We haven't seen a spike.

Senator Lisa Murkowski: We saw a little bit of a spike and then things settled back down. And in my view, this speaks to the role that the United States is now playing. Obviously, we still look to the Mideast for significant resource, but it is – it is significant that we are – we are more insulated because of the production that we have.

You mentioned the Strategic Petroleum Reserve. And we had a discussion, what, about a month ago now in committee about the SPR and whether or not the Strategic Petroleum Reserve is even necessary. I happen to believe it is necessary. I happen to believe that the beauty of an insurance policy is that you don't have to use it, but you don't want to – you don't want to erode it or get rid of it because then, in the event that you do need it, you don't have that. So –

Senator Joe Manchin: We're not disciplined enough, either. We're not disciplined enough. And we're using it for everything but what it's supposed to be used for.

Senator Lisa Murkowski: And we have to stop that. We have to stop that.

Senator Joe Manchin: We buy high and we take it back and sell low.

Senator Lisa Murkowski: But we'll –

Senator Joe Manchin: You had something. You were just champing at the bit to say something.

Peter Semler: Me?

Senator Joe Manchin: Yeah.

Sarah Ladislaw: Go.

Peter Semler: No, no. The thing that I was just saying, that there's no correspondence with what's happening today in the Middle East and oil prices is just shocking.

Senator Joe Manchin: Right. It is shocking.

Sarah Ladislaw: So a shameless plug – a shameless plug on our side: Senator Cornyn has asked to come talk about that here next week, wants to talk about the sort of oil security, the global market.

I agree with you. I think we are in a much better position. But you always – you all know this, and this is one of the reasons why you support the SPR – but it's the context, right, you know?

Senator Lisa Murkowski: Yes.

Sarah Ladislaw: I mean, in another point in time or had that tropical storm that reversed into Texas been a hurricane that, you know, hit that infrastructure, we have vulnerabilities. We're in a much better position, but we do have vulnerabilities, which is why it's good to have insurance policies.

Senator Lisa Murkowski: We have to be – we have to be aware. We have to be heads up. And we have to anticipate that stuff might happen.

Sarah Ladislaw: Yeah. Right.

Senator Joe Manchin: But look at –

Senator Lisa Murkowski: And it's when we get too complacent and say, stuff hasn't happened in a long time we don't need to worry about it, that's a vulnerability that we should not expose ourselves to.

Senator Joe Manchin: We haven't – we haven't done infrastructure on storage, where we keep it. We haven't, basically –

Senator Lisa Murkowski: We're modernizing it, finally.

Senator Joe Manchin: I know, a little bit.

Senator Lisa Murkowski: Yeah.

Senator Joe Manchin: But we haven't done anything on what we think the level should be. And we shouldn't – we should be disciplined enough or basically prohibited from using it for budget gimmicks.

Senator Lisa Murkowski: Yeah.

Sarah Ladislaw: Yeah.

Senator Jan Manchin: And we've done all of that.

Sarah Ladislaw: Well, listen, we could go on all day because this is a very interesting discussion. There's a lot going on in this sector. And so we want to say thank you very much for spending your morning with us and sharing your thoughts.

Senator Joe Manchin: Thank you.

Senator Lisa Murkowski: Thank you.

Sarah Ladislaw: We appreciate it.

(END)