

GRANHOLM NOMINATION

HEARING
BEFORE THE
COMMITTEE ON
ENERGY AND NATURAL RESOURCES
UNITED STATES SENATE
ONE HUNDRED SEVENTEENTH CONGRESS
FIRST SESSION
TO
CONSIDER THE NOMINATION OF THE HONORABLE JENNIFER M.
GRANHOLM TO BE THE SECRETARY OF ENERGY

JANUARY 27, 2021



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¹ S. Res. 28, the majority party's membership on certain committees for the One Hundred Seventeenth Congress, or until their successors are chosen, was passed on February 3, 2021.

² S. Res. 32, the minority party's membership on certain committees for the One Hundred Seventeenth Congress, or until their successors are chosen, was passed on February 3, 2021.

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GRANHOLM NOMINATION

WEDNESDAY, JANUARY 27, 2021

U.S. SENATE,
COMMITTEE ON ENERGY AND NATURAL RESOURCES,
Washington, DC.

The Committee met, pursuant to notice, at 9:40 a.m. in Room SD-106, Dirksen Senate Office Building, Hon. Lisa Murkowski, Chairman of the Committee, presiding.

OPENING STATEMENT OF HON. LISA MURKOWSKI, U.S. SENATOR FROM ALASKA

The CHAIRMAN. The Committee will come to order as we meet to consider the nomination of the Honorable Jennifer Granholm, the former Governor of Michigan, to be our next Secretary of Energy. I will say, as I am starting off the hearing, I am glad that I have good eyesight because you are a long way away. But welcome to the Committee and those who are joining us virtually.

This is our Committee's first hearing in the new Congress. My gaveling in this morning is perhaps a little bit unexpected as the Senate leaders are finalizing and organizing a resolution. I am still Chairman, perhaps on a technicality here, but I will be handing the gavel over to Senator Manchin in just a few moments. Before I do, I want to just make a couple comments.

First, I want to reiterate what an honor, what a privilege, what a pleasure it has been to chair this Committee. I think we recognize that we accomplished a great deal for our country and we did it in a way that, I think, demonstrates the best of the Senate. We did it in a collegial way, we did it with a bipartisan approach and we did it on issues that are sometimes difficult, but we worked things through the Committee. We worked with our staffs and I want to thank members on both sides. I want to thank staffs who worked hard with us, and I also want to recognize those who are no longer serving on the Committee with us for all that they did to help make sure that good results were going to be possible coming from this Committee.

Second, I want to offer my congratulations and my best wishes to the gentlemen on either side of me here this morning, both of whom are set to assume new roles here. Senator Manchin has been a true partner over the past couple of years. You know, Joe, I never really thought of you so much as my Ranking Member but as more of a co-pilot here. I have great confidence in you and your approach on these important and significant energy issues, and I have truly appreciated and valued the relationship that I have had with you as a Ranking as I did with Senator Wyden, as we were teaming,

and Senator Cantwell as well. I have been truly privileged in the leadership role that I have had on this Committee, both as Ranking and as Chairman, and I appreciate that.

Senator Barrasso is going to be our new Ranking Member. If there are those here in the Senate that I look to and I call my good friend, John Barrasso is my good friend and an extraordinary colleague. I know that the Republican side of ENR is going to be well, well taken care of in your excellent hands. So I am pleased that you are in this role and in this position.

You know, I think we recognize that in these roles you can't pick your counterparts, you can't pick your successors and sometimes it is the luck of the draw, sometimes you may look at it and say, man, that is going to be a headache.

[Laughter.]

But I do feel very, very fortunate to have been able to work with some extraordinary leaders on this Committee and look forward to the leadership that you two will provide in this 117th Congress.

I have plenty to say about today's hearing, but I am going to simply welcome Governor Granholm at this moment. I will reserve my statement until later on, but at this point I will turn to Senator Manchin for his statement. Congratulations, again, Senator Manchin, very soon, officially to be Chairman Manchin from the great State of West Virginia.

What do you say? The little state?

Senator MANCHIN. No, no, no, nothing about little.

[Laughter.]

Great state works.

The CHAIRMAN. All right.

[Laughter.]

Senator Manchin.

STATEMENT OF HON. JOE MANCHIN III, U.S. SENATOR FROM WEST VIRGINIA

Senator MANCHIN. We have all got great states, right, John?

The CHAIRMAN. We do.

Senator MANCHIN. The great State of Wyoming, Oregon, Michigan, Washington, Vermont, and New Mexico. We have the South. The South is well represented, and we just have a great staff. It is a great Committee and it is great on both sides of the Congress.

I want to thank you again, Madam Chairman. I am very grateful for your courtesy in allowing me to preside this morning, even though it is still not official. We understand that changes are coming very quickly, and it is one more example of the kindness and consideration that you have always shown me, the grace in which you have led this Committee, and I am very grateful for that.

I would like all of us to take a moment to thank our Chairman—Chairwoman, if you would—for the great service to this Committee. There have only been two Republicans that have served as long as Senator Murkowski has. In the past six years, she has been the Chair—she served six years as Ranking Member before that, and one other person who did that was her father, Senator Frank Murkowski. So she has kept right up with dad and I would say that maybe, I think—it is a very competitive family. She thinks she has beat him a few times on things. But anyway, we have been ex-

tremely productive in this Committee because of your leadership, and I thank you for that.

We were able to enact not only the first Omnibus Public Lands bill in five years but also the first Omnibus Energy bill in 13 years, and provided mandatory funding for the Land and Water Conservation Fund, and maintenance on public lands. Enacting any of those would have been a mammoth undertaking. We did it in one Congress. It was a combination of the hard work of then-Chairman Wyden, then-Chairman Cantwell from the State of Washington, and everyone working together on this, and also, the Ranking Members you have had.

As Chairman, I look forward to carrying on the Committee's longstanding bipartisanship tradition and ensuring the nation's energy security and the wise use of our natural resources. Even though both Senator Barrasso and I must wait for the Senate to adopt the organizing resolution before we officially assume our new roles, the Committee's obligation to do the public's business does continue. John and I have been able to meet, and the staffs have been getting acquainted. It is going to be a really good transition. You have set a good example for all of us to follow. So I am grateful to you, Senator Murkowski, for convening this hearing this morning to consider the nomination of my friend, Governor Jennifer Granholm, to be the nation's 16th Secretary of Energy.

Welcome, Governor Granholm, to you and to your husband, Dan. I know you very well and have the pleasure of having a great relationship with you, as we were governors together. We have traveled together, and your willingness to serve our country in a higher capacity is just wonderful.

Congress created the Office of the Secretary 44 years ago at a time of crisis when the nation faced severe energy shortages and disruptions. The idea was to consolidate the Federal Government's energy functions in the Secretary's hands so that she could ensure the effective management and administration of the nation's energy policies and programs. But the job is even bigger than that. The Secretary is responsible for overseeing the nation's nuclear arsenal and ensuring that our nuclear deterrent remains secure and effective. You will be responsible for making the fuel that propels the nuclear navy in guarding our nation against nuclear proliferation. You must also manage the world's most challenging environmental cleanup at Hanford and at the Cold War nuclear sites, and oversee our four Power Marketing Administrations (PMAs) which supply electricity and federal dams to customers in 34 states. You will be responsible for leading the world's premier science and technology enterprises, the 17 national laboratories we depend on for the scientific discoveries and technology innovations that we need to meet our energy needs here, and to keep America strong and secure.

I am delighted that President Biden has nominated you, Governor Granholm, for this important position. I know you and your family. We served as governors, as I have said before. You served two terms as Governor of Michigan during an especially challenging time, which I know Senator Stabenow knows very well and remembers very well, in your state's history as it weathered the Great Recession and the collapse of the auto industry. You were up

to that challenge. You helped save the auto industry. You diversified Michigan's economy, brought in new investment and new industries, and created new jobs. Governor Granholm demonstrated in Michigan the vision and leadership that we need to tackle the challenges that we now face at a national level, including tackling climate change, while ensuring no worker is left behind and our energy security remains uncompromised. We are very fortunate to have such a well-qualified and talented nominee for the important position of Secretary of Energy.

I wholeheartedly support your nomination and am very pleased to welcome you to our Committee.

I would like to recognize Senator Barrasso and Stabenow at this point. So, Senator Barrasso, for your opening statement.

**STATEMENT OF HON. JOHN BARRASSO,
U.S. SENATOR FROM WYOMING**

Senator BARRASSO. Well, thank you very much, Chairman Murkowski and Chairman Manchin. I want to thank you both for your leadership of this Committee last Congress—for the productivity, partnership, the friendship and how we all work so closely together. But it was under the leadership of the two of you that really made it all happen, the successful passage of legislation and we had, what, 37 separate Senate bills that are going to work together to boost advanced nuclear power, carbon capture technologies, energy storage, critical minerals, renewables, many other energy sources that might have not been possible had it not been for the combined work of the two of you to make sure that all of the Committee worked together. And Chairman Murkowski, you have such a strong history and tradition of leading this Committee so well.

Senator Manchin mentioned your father had the gavel. I think it was, is it that gavel? Well, you better not pass that one along. That belongs in a museum somewhere in Alaska. But I will tell you, your father could not have done what you have done. We are just so wonderfully proud of the job of this Committee in the bipartisan way you have done it, and you have made all of us proud and Alaska proud. We are grateful for your leadership of the Committee.

I am hoping to follow in your footsteps. You have been on this Committee since 2002 and lead the Republicans since 2009. Thank you for the way you have led the Committee. Over the years we have all had the opportunity to travel together in a bipartisan way to remote areas, to take a look at what was happening with changing climate in some of the most remote locations in Alaska. We have been to Greenland together, to Svalbard, to Northern Norway, all looking at issues related to climate. Senator Cantwell has joined us on those along with Senator Whitehouse, and we are going to continue in that way in the future—working together in a bipartisan way in addressing the major issues.

So I want to continue the partnership that you have had with Senator Manchin, to work closely with him. We met yesterday. We are going to continue working in a very productive way, because energy is the lifeblood not just of Alaska but also of Wyoming and of West Virginia, and in working together we can achieve goals in the Committee.

I do want to thank and congratulate and welcome Governor Granholm to the Senate Energy and Natural Resources Committee. Our nation's energy production benefits every American whether it is power generation from coal, from natural gas, uranium, water, sun, wind, American energy keeps the lights on in our schools, in our businesses, in our homes. It powers our vehicles, our cars and trucks and it helps grow the economy. The future of American energy is ingenuity, investment, invention, and innovation. I think this is something that both parties and everyone up here at the dais agrees on. Recently Republicans and Democrats worked together to enact laws that promote carbon capture technology, support advanced nuclear reactors, provide for more efficient diesel engines and prevent greenhouse gas emissions from air conditioners. These laws are going to pay significant dividends toward reducing greenhouse gas emissions. The end result is cleaner air and lower costs for the American people.

So I look forward to working with Chairman Manchin and members of the Committee to build on this bipartisan record. The country is stronger when we do work together. Likewise, I am ready to work with the Biden Administration to make American energy as clean as we can, as fast as we can, without killing jobs or raising costs on American consumers. The work begins today as the Committee considers the nomination to serve as Secretary of Energy, and we have a long and distinguished history. You and I have had a chance to visit about that and Senator Manchin has mentioned your long history in energy and as Governor.

The Department of Energy oversees the United States' energy supply. It is also responsible for carrying out the environmental cleanup for Cold War nuclear missions, managing 17 national laboratories, among other responsibilities. The Department plays a critical role in keeping American energy and keeping us energy dominant. American energy dominance enables energy security, economic strength and environmental stewardship. I always talk about the three E's of energy which is just that, energy security, economic strength and environmental stewardship. Energy is called the master resource for a reason. It powers our nation, our military, our economy. It is an instrument of power, it is a force multiplier, and it can be used as a weapon of geopolitics. Our nation is an energy superpower, and I believe we need to continue to act like one.

Much of our nation's energy comes from my home State of Wyoming, America's leading energy producer. Wyoming produces coal, oil, natural gas, and uranium. It also has incredible renewables. We are the world wind capital in so many ways. We have world class wind and large wind farms. It also has among the largest reserves of energy resources in the country. We produce 15 times more energy than we use in our state, and it is the biggest net energy supplier among all the states. So energy production is the economic lifeblood of my state. Energy creates good paying jobs for the people of Wyoming. It provides a critical resource of revenue for the state. The incoming Administration should not devastate our economy by implementing policies that undermine energy production. The last democratic administration went on a regulatory rampage to slow or stop energy production. I am not going to sit idly by, or

my colleagues, if the Biden Administration enforces policies that threaten Wyoming's economy and the lifeblood of so many people in my home state. That is why I find some of Governor Granholm's past statements and executive actions troubling.

In 2016 during a public event, the nominee stated, "We ought to do everything possible we can to keep fossil fuel energy in the ground." That makes no sense for America or for Michigan. In 2019, 62 percent of Michigan's electricity generation came from coal and natural gas sources. The bottom line is the United States will need fossil fuels well into the future. Coal, oil, and natural gas are not going away, and America should not leave these assets stranded in the ground. I believe shutting down American coal, oil, and natural gas production will only shut down our country's economy. If you want skyrocketing energy costs and high unemployment, that is how you do it. America needs a broad energy mix—it includes renewable sources, nuclear power and yes, traditional fuels—coal, oil, and natural gas.

Traditional fuel powers three out of five American homes and three out of five American businesses; however, 95 percent of Americans' transportation. If the Biden Administration's nominees intend to block these critical energy sources, then I can't support them or that. We need to find ways to make expensive energy more affordable. The Biden Administration should not insist, as it seems to be doing, on making affordable energy more expensive. As the Governor addresses this, we want to make the Department of Energy successful. It is critical that today you have an opportunity to find your views and demonstrate that you are dedicated to all forms of American energy and expanding America's energy security.

So this hearing gives us an opportunity to hear directly from the nominee, Governor Granholm, and for her to provide more clarity regarding her views, her actions as Governor and her visions for the Department of Energy, and I look forward to the testimony.

Senator MANCHIN. Also, we are privileged today to have our colleague, Senator Stabenow, and then also Representative Upton, to do the introduction for Governor Granholm.

Senator Stabenow.

**STATEMENT OF HON. DEBBIE STABENOW,
U.S. SENATOR FROM MICHIGAN**

Senator STABENOW. Well, thank you very much, incoming Chair Manchin. I want to first just lend my voice and thank our wonderful Chairwoman. Senator Murkowski has really led us through some very important times and important accomplishments, and I congratulate you on not only the accomplishments, but the way in which you lead, and especially in situations where we worked together, tirelessly, to find a way to help the people of Flint. I appreciate very much your partnership in that and your willingness to work hard for us to work through what we needed to do to help people in the lead water crisis in Flint. So thank you, and I am looking forward to working with our incoming Chair and Ranking Member. I appreciate all three of you today, even though the organizing resolution is not official, working together. This is typical of

the bipartisanship on the Committee and of your leadership, Madam Chair. So, thank you, again.

It is really my honor today to introduce my friend and the former Governor of Michigan, and with your support, our new Secretary of Energy, Jennifer Granholm. And as always, her partner in life, Dan, is by her side. It is wonderful to see you, Dan, and we welcome you to the Committee as well.

Right now, our nation faces a whole host of challenges, from getting this pandemic under control, to building back the economy and our middle class, to updating our infrastructure for our clean energy future, to taking steps to solve a climate crisis. These are big challenges, and big challenges require big solutions. That is why Governor Jennifer Granholm is such a great fit to lead the Department of Energy. Governor Granholm knows how to meet big challenges because she has done it before. In addition, I should say, first, during the Great Recession, Governor Granholm's leadership helped rescue the U.S. auto industry and save one million auto jobs. In addition, she helped then-Vice President Biden implement a recovery plan that sparked a clean energy jobs boom to diversify Michigan's economy and made our state a leader in clean energy jobs.

We need more of that right now, and I cannot think of anyone better suited to make that happen than Governor Granholm. She knows how a good job can change a family's future, because she lived it. Her own parents moved to America from Canada in search of better jobs and a brighter future. Better jobs and a brighter future, that is what Americans need right now. We can invest in clean energy and create millions of good paying jobs right here at home in America. We can grow a stronger, more inclusive middle class from coast to coast and in every community in between. We can put our national labs and our user facilities, including Michigan's own facility for rare isotope beams, to work solving our nation's toughest challenges and unlocking the secrets of the universe. And we can take real action to address the climate crisis, an issue that is already harming Michigan's Great Lakes, our economy, and our people.

I have heard it said that the Department of Energy really could be called the Department of Science and Technology, and I know few people who are more passionate about the possibilities of science and technology than Governor Jennifer Granholm. I look forward to supporting her nomination enthusiastically, and I am excited about the new Michigan energy she will bring to the Department of Energy. So I am honored to introduce Governor Granholm and join with my colleague in the House, Congressman Fred Upton, in doing so.

Thank you, Mr. Chairman.

Senator MANCHIN. Thank you. Thank you, Senator Stabenow.

And now we have Congressman Upton for his introduction.

Congressman Upton.

**STATEMENT OF HON. FRED UPTON,
U.S. REPRESENTATIVE**

Mr. UPTON. Well, thank you, Mr. Chairman. It's a delight to join my colleague from Michigan, Debbie Stabenow, but also with you,

with Lisa Murkowski, John Barrasso. I've been to Svalbard too. But so many friends that previously served on the Energy and Commerce Committee in the House.

You know, during my time in the House I've been glad to work with Energy Secretaries from both Republican and Democratic administrations whether it was Bodman or Chu, Moniz, Perry, Brouillette, or Michigan's own Spence Abraham. I could always pick up the phone and call them regardless of party or whether we agreed on the particular issue that it was about. I also know that I've got that same relationship with Secretary Granholm to be, Governor Granholm, when she is, in fact, confirmed by your body.

You know, when she was Governor of Michigan, Jennifer and I worked on a number of things important to both Southwest Michigan, but our state as a whole. Those of us from Michigan know the immense importance of the Great Lakes, both from the environmental and the economic standpoint. My district is on Lake Michigan and I can name dozens of times where we worked together on issues ranging from lake cleanup to beach erosion, harbor dredging, keeping that awful Asian carp out of our lake. But we also worked hand in glove on Harbor Shores project which has helped me to turn Benton Harbor from a distressed community with a history of racial strife into a real tourist destination.

I look forward to continuing that relationship with her as Secretary of high capacity as the Republican leader of the Energy Subcommittee in the House. Our nation is certainly facing a number of very pressing issues in its energy sector. We need to ensure policies that continue down the path of a clean energy economy while ensuring an all-of-the-above approach, fosters innovation, provides a reliable and affordable energy supply. I also look forward to continuing to work with Jennifer and the new Administration in establishing a permanent repository for spent nuclear fuel so we can finally get this stuff off the shores of Lake Michigan. We also need to do all that we can to prevent cyberattacks on our nation's grid.

And Joe, as you mentioned, she and I worked with John Dingle, with Dave Camp, John Boehner, Debbie Stabenow, Gary Peters in both the Obama and Bush Administrations in a bipartisan way to rescue the auto industry. So important, not only for Michigan but for the entire nation as well. You know, we might not always agree on how we can achieve these goals, but I know and I'm confident that our previous experience and partnership will, in fact, allow us to have an open line of communication so that we can work together to solve these very important issues.

And with that, Mr. Chairman, I yield back the balance of my time. Thank you for letting me be present for this very important confirmation hearing.

Senator MANCHIN. Thank you, Congressman. We appreciate it very much.

With that, Governor Granholm, if you would stand, please. We have applied to all nominees a requirement that they be sworn in in connection with their testimony.

If you would, please raise your right hand.

Do you solemnly swear that the testimony you are about to give to the Senate Committee on Energy and Natural Resources shall be the truth, the whole truth, and nothing but the truth?

Ms. GRANHOLM. I do.

Senator MANCHIN. Thank you. You may be seated.

Before you begin your statement, I am going to ask three questions addressed to each nominee before this Committee.

My first is, will you be available to appear before this Committee and other Congressional committees to represent departmental positions and respond to issues of concern to the Congress?

Ms. GRANHOLM. I will.

Senator MANCHIN. Are you aware of any personal holdings, investments, or interests that could constitute a conflict of interest or create the appearance of such a conflict, should you be confirmed and assume the office to which you have been nominated by the President?

Ms. GRANHOLM. There are no conflicts, and I have abided by the Office of Government Ethics' direction.

Senator MANCHIN. Good.

Are you involved or do you have any assets held in a blind trust?

Ms. GRANHOLM. No.

Senator MANCHIN. You may begin your statement.

Ms. GRANHOLM. Great.

Senator MANCHIN. Thank you.

**STATEMENT OF HON. JENNIFER M. GRANHOLM, NOMINATED
TO BE THE SECRETARY OF ENERGY**

Ms. GRANHOLM. Thank you so much, Chairman Murkowski—

Senator MANCHIN. I am sorry, you can introduce your family with you here too.

Ms. GRANHOLM. I will.

Senator MANCHIN. Okay.

Ms. GRANHOLM. As part of my statement, but this, yes, is Dan Mulhern, my great spouse, partner, best friend, et cetera.

Chairman Murkowski and Ranking Member Manchin, soon to be Chairman, and soon to be Ranking Member Barrasso and distinguished members of the Committee, thank you so much for holding this Committee hearing so expeditiously. And I'd like to begin by thanking Senator Stabenow and Congressman Upton for their gracious words. Senator Stabenow has been an ally as we have navigated the struggles of the recession, and Michigan is indeed fortunate to have such an incredibly hard working and indefatigable senior senator. And Congressman Upton, thank you for your words of bipartisanship. I have thoroughly enjoyed working with you over the years and here, too, the people of West Michigan are lucky to have a man of Fred Upton's integrity and intelligence looking out for them.

I introduced my husband, who I want to thank from the bottom of my heart for his love and support as I pursue public service again.

Just a little about me. As Senator Stabenow mentioned, I was brought to this country from Canada at four years old by parents seeking economic opportunity. And as I mentioned when I was nominated, my parents both only had high school degrees. My dad was born into dire poverty in a cabin with no running water in a rural part of Canada. My dad's father shot and killed himself out of desperation during the Great Depression, because he couldn't

find work for himself to support my grandmother and their three children. My dad was three years old at the time. So I bring to this role the sincere belief that we, in America, cannot leave our people behind.

I'd like to share a bit about the focus that I will bring to the Department of Energy, if I'm confirmed. I'll focus on, DOE does a huge number of things, but I want to talk about three missions. First is the security of America through the National Security—Nuclear Security Administration and the cleanup of that Cold War legacy, ensuring that we can protect our nation. Second, supporting the amazing, amazing scientific work that's being done at the DOE's 17 national laboratories and other facilities across the country, including on climate change and emissions reductions. And third, taking that research to scale, deploying it, to create jobs for Americans. And it's that last point that I want to pause on for a moment because I believe I was nominated by President Biden because I am obsessed with creating good paying jobs in America. Having been the Governor of Michigan when the automotive industry was on its knees, I understand what it's like to look into the eyes of men and women who have lost their jobs through no fault of their own. Michigan is a place where workers could have a house and two cars and enough left over to take their family on a vacation, to a cottage on a lake up north, all because they had a good job in a factory and then the bottom dropped out.

The recession and the auto bankruptcies hit and at that time our unemployment rate was the highest in the nation. In Detroit it was 25 percent. And because we had such an auto-dependent state, I knew we had to diversify, both inside the auto industry and outside the auto industry. When I say inside, I mean we built car 1.0. We had to build 2.0, the electric vehicle, including the guts to that vehicle which is the battery and diversifying outside the auto industry we had to create new jobs in new sectors and the most promising of those sectors was in clean energy. And so, we went to work. And today, one-third of all North American battery production is in Michigan. Michigan is one of the top five states for clean energy patents and 126,000 Michiganders were working in the clean energy sector before COVID-19 hit.

This is a sector that every single state can benefit from. The products that reduce carbon emissions are going to create a \$23 trillion global market by 2030. That is a massive opportunity. So we can buy electric car batteries from Asia or we can make them in America. We can install wind turbines from Denmark or we can make them in America. We can allow other countries to corner the market on carbon reduction technologies like carbon capture, utilization and storage or we can put our workers in good paying jobs manufacturing and installing those solutions in America, and we can export them all as well.

So, in talking with you all, thank you so much for the conversations we've had, Democrats and Republicans. I know that you share the belief of making energy in America and, if confirmed, I look forward to working with you to bring good paying jobs to every state and to make sure that no worker gets left behind.

I'm happy to take your questions.

[The prepared statement of Ms. Granholm follows:]

Statement of

Jennifer M. Granholm

**Nominee for the Position of Secretary
of the United States Department of Energy**

Before the

**Committee on Energy and Natural Resources
United States Senate**

January 27, 2021

Chairman Murkowski, Ranking Member Manchin, and distinguished members of the Committee.

Thank you for holding this hearing so expeditiously.

I'd like to begin by thanking Senator Stabenow and Congressman Upton for their gracious words. Senator Stabenow has been a role model for me as we navigated the struggles of the recession; Michigan is indeed fortunate to have such an incredibly hard working and indefatigable senior senator.

And congressman Upton, thank you for your words of bipartisanship. I have thoroughly enjoyed working with you over the years, and here too the people of West Michigan are lucky to have a man of Fred Upton's integrity and intelligence looking out for them.

I want to introduce my husband, whom I also thank from the bottom of my heart, for his love and support as I pursue public service again.

A little about me — I was brought to this country from Canada at four years old by parents seeking economic opportunity. As I mentioned when I was nominated, my parents both had only high school degrees. My dad was born into dire poverty, in a cabin with no running water in a rural part of Canada. My dad's father shot and killed himself out of desperation during the Great Depression because he could not find work to support my grandmother and their three children. My dad was three years old. I bring to this role the sincere belief that we, in America, cannot leave our people behind.

I'd like to share a bit about the focus I will bring to the Department of Energy if I am confirmed.

I will focus on three missions: first, the security of America through the National Nuclear Security Administration and clean-up of our Cold War legacy, ensuring that we can protect our nation. Second, supporting the amazing scientific work being done at the DOE's 17 National Labs and other facilities across the country, including on climate change and emissions reductions. And third, taking that research to scale, deploying it to create jobs for Americans.

It's that last point that I want to pause on for a moment. I believe that I was nominated by the President because I am obsessed with creating good paying jobs in America. Having been the governor of Michigan when the automotive industry was on its knees, I understand what it's like to look in the eyes of men and women who have lost jobs through no fault of their own.

Michigan is a place where workers could have a house and two cars and a enough left over to take their family on a vacation to a cottage on a lake up north — all because they had a good job in a factory.

Then the bottom dropped out. The recession and the auto bankruptcies hit. At that time our unemployment rate was the highest in the nation. In Detroit it was 25%.

Because we had been such an auto-dependent state, I knew we had to diversify, both inside and outside the auto industry. When I say "inside" the auto industry, I mean we had to make car 2.0: the electric vehicle, including the guts to that vehicle, the battery. And diversifying outside the auto industry, we had to create jobs in new sectors. The most promising of those sectors was in clean energy. So we went to work. And today, one third of all North American electric vehicle battery production is in Michigan. Michigan is one of the top five states for clean energy patents, and 126,000 Michiganders were working in the clean energy sector before COVID-19.

This is a sector that every state can benefit from: The products that reduce carbon emissions will create a 23 trillion dollar global market by 2030. That's a massive opportunity! We can buy electric car batteries from Asia or we can make them in America. We can install wind turbines from Denmark or we can make them in America. We can allow other countries to corner the market on carbon reduction technologies like Carbon Capture Utilization and Storage, or we can put our workers in good paying jobs manufacturing and installing those solutions in America.

In talking with you — Democrats and Republicans — I know that you all share that belief, and if confirmed, I look forward to working with you to bring good paying jobs to every state, and to make sure that no worker gets left behind.

I'm happy to take your questions.

Senator MANCHIN. Thank you, Governor.

Normally, the Chairman is entitled to ask the first questions, but since Senator Murkowski is still our Chair, I wanted to make sure that she asks our first questions. Senator Murkowski.

The CHAIRMAN. Thank you, Mr. Chairman. I want all the Committee members to continue to enjoy the fine, clear Alaskan glacier water that we have been providing the Committee for the past couple years. I think we might have some leftovers you can use.

Senator MANCHIN. I hope so.

The CHAIRMAN. Governor Granholm, thank you for being before the Committee. Thank you for the time that you have given me on the phone. I hope these first questions will be pretty easy, pretty direct.

In all of the opportunities that I have to discuss with nominees before any president's cabinet, I ask them about the Arctic because this is an area that, I think, has been overlooked for far too long. My colleagues have noted that I have invited them on some opportunities to see what goes on in the Arctic and to determine then and understand for themselves America's role in the Arctic. In recent years, Alaska and the Department of Energy worked together to advance energy security in the Arctic. Last year we got funding to revive this Arctic Energy Office that I shared with you. This is going to be a key initiative in advancing things like the microgrids, the new technologies we are looking to, to mitigate the impact of climate change in the Arctic as well as to reduce costs.

So what I would like from you publicly this morning is your commitment to remain engaged with these issues ensuring that the Arctic Energy Office continues with its purpose, but also recognizing what the National Renewable Energy Lab, NREL, has done in concert with the Cold Climate Housing Research Center that exists, the partnership then that comes with that to explore and understand cold climate technologies, maintaining that energy security. I would just like your commitment to have a focus in these areas.

Ms. GRANHOLM. You have that commitment.

The CHAIRMAN. Very good. We look forward to that and to the opportunity to demonstrate the advantages of the pioneering going on in cold weather, weather climates and America's energy security.

You have mentioned security for America. We all want that. We all understand that. We all want to move to cleaner energy technologies and one of the strong initiatives that came out of our Energy Act of last year that was passed into law, was the effort that I had led along with Senator Manchin here, our Mineral Security Act. This, to me, is as significant as anything going forward. When we think about vulnerabilities and American security, because as you speak to the opportunity to build those wind turbines here, to do more with all clean energy technologies, if we don't have the guts, to use your term, if we don't have the minerals to build these because we rely on China, because we rely on other countries that are, perhaps, not reliable friends, this places us in a vulnerable position.

What I would ask of you this morning is to share with the Committee how you believe that our mineral security is a national secu-

rity imperative as well as an imperative in terms of what more we can be doing as a nation to provide for those jobs that you are talking about. This can be contentious because there are some people that don't want to dig that hole, that don't want to mine for the resource here because they don't like digging the hole. But the reality is, is that resource is necessary to make that next step for that clean energy economy that you are talking about. So if you can please address——

Ms. GRANHOLM. Yeah.

The CHAIRMAN. —our mineral insecurity and what that means for us.

Ms. GRANHOLM. Thank you, Senator, for the question.

I think it is a very important question if we are to build the supply chain, for example, for batteries. As one example, if we allow for China to corner the market on lithium or for the Democratic Republic of Congo to be the place where everybody gets cobalt, when there may be child labor or human rights violations associated with that supply, then we are missing a massive opportunity for our own security, but also for a market for our trading partners who also may want to have access to minerals that are produced in a responsible way. And responsible way is an important thing to mention. We know that we can mine in a responsible way, but I do think it's really important for us and thank you for your leadership on the Energy Act, because there was direction to the Department of Energy to work on this issue of critical minerals and rare earths which I am very enthusiastically supportive of for both jobs and energy security and supply chain security in the United States.

The CHAIRMAN. Thank you, Mr. Chairman.

Senator MANCHIN. Thank you, Senator.

Governor, if you could, just basically explain your thoughts about energy independence and the importance of the United States of America to be energy independent. This includes using all-of-the-above energy in the best fashion, cleanest fashion, and technology that we may be able to produce.

Ms. GRANHOLM. Yup, thank you, Senator. I really appreciate this question, because I do think that we should be energy secure and I do think that we should be doing it in the cleanest way possible. And so, this is where the Department of Energy comes in and, if confirmed, I want to work with you to continue to push on carbon management solutions that get to the goal of net zero carbon emissions by 2050. And if you look at the internet—Intergovernmental Panel on Climate Change, they have said that you can't get to that goal of net carbon zero without technologies that are being deployed and researched at the Department of Energy like carbon capture, use and sequestration, like hydrogen solutions, like direct air capture. There is a series of technologies that the Department of Energy is working on to reduce and manage carbon emissions. And I think that is an important piece of the energy mix to make us secure and to have us reach the goal of net zero carbon emissions by 2050.

Senator MANCHIN. Also, you know, there are an awful lot of states that have been heavy lifters for many, many years. We have Senators from Wyoming, Alaska, Michigan, and West Virginia,

whose states have done the heavy lifting to get the country where we are today. And I think we have talked previously about this, people feel like they have been left behind. So in those areas that have been ravaged because of the market changes, the market is changing. We know that, and people are coming to realize that. How do we keep them in an opportunity situation? What have you seen that the Department of Energy could help us with?

Ms. GRANHOLM. Yeah, this is the most important question, honestly, Senator Manchin, because we know that this transition is happening and we cannot leave our people behind. And this technology, the ability to, not just research it, but to take it to scale. I mean, for example, you look at blue hydrogen, for example, taking natural gas and from it creating hydrogen that is clean. Well, that hydrogen requires equipment and the equipment has like steam methane reformers. Who is making that equipment? If we are getting that equipment from another country, we're missing an opportunity to put our people to work.

So in West Virginia and in other coal states and other fossil fuel states, there is an opportunity for us to specialize in the technologies that reduce carbon emissions to make those technologies here, to put people to work here and to be able to look at other ways to diversify as well. And if I could just say a word, I mean, Michigan, obviously, had relied, has relied for 100 years on the internal combustion engine which is powered by fossil fuels. And when the recession hit and the bottom dropped out, you know, and there were senators and leaders from Michigan for years who had battled CAFE standards because we wanted to protect our industry. I totally get that. But as we say in Michigan, in deference to the Detroit Redwings, you know, Wayne Gretzky has said, "You skate to where the puck is going." So we saw where the puck was headed and the puck was headed toward cleaner solutions.

And so, we weren't going to abandon the automobile, but if we could make the next generation of automobile and be successful at it, that is an opportunity for job creation. And now, as I mentioned, 126,000 people in Michigan are working in clean energy where they had not before. So my point is, these place-based solutions to be able to take advantage of expertise and comparative advantages of states and build on that to allow them to diversify inside and outside their main industries is a partnership that we could have through the Department of Energy.

Senator MANCHIN. I have one more question, if you could. As the transition is happening, as we know, would you be supportive—because there is an awful lot of money that is going to be put toward the Department of Energy for research and development. Any of this type of research development and new technology and manufacturing tax credits incentives—would you be supportive of having a priority for those jobs, or that money, being used in the states that lost traditional jobs that have carried this country?

Ms. GRANHOLM. A thousand percent, yes.

Senator MANCHIN. That is all I need.

Thank you, Madam. Thank you, Senator.

At this time we have Senator Barrasso.

Senator BARRASSO. Thanks, Senator Manchin.

Just to follow up on Senator Manchin's first question, a series of short questions. If you would just, kind of, respond briefly.

The United States is the world's largest oil and natural gas producer, just a fact. On balance is that a good thing or a bad thing?

Ms. GRANHOLM. It is a good thing, and I look forward to working with you to make sure that it's clean and reduces GHG emissions.

Senator BARRASSO. And the United States has, if not the lowest, then among the lowest energy prices in the developed world. Again, on balance, a good thing or bad thing?

Ms. GRANHOLM. Good thing, of course.

Senator BARRASSO. Jobs in oil, natural gas, and coal sectors pay well above the national average. On balance, good thing?

Ms. GRANHOLM. Good thing, of course.

Senator BARRASSO. Largely because of hydraulic fracturing U.S. emissions are now at the lowest level since the early 1990s. On balance, good thing? Bad——

Ms. GRANHOLM. Yes.

Senator BARRASSO. And U.S. oil exports, natural gas exports, coal exports to other countries make us influential suppliers in the global energy markets. Good thing? Bad——

Ms. GRANHOLM. It's important to be influential in the global energy market, yes.

Senator BARRASSO. So last week the Biden Administration issued a 60-day ban on oil, gas, coal leasing, and permitting on federal lands and waters. Now half of the State of Wyoming is federally-owned. Alaska, it is a lot higher percentage than that. Did President Biden or his advisors seek your counsel on the ban?

Ms. GRANHOLM. I knew that it was coming. It was part of the campaign promise of President Biden.

Senator BARRASSO. Did you encourage him to issue the ban then?

Ms. GRANHOLM. I didn't have a specific conversation with him about it myself.

Senator BARRASSO. Yes a long-term ban on oil, gas leasing is going to cost about 62,000 jobs in New Mexico, and we have the Senator from New Mexico here; about 33,000 jobs in Wyoming; 18,000 jobs in Colorado. A long-term ban is going to cut revenues to New Mexico and Wyoming by hundreds of millions of dollars which these states use for K-2 public education and other essential services. I am just curious how a long-term ban is consistent with the President's goal of unifying our country and putting Americans back to work and helping our economies grow, how is that all consistent?

Ms. GRANHOLM. I think the President's plan of building back better which would create more jobs in energy, clean energy, than the jobs that might be sacrificed. But I will say this, no job, we don't want to see any jobs sacrificed. And that's why this, when you opened up your remarks, sir, your remarks about technology were so important. This is why reducing GHG emissions is so important on, in the fossil fuel arena. The moratorium on public lands, I know, for those states that have these jobs in abundance, this is something we're going to have to work on together to ensure that people remain employed.

But I will say that the licenses that currently are operating are not going to be disrupted. They will continue to operate. Then the

oil and gas industry, in particular, they've got 10,000 licenses that they have and that will not be disrupted that they can continue to permit and deploy and extract energy from. It is only on future licenses that this moratorium is. So it gives us some time to be able to work on creating jobs and diversifying and providing good paying jobs in every pocket of the country. And to Senator Manchin's point, I know that part of what Joe Biden has put together is a, sort of, SWAT team inside of the Federal Government to focus on communities that are, that have powered America and to make sure that we don't leave those workers behind.

Senator BARRASSO. In 2016 you stated the U.S. should, "Do everything we possibly can to keep fossil fuel energy in the ground." Do you stand by those remarks? Do you want to comment related to that?

Ms. GRANHOLM. Yeah, I think it is important that as we develop fossil fuels that we also develop the technology to reduce greenhouse gas emissions.

Senator BARRASSO. In December 2020, December 29th, just a little over a month ago, USA Today published an Op Ed entitled, "Jennifer Granholm's Energy Record in Michigan Should Frighten America." The Op Ed alleges that as Governor you directed hundreds of millions in taxpayer dollars to battery, solar, and other green energy companies that failed to deliver on their job creation promises. One of the highlights, you talked about one of the examples was A123 Systems, an advanced battery company, promised to create 3,000 jobs. In 2009, the Obama Administration awarded A123 Systems a \$249 million grant. Your administration provided more than \$141 million in credits and subsidies. In 2012, they filed for bankruptcy, were later bought by a Chinese company, restructured in federal bankruptcy court and stopped manufacturing in Michigan altogether. In short, American taxpayers spent close to \$400 million to subsidize a technology transfer, basically, to the Chinese.

So based on this record, could you provide us something in terms of what confidence we should have, if you are confirmed, that you will be able to invest U.S. taxpayer dollars wisely?

Ms. GRANHOLM. Thank you, Senator.

First, that article is incorrect. In Michigan we have something called the Michigan Economic Growth Authority that offers tax credits to firms that promise to build, create a certain number of jobs, but if they don't, they don't get the funds. And so, in Michigan, because of the way that tax credit is structured, that's—we don't pay out if firms don't deliver. I'm really proud, actually, of my record in Michigan in terms of seeding the area for battery technology. As I say, one-third of all battery facilities now in North America are in Michigan as a result. We should not be wasting taxpayer dollars. There's no doubt about that.

And the money that was the Loan Guarantee Program that the Loan Program Office at the Department of Energy was/is responsible for, they too, in fact in Michigan, for every dollar in tax credits that we put out, we got \$2.30 back in investment. And that's the kind of return that we should be looking for. The taxpayers of the United States have received \$500 million back from the loans that the Loan Program Office has given out. And I hope that we

don't look at some failures along the way as a reason not to invest in technologies that banks are not going to invest in because they haven't been deployed yet.

And this is why, I think, the Loan Program Office is a huge opportunity for all of your states to be able to see technologies deployed and to—unfortunately, I think the idea that the government's incentives are not, because there may be one or two issues where the companies themselves, for market reasons or because China has come in and bigfooted in some way. Those should not be reasons why the U.S. does not get in the game. You better, we better believe that China is in this game. They are aggressively competing. States, individually, are bringing a knife to a gunfight and without a federal partner in making sure that we can get these jobs in America, then we will be losing globally. So I hope that we can work together to ensure that the Loan Program Office and the state programs across the country are successful and are supported and in partnership with the private sector to make sure that we create jobs for people.

Senator BARRASSO. Thank you, Mr. Chairman.

Senator MANCHIN. Thank you, Senator.

Senator Wyden.

Senator WYDEN. Thank you, Senator Manchin.

And Governor, welcome. It is a pleasure to have you on a day when the Biden Administration is coming out swinging on climate change, and as Governor you worked relentlessly on this issue. So clean energy can create more high skill, high wage jobs. And it is jobs that I am going to focus on.

After Oregonians battled brutal wildfires in the Fall of 2020, I was asked often about my 21st Century Civilian Conservation Corps legislation that would put thousands of people to work in the woods in a dozen ways that address the effects of climate change. Now we learned today that the President is considering creating a Climate Change Corps which is on the same page as our discussion in the Pacific Northwest. Now at the Department of Energy, you would have the ability to do daring, cutting-edge research that can arm our climate change and conservation fighters with the smartest, science-based strategies for reducing carbon in our communities. I know you are up for this, and I would like to hear a little bit about your thoughts.

Ms. GRANHOLM. Yeah, well, thank you for that, and I'm very excited to be able to take technology to scale. So for example, off of the West Coast and Alaska, and Senator Murkowski and I talked about this as well, and in Washington State, you've got an amazing coastline and you've got amazing waves. And so, to have offshore wind be an opportunity for us to gain clean energy is huge, but in—but the shelf is very steep. And so, the next wave, potentially, of technology for offshore is perhaps on platforms, perhaps there are platforms that have been built by those who also built oil rigs. So there's an opportunity for diversification or hydrokinetic energy, wave power, another technology that, I think, would put people to work whether it's the Climate Corps, which I'm very excited about as well, or people who have been displaced by the changes to our economy.

The bottom line is technology, whether it is wind or next generation solar or utility scale battery technology coming out of the laboratories or battery technology for vehicles or geothermal or you name it, it is very exciting to be able to imagine not just the idea, but the deployment of this technology that puts people to work and generates clean energy.

Senator WYDEN. I have another question, but I just want to make it clear that I think the important work that is being done on climate, our 21st Century Civilian Conservation Corps, is an ideal fit with the cutting-edge research that you are doing at the Department of Energy that will arm our climate warriors and mobilize our communities to help us reduce these horrendous fires that we are seeing.

I am going to turn to the issue of Hanford. As you know, Senator Cantwell and I care deeply about this issue because the Columbia River, which Hanford adjoins, is our lifeblood. And here is the problem. We have spent billions and billions of dollars to turn the toxic waste into material that can be stored safely, but not a single ounce of waste has actually been treated. And so what happens is we have all these failures, and then what happens is people just kind of kick the can down the road. So we have talked about approaches like new tanks to temporarily secure the waste, or something called grouting which keeps the waste in place. We need to really have a concrete, specific game plan to complete this decades-long effort and actually deal with the safety of the people in Oregon and Washington, in particular. Senator Cantwell has been doing good work on this for years, and we work in partnership on it.

Your thoughts? What are we going to do to finally deal with safety and protect the people in the Northwest against, basically, what has just been a kicking the can down the road strategy?

Ms. GRANHOLM. Thank you, Senator Wyden, and thank you, Senator Cantwell, for your discussion with me yesterday on this as well. I am well aware this is the largest and longest cleanup project that has occurred.

Senator WYDEN. It is the longest running battle since the Trojan War.

[Laughter.]

Ms. GRANHOLM. And you were right that we cannot kick it down the road, that we have to take steps every single year to address this issue. I know it is complex and I appreciated the conversation that I had with Senator Cantwell yesterday in discussing some of the steps that have been taken, but there are so many more that need to be taken. So you have my assurance, both of you, that this is going to be a priority. I know that every Energy Secretary who has come up for confirmation is asked this question and they all say it is a priority and I know it is complicated, but I also know that we have seen some positive steps in the past few years in terms of carving out pieces, taking care of the most, the lowest hanging fruit. We still have some very difficult, highly radioactive waste that we have to deal with, but the bottom line is I will make sure that this is high level in the Department and I look forward to working with you on it.

Senator WYDEN. Hearing that it is urgent business for you is what the people of the Pacific Northwest want to hear.

Ms. GRANHOLM. Urgent.

Senator WYDEN. Thank you.

Senator MANCHIN. Senator Lee.

Senator LEE. Thank you, Mr. Chairman.

Governor Granholm, it is good to see you today.

Ms. GRANHOLM. Thank you.

Senator LEE. Thanks for visiting with me briefly yesterday.

I wanted to continue to talk to you a little bit about some energy policy issues, some issues that would fall in front of your portfolio, if you were to be confirmed to this position. As you know and as we discussed briefly yesterday, I think, the Department of Energy has an entity called the Office of Fossil Energy. That office plays a significant role in, among other things, approving the export of natural gas from the United States. If a company wants to export natural gas to another country, a country with whom we don't have an established trade agreement that is applicable, then they have to go through the Office of Fossil Energy and they have to make a public interest determination before allowing them.

What can you tell me about how your climate considerations might be factored into that analysis, if you were confirmed, and would climate change considerations impact your determination specifically with regard to LNG exports?

Ms. GRANHOLM. Yeah, I mean, the Natural Gas Act of 1938 dictates the requirements and the considerations and I would certainly abide by that Act, including issues related to whether something is in the public interest, what the economic, what the geopolitical concerns are. I would abide by the direction that Congress has given through the Natural Gas Act.

Senator LEE. Okay, let's talk about how those determinations might work. I suppose that in many instances foreign consumption of American produced LNG would probably serve our geopolitical interests, would they not?

Ms. GRANHOLM. Yes, if, for example, I know that some Senators are interested in this in the smaller exports to island nations that might be using pure coal or diesel, et cetera, it might lower the greenhouse gas emissions for those countries. And I would say I would also want to work with the natural gas providers to see if we can continue to reduce greenhouse gas emissions at the point of production.

Senator LEE. In other words, American natural gas might well be a lot cleaner than whatever else they would otherwise burn, is that—

Ms. GRANHOLM. Yes, in terms of emissions, that's true.

Senator LEE. Yes. Do you think the Department of Energy ought to play some role in promoting American energy abroad?

Ms. GRANHOLM. Yes.

Senator LEE. Let's talk about some issues related to mining, really quickly. Although you are not as involved in mining as the Department of the Interior would be, the Department of Energy does have a significant role to play there.

Mineral markets of all sorts have been suffering as a result of a variety of factors, some of them regulatory, some of them cyclical and economic, some of them related to restrictions on access to federal lands where we have a lot of minerals. So for example, ura-

mium producers, in 2019, produced around 173,000 pounds of domestic uranium concentrate, or U308. This is the lowest domestic production, as I understand it, that has occurred since before 1949. In order to boost domestic uranium production, the Trump Administration requested \$150 million to establish the Uranium Reserve Program. Congress allocated \$75 million to that program, but it appears that the work has not yet commenced. This is a significant issue for the uranium industry, but it doesn't appear to address some of the reforms that might be necessary to help the mining industry as a whole.

Do you have any ideas on how you would intend, if you are confirmed, to implement the Uranium Reserve Program at the Department of Energy?

Ms. GRANHOLM. Right, I certainly would abide by the direction of Congress. I know that there is that \$75 million there and, I think, you know, broadening the scope of your question to include other critical minerals. I was saying earlier that I think that these minerals can be mined in a responsible way, in a way that respects the environment but it also serves to shore up our ability to produce products, like batteries, for markets internationally. And we don't want to be at the—under the thumb of China or other countries that may have, as their geopolitical strategic interest, to corner the market on critical minerals.

We need to be independent. And so, I'm eager to work with folks on all sides of the aisle to make sure that the United States has its own critical supply.

Senator LEE. Thank you.

Thank you, Mr. Chairman.

Senator MANCHIN. Thank you.

Senator Cantwell.

Senator CANTWELL. Thank you, Mr. Chairman. I would be remiss if I didn't say something about Senator Murkowski's comments this morning and working with everybody. There is a great article in the Seattle Times this morning about the Smart Grid legislation that we worked on together, and so it is good to know that people are finally seeing the remnants of that legislation that you worked so hard on, that we all worked so hard on, actually become law. Now people in the community are realizing how we can take it and move it forward. So hopefully you will get a chance to check that article out.

Governor Granholm, congratulations on your nomination. You have already, I can see just from the few questions you have had, gotten a sense of the vast issues of energy policy and challenges facing America. You and I had a chance to talk about Hanford, but I just wanted to reiterate it being one of the largest cleanup projects in the entire world. Hanford is the Federal Government's second largest obligation after Social Security and Healthcare. So it is frustrating, as I mentioned to you often, that administrations come in and try to do it, and cut corners or do something. Last year the Trump Administration proposed funding at 46 percent below what DOE said was needed for the Tri-Party Agreement compliance. So I hope that you can commit to putting forth a budget that helps DOE keep its milestones that are laid out as part of a Tri-Party Agreement. Do you commit—

Ms. GRANHOLM. You have my commitment.

Senator CANTWELL. I am sorry, I——

Ms. GRANHOLM. I said—I'm sorry, I talked over you. Pardon me. I said you have my commitment.

Senator CANTWELL. Thank you.

Well, a lot of people at home are listening. I just want to make sure people heard that.

Ms. GRANHOLM. Yes, I get that.

[Laughter.]

Senator CANTWELL. In addition, I want to give credit to Secretary Brouillette, because he and his team did make significant progress on the construction of the facility that Senator Wyden was commenting on. So one of the next challenges will be to meet a 2023 Tri-Party Agreement deadline of getting that facility online. I hope that is something that we can meet, and I hope that you will come to the Tri-Cities as soon as possible to see this facility.

Ms. GRANHOLM. I'd very much like to do that.

Senator CANTWELL. Thank you.

As far as workforce safety, that is a major issue at Hanford. The HAMMER facility helps the training and skilling of a workforce to continue to be ready to meet all the challenges at Hanford. I hope you will commit to supporting that.

Ms. GRANHOLM. Yes.

Senator CANTWELL. And then, just in the debate or conversation we have just been having, you know, our national laboratories play a pretty big role in the next generation of energy policy and enabling one, in particular, project. The Grid Storage Launchpad at the Pacific Northwest National Laboratory is really important in doing the next level work on commercialization of long duration grid-scale storage at one-tenth of the cost of today's lithium-ion batteries. So I hope that these projects at our national laboratories, like Grid Launch, will be priorities for you, and so will the funding.

Ms. GRANHOLM. Absolutely, very excited about it.

Senator CANTWELL. Great.

Thank you, Madam Chair.

The CHAIRMAN. Who is next? Senator Cassidy? [Off mic.]

Sorry for that slight delay. Senator Cassidy, you are online, please go ahead.

Senator CASSIDY. Thank you, Madam Chair.

Governor, thank you again for our phone conversations. I enjoyed them. And I know that you and I have discussed this, but for the benefit of those whom I represent, I would like to go over some of the same things we discussed because I think there is, kind of, a question before the American people. Does the Biden Administration actually care about their jobs? You had mentioned, in response to Senator Barrasso, that the Biden Team will have a SWAT team to make sure that folks are employed. I am thinking they have a SWAT team to take out some jobs.

The Keystone XL pipeline, 11,000 people either fully or partially employed, obviously unemployed. And you had mentioned that ideally we would replace those with green jobs. Mr. Buttigieg, when he was in testimony yesterday, admitted that those jobs will not come online quickly. Gina McCarthy in another interview said that the American people have sacrificed enough. We should not ask

them to sacrifice more. So how do we square the fact that we are killing 11,000 jobs now, that there will be some, assuming that they are replaced with green jobs, that there will be some lag time there and yet, supposedly, the American people are not being asked to sacrifice anymore because they have suffered too much already?

Your thoughts on that, please?

Ms. GRANHOLM. Yes, thank you, Senator.

I, and I know Senator Stabenow feel this, I totally get the concern about job losses, totally, but this is why President Biden's commitment to create millions of jobs in infrastructure——

Senator CASSIDY. How quickly will those jobs form though? Mr. Buttigieg concedes that they may not come online for maybe years. And if you have lost a job that is putting food on your table now, it is cold comfort to know that years from now, perhaps in a different state with a different training within which you have, there will be another job available.

Ms. GRANHOLM. Yeah, I completely understand what you are saying. What I can tell you is from my experience in Michigan is that when we focused on providing incentives for job providers to locate, in Michigan, in clean energy, they came. I mean, you know, Senator Manchin and Senator Stabenow have 48C which is, which they hope will be able to be plussed up to entice job providers into communities that have been left behind. So this is why——

Senator CASSIDY. So let me—I am sorry, because I have limited time.

Ms. GRANHOLM. Yeah.

Senator CASSIDY. I see where you are going with that, but obviously, there is going to be a lag time and it may happen, it may not happen, but those folks will not have a paycheck next week.

As we all know, oil and gas is used not just for fuel, but also for feedstock for the plastics. You are sitting at a desk which is covered with some plastic to keep it from being scratched. It is probably built with certain glues that are made from the feedstock from oil and natural gas. So is it someplace, something we agree on that if there is decreased supply that prices typically would increase for oil and gas?

Ms. GRANHOLM. The rules, the economic rules suggest that when the supply goes down, the price goes up.

Senator CASSIDY. So one thing that has been just so remarkable in South Louisiana and across the Gulf Coast is there have been companies moving, reshoring, to take advantage of low-cost natural gas and our workforce in order to build those plastic lubricants and chemicals that ship worldwide creating jobs here and done with our environmental standards, not those of other countries, which are far worse, so net global greenhouse gas emissions are lowered.

My concern is that if we decrease the supply of natural gas and oil from the United States, we either have to import it or we become less competitive because our domestically-produced products are now higher because of a lower supply. Is there anything faulty with that logic?

Ms. GRANHOLM. The only thing I would say, sir, is that we would want to increase the pie of energy feedstocks. And so, as we consider what our energy sources are, diversifying and adding new sources——

Senator CASSIDY. But if we speak not of energy feedstock, but we speak of a feedstock for a lubricant, a plastic, a resin, we could grow it from corn, but then you have to have more fertilizer which is made with methane, in order to have greater yield. Again, is there, with that, not speaking of energy for fuel, but rather that for feedstock, was there anything wrong with my logic?

Ms. GRANHOLM. Well, here's what I would say, sir. I know you and I spoke about this, the opportunity to, and separate from cost, the opportunity to provide these products as well as energy in a way that reduces greenhouse gas emissions is there, if we take this technology to scale. So you and I spoke, I mean, slightly separate, you and I spoke about this idea of blue hydrogen and how the push boats along the Louisiana coast might be, for example, a pilot for that kind of technology. I would love to work with you on that to ensure that people are put to work, but in a way that reduces greenhouse gas emissions. I think that's true for the feedstock for products as well.

Senator CASSIDY. I thank you for that. I am out of time. I will thank you for that commitment to, kind of, seeing what we can do, but I will say that if we have less supply of natural gas and oil, we will buy it from other countries creating jobs there while we destroy jobs here.

Thank you, Governor. I appreciate it, and I yield back.

Senator MANCHIN. Thank you, Senator.

Senator Sanders, I understand, is on a call, but he will be returning. Is that correct? If so, we will go to Senator Stabenow.

Senator STABENOW. Thank you very much. I appreciate, Governor Granholm, your mentioning 48C, which is a tax credit in the 2009 Economic Stimulus package which I authored—a 30 percent tax credit for retooling or creating clean energy manufacturing—and things just exploded in Michigan. A lot of what we saw came from that, and I am so pleased to be partnering with our incoming Chair, Senator Manchin, to focus this on particular states where there has been this transition, where it is so hard moving from fossil fuels, from coal, from jobs that are not there, are not going to be there and how to get new jobs as quickly as possible. I know that what we did then created jobs, actually, much more quickly than I thought. And so, I am anxious to put those kinds of things in place as quickly as we can.

Not surprisingly, I want to talk to you about vehicles and the enormous task of making the next generation of vehicles. We know that Michigan auto workers are ready, willing, and able to do that, as are the manufacturers, and, in fact, GM is investing \$27 billion to bring 30 different EV models to the market in the next four years, including trucks. Same thing with Ford, investing \$11.5 billion. I could do an ad and go through all of the models, but I won't. Stellantis, formerly FCA, is doing the same with electrifying their popular Jeep line. So I am very excited to work with you, and to work with the President, on building back better on this plan.

I will say one thing though, as we look at our investments, I am glad we are making these investments. You mentioned China, and the red flag over and over again is what is happening in China on EVs, over \$100 billion in subsidies they have given, just in the last ten years. Of the 142 lithium-ion battery megafactories that are

under construction, 107 are in China, and only nine are in the U.S. We can't sustain this. We have got to lean in much more quickly.

So what role do you believe the Department of Energy can play in ensuring a number of things—our workers have the skills they need for high-tech auto jobs, our states can build the public charging station infrastructure—which, I think, is really critical now to consumer confidence and availability in purchasing electric vehicles—and then also, working with our universities and our industries to develop the new battery storage technologies for vehicles and renewable electricity?

Ms. GRANHOLM. Great, thank you, Senator. I'm so enthused by the numbers of, the amount of investment that's happening by the domestic auto industry when during the recession we were just—

Senator STABENOW. Right.

Ms. GRANHOLM. —you know, begging for them to survive. And as the proud driver of a Chevy Bolt, it's my second Bolt, best car ever. I just love these electric vehicles. I drive on sunshine. I have solar panels on my roof and plug the car in. It's just amazing. And I hope we can have universal acceptance and deployment of EVs. Obviously, the charging stations are a necessity so that people still do, have range anxiety and we want to make sure people can drive from coast to coast and stop everywhere in between and feel like they're not jeopardizing their freedom of mobility.

Part of what Joe Biden's Executive Order was today was to create a whole of government effort with respect to, especially electric vehicles, charging. I will look forward to working with Mayor Buttigieg to make sure that those charging stations are installed along the rights, the federal rights-of-way along highways, et cetera. And just as sort of a separate matter from that, I think it's important for us to think about digging once and also potentially using those rights-of-way if we have to ground grid transmission wires or if we have to, if we would like to get broadband to rural communities. Those are opportunities while that is happening.

The 17 national labs, obviously, are working in tandem with many universities across the country to create that next generation of STEM workers. You talked about the importance of a trained workforce, both the folks who are in the factories as well as the folks who are designing the vehicles. That's DOE's bread and butter, and those 17 labs are the jewels, and I'm so proud of that FRIB facility in Michigan attached to Michigan State University. And the battery technology, that too, is being done at, distributed throughout the lab system and it's for vehicles, but also energy, excuse me, utility scale energy storage is also being worked on. And again, we have to build those batteries soup to nuts, not just assemble the cells that come from Asia, but build the actual cells themselves inside the United States to make that full supply chain happen.

I just want to say I really applaud this Committee for the Energy Act of 2020, because there was so much in there that demonstrates bipartisan support for these new technologies that I think this Committee can be an example of unity for the country based upon the work that was done at the end of last year.

Senator STABENOW. Thank you.

I know I am out of time but rather than ask another question I am just—

Ms. GRANHOLM. Sorry——

Senator STABENOW. No, that was excellent. I would just say that we know that medium- and heavy-duty vehicles make up 22 percent of the energy use in our transportation sector. Commercial trucks contribute 60 percent of the air pollution in metropolitan areas and so on. So I am a huge advocate and proponent of the SuperTruck program and the Department of Energy has pushed to continue to expand that. That is where we can tackle this area around energy and carbon pollution the most, and I know that the Department is set to enter the third iteration with the SuperTruck 3 program. I think it is very, very important that we be focusing on emissions from larger vehicles.

So thank you.

Ms. GRANHOLM. Agreed, and I look forward to working with you on that.

Senator MANCHIN. Senator Hyde-Smith.

Senator HYDE-SMITH. Thank you, Mr. Chairman.

Governor Granholm, congratulations on this nomination, and I certainly welcome you and your husband today to these hearings.

Mississippi has a significant energy infrastructure, including the largest U.S. nuclear power reactor in terms of generating capacity, a large petroleum refinery and natural gas processing plant and a liquified natural gas terminal located on the state's Gulf of Mexico on our coastline. And referring to the moratorium from the White House on new oil and gas leases on federal lands and waters, the Gulf of Mexico is one of the nation's most important regions for energy resources and accounts for a large portion of our crude oil in federal, offshore natural gas production.

Mississippi, as I said, we have a substantial energy infrastructure which provides thousands of jobs and hundreds of millions of dollars in economic output through our ports, refineries, processing plants and things like that. While I understand the responsibility for carrying out this executive action is not solely the Department of Energy's responsibility, but it is the responsibility of the Department of Energy for overseeing the United States' energy supply. The Department of Energy has so much to do with this right now that you will be leading. Do you support this moratorium on oil and gas leasing and what am I to tell my constituents, the fossil fuels industry, to assure them that their jobs, their job security, they are secure in that gas prices will remain stable and U.S. energy independence will continue in the years to come? What am I to tell my constituents that are depending on this?

Ms. GRANHOLM. Thank you, Senator.

Two things I would say briefly. One is that the moratorium on leases is prospective. It does not apply to those who are currently operating. Offshore, I believe there are the oil and gas industry has 12 million acres of offshore ocean water that is under lease, but they're only using half of that or maybe even 3 million of the 12, but there are 10,000 leases that are unused. So my point in saying is, is that the Biden Administration is not going to take their jobs away on existing leases. That's true onshore as well, 26 million acres of public lands that are under lease, but only half of that is being used. But that's the first thing.

The second thing is, this gives us time to be able to work on the technologies that reduce greenhouse gas emissions that will keep people employed and even the oil and gas companies themselves have taken on net zero carbon emission goals. They are considering themselves, many of them, energy companies now and not just oil and gas companies. They see where the puck is going, if you will. And so, I want to work with you to make sure that people remain employed, that we look at Mississippi as an opportunity to take advantage of some of your other amazing assets like the forests, the cellulosic biofuel opportunities, et cetera, in addition to making sure that the technologies that are being researched in the labs of the Department of Energy are taken to scale and deployed so that we can continue to produce energy.

Senator HYDE-SMITH. My concerns are those that are Senator Cassidy's concerns as well. You know, there are things out there that we know you are focused on, but the timeframe of these people that would be unemployed to that time is my greatest concern. So I look forward to working with you on that.

Ms. GRANHOLM. Thank you.

Senator HYDE-SMITH. Thank you, Mr. Chairman, and I yield.

Senator MANCHIN. Senator Heinrich.

Senator HEINRICH. Thank you, Mr. Chairman. It is a pleasure to call you that.

Senator MANCHIN. Thank you.

Senator HEINRICH. And I should say thank you to our former Chairman, who it has been a real pleasure working with, and I look forward to working with in the future.

Governor, congratulations, and thanks so much for meeting with me yesterday. I especially want to thank you for offering to come out and take a look at our national labs in New Mexico. You did that of your own accord. I usually have to ask someone to do that. So thank you.

You said in your prepared testimony that we, in America, cannot leave our people behind. I think we all agree with that sentiment, and want to figure out what is the best way to actually achieve that. You know, the energy sector is changing incredibly rapidly right now, and that means incredible new careers. We just broke ground on the largest single build wind farm in the history of the country in Central New Mexico. But it also means job losses into the future in traditional fossil energy, and we have to recognize those changes that are occurring.

Coal has experienced a dramatic decline over the last decade, and oil and gas are now entering what appears to be a structural, rather than a cyclical, decline, and that is separate from any of the policy or climate change concerns. So, you know, I believe that the people who work in these sectors today and in the past are like our nation's energy veterans. They are men and women who have powered this incredible nation for the last half century and given their working lives to that goal.

What investments will we need to make, specifically in oil and gas workers and in their communities, to ensure that these hard-working Americans are not left behind?

Ms. GRANHOLM. Thank you for the question. I mean, this is a chicken and egg question that we faced in Michigan. Do you train

people for jobs that are not there yet? It's much better to get a job provider and train somebody for a specific job. And so, this is what the efforts of the Biden Administration are looking at. What are the economic assets that states have that can create economic clusters that will make them successful? And then be able to partner with universities, et cetera, to train at or in unions to be able to train people for good jobs in their states so they don't have to move somewhere but every state has something to offer?

You described the big wind farm. Why aren't we building these wind turbines near the wind farms in America? We should not be importing those huge, I mean, the materials work that is being done at the Department of Energy on lightweight materials, that can be used as assets to create wind turbines that are larger and give people a chance to be able to work in that industry.

Bottom line is place-based strategies are critical for areas that have been left behind. And that's exactly what the Executive Order from Joe Biden, today, has put together to fix.

Senator HEINRICH. So this should be an easy one. Will you commit to working with me to create a place-based plan for investing in and diversifying my state's oil and gas producing communities so that those constituents do not get left behind?

Ms. GRANHOLM. Yes.

Senator HEINRICH. Thank you.

It is hard, because history has shown that hanging on to the past, frankly, is very politically expedient. What I have seen is that doesn't always work, and usually fails those communities in the long run. We have to make these forward-thinking investments or we are going to see those job losses, and they are going to be worse, and they are going to be sooner. So I look forward to working with you. This is not going to be easy, but it is incredibly important.

One of the fastest ways, obviously, to drive decarbonization and to drive the carbon pollution out of vast swaths of our economy is to begin electrifying practically everything. You have talked a lot about electric transportation. You know, today it is possible to electrify broad swaths of our economy that were run with fossil generation in the past. Heating water, heating and space cooling, and transportation are just a few of those examples.

Importantly, if we do that, it creates an enormous number of blue-collar jobs and quality careers in local communities. How can you harness the expertise of the Department of Energy to accelerate that transition and accelerate the electrification of those parts of our economy for which the technology is there, but there are all these friction points?

Ms. GRANHOLM. Yeah, I appreciate this question because one of the, you know, again, the Executive Order that was issued today also created a requirement that we lead by example in the Federal Government, and it is the Department of Energy that will be working on making sure that we are buying American, creating demand in America for American-made products and that we are deploying them on the vast complexes inside of the Federal Government. That creates an opportunity for American companies to build these products that will electrify our entire, our country in ways where we haven't seen that before. So, I think that, number one, and very quickly, that can happen through the lead by example effort that

the Biden Administration has. And I just want to say that the signing of the Executive Order this week on Buy American is huge. It is huge for the signal, the demand signal that America is serious about buying these products, but if you are a company manufacturing something, if they're windmills, you've got to make them in America. And so locating them in places that have been hurting, that's going to be our strategy. How do we get them to locate there as we electrify?

Senator MANCHIN. Thank you, Senator.

At this time, we have Senator Hirono.

Senator HIRONO. Thank you very much, Mr. Chairman.

Welcome, Governor Granholm. It was a pleasure to talk with you earlier.

Now, to ensure the fitness of nominees for appointed positions, I ask every nominee that comes before any of the Committees on which I sit the following two questions.

Since you became a legal adult, have you ever made unwanted requests for sexual favors or committed any verbal or physical harassment or assault of a sexual nature?

Ms. GRANHOLM. I have not.

Senator HIRONO. Have you ever faced discipline or entered into a settlement related to this kind of conduct?

Ms. GRANHOLM. I have not.

Senator HIRONO. When you talk about place-based strategies, that really makes a lot of sense to me because I represent a state that is the most isolated island chain in the world. And as recently as 2006, Hawaii relied on imported oil and coal for 92 percent of our energy. We were spending billions of dollars bringing oil and coal into our state, mainly oil. The state now gets about 28 percent of its power from renewable sources, but our two largest economic drivers, tourism and the military, remain highly dependent on oil. So Hawaii now has a goal to reach 100 percent renewable energy, renewable power, and a carbon neutral economy by 2045. That is one of the most ambitious goals of any state. The Department of Energy supports these efforts through a Memorandum of Understanding with the state that established the Hawaii Clean Energy Initiative, which Secretary of Energy Moniz renewed in 2014. My question is, can the State of Hawaii count on continued support from the DOE as it seeks to be a leader in building a clean energy economy?

Ms. GRANHOLM. Yes.

Senator HIRONO. You talked a lot, Governor, about creating jobs and yes, clean energy careers. Hawaii had a 9.3 percent unemployment rate in December, and studies indicate that about 22 percent of Hawaii's clean energy jobs that were lost due to the pandemic have not yet come back. One of President Biden's key messages has been that taking action on climate change will help build back the economy and create new, well-paying careers for people. So, as Governor, you know, you worked to diversify Michigan's economy with clean energy and job training. As Secretary, what do you see as DOE's role in creating high quality jobs in, as you say, place-based strategies—

Ms. GRANHOLM. Yeah.

Senator HIRONO. —for a state like Hawaii?

Ms. GRANHOLM. Thank you.

Number one, I think that to create, to identify economic clusters that are, that give you a comparative advantage is really important. And so, doing an assessment to figure out what is it that's unique. I mean, there's so many unique things about Hawaii, but what is it that Hawaii wants to focus on to create a full supply chain there? And this is what the Executive Order from today allows us to really think through in communities in place. How do we encourage supply chains for the products that those communities are going to be buying to meet their demand for clean energy products? The demand signal has been set in Hawaii.

Senator HIRONO. Yes.

Ms. GRANHOLM. And now it's up to us to help to provide the supply and it's a supply of those clean energy products made in America, hopefully made in Hawaii, if they're going to be used in Hawaii. So this is what I look forward to working with you on is a strategy that is unique to the unique state that you represent.

Senator HIRONO. Manufacturing is always a challenge in Hawaii, but if we could at least get the products from the United States, from our country, that would be great.

Now we do a lot of research through the DOE's labs, and that is great, but it is also really important as we implement the Energy Act of 2020 that was enacted at the end of last year. We provided funds for DOE demonstration projects for improving the electric grid, expanding energy storage, and accelerating new solar, wind, and marine energy technologies. So I would like to get your commitment that the DOE's role would be to support these kinds of demonstration projects to drive innovation in emission-reducing technologies.

Ms. GRANHOLM. I'm excited to support that. That's right in the DOE's sweet spot.

Senator HIRONO. Thank you.

Thank you, Mr. Chairman.

Senator MANCHIN. Thank you.

Senator Daines.

Senator DAINES. Thank you, Mr. Chairman.

Governor, thank you for being here today and thanks for taking time yesterday to talk about these important issues for Montana and our country. If you are confirmed, I hope we can see you out in Montana. That way you can take a look at firsthand about some of these issues we are talking about here today.

In Montana, we have a diverse energy portfolio that supports over 16,000 jobs across our state. Coal and hydro produce the vast majority of our electricity. In fact, we have the largest recoverable coal reserve in the United States. We also have four petroleum refineries and we are building new wind and solar farms throughout our great state. Montana has balance. We have a balanced energy portfolio, and I believe balance is very important and needed at this time.

Governor, oil and gas production and manufacturing accounted for \$3.7 billion in Montana GDP in 2019 according to the Bureau of Economic Analysis. Coal provides reliable baseload energy. It supports high paying jobs. It is an essential part of so many of our Montana communities. For example, coal supports over half the

budget of our Crow Tribe in Montana. Without it, they would be economically devastated. It provides high paying jobs in an area where there is frankly few other opportunities. In fact, if we were to eliminate those jobs in Crow Country, the jobs and the revenue it would have by being eliminated, it would have devastating impacts to the Tribe.

I remember we had some protesters that broke into an energy summit we were having in Billings, Montana, a few years ago, and they had big signs that said, "Keep it in the ground." And the daughter of the Crow Chairman, Ms. Old Coyote, she went up to one of the protesters and said, "If you keep it in the ground, my people will starve." And these protesters quietly folded up their signs and they walked out the door. Unfortunately, President Biden has already taken steps that are very concerning for Montana—cancelling the Keystone XL pipeline six hours into his presidency, prohibiting new oil and gas and coal leases on federal lands—we are already losing jobs.

I was on the phone last night with one of our county commissioners in Eastern Montana, and they are struggling economically. Our eastern part of our state has a hard time making county government budgets balance. One of our county commissioners, who was going to receive \$7 million a year in tax revenues from the Keystone pipeline, \$80 million a year across Eastern Montana in our state. He said, "Steve, we just had to give notice to 60, 60 union workers that they are losing their jobs because of the cancelation of the pipeline." I can tell you those are 60 of the best jobs that we have in that county.

So the question is, in this important role that you are looking to be confirmed into, do you believe the United States needs to completely remove oil, gas and coal from its energy portfolio?

Ms. GRANHOLM. No, I do not. I believe, if I can just follow up, I believe that if we are going to get to net carbon zero emissions by 2050, we cannot do it without coal, oil, gas being part of the mix. But without CCUS technology, that's the important add that I would make—

Senator DAINES. Right.

Ms. GRANHOLM. —is without these carbon management technologies that are being researched at the Department of Energy, we won't get to the goal of net carbon zero and I think we must use those technologies to keep people employed and to clean up and to remain energy independent.

Senator DAINES. Yes, thank you, Governor. We will talk about that. I really enjoyed our conversation yesterday about CCUS. And by the way, in terms of net carbon neutral, the Keystone Pipeline is net carbon neutral. That is what has people scratching their heads, saying it is the most environmentally sound way to transport a liquid and has the least impact, in fact, it is carbon neutral as it relates to that transportation means.

I am glad you brought up CCUS. As you know, after years of work this Committee passed a very forward-looking energy bill that included major advancements in carbon capture investment and commercialization. One of the bills that was included was the EF-FECT Act. It is a bill that I worked on with both the Ranking Member and the Chairman. This bill established a large-scale

CCUS pilot project at an existing power plant. And as we talked yesterday, I think Colstrip Power Plant in Montana is uniquely suited for this DOE-funded pilot project. It would create high paying jobs in Montana, importantly, reduce emissions and get us on this path of a commonsense kind of balanced energy portfolio.

Governor, would you commit to working with me and Montanans to bring a CCUS project to our state?

Ms. GRANHOLM. I'll certainly commit to working with you and take a look at it. I look forward to being briefed on it further. I think the DOE did a study on it a couple of years ago, but I look forward to following up with you and working with you on it.

Senator DAINES. Thank you.

Well, you are going to find this is a great Committee. We have a great Chairman, a great Ranking Member that seeks to find balance—

Ms. GRANHOLM. Yeah.

Senator DAINES. —in terms of ways to our energy going forward here for our country. So thanks for your consideration, thanks for being here today.

Senator MANCHIN. Senator Sanders.

Senator SANDERS. Thank you very much, Mr. Chairman. Let me thank Senator Murkowski for the great job that she did as Chair as well. She and I do not agree on every issue, but she ran a non-partisan, open-minded Committee, and we appreciate that.

Governor, the scientific community suggests to us that if we do not transform, not only our energy system, but the global energy system, there will be irreparable underlying damage done to communities throughout our country and the world, and that the situation is getting more dire every day. Do you agree with that assessment?

Ms. GRANHOLM. Yes.

Senator SANDERS. The good news is that while—when we transform the energy world, there will be dislocation, and no one can deny that. What the economists tell us is that we have the potential to create a hell of a lot more jobs in energy efficiency, sustainable energy, and all the technologies you have been talking about, than we lose. Do you have a sense of how many good-paying, new, hopefully union jobs we can create if we are aggressive in transforming our energy system?

Ms. GRANHOLM. I do know the goal was to create 10 million in the United States using these technologies. Huge opportunity.

Senator SANDERS. That is extraordinary. And while there will be, clearly, as we make the transformation, the loss of some jobs, no question about it, correct me if I am wrong, but 10 million is a hell of a lot more jobs being created than being lost. Is that correct?

Ms. GRANHOLM. Yes.

Senator SANDERS. All right, let me ask you this. If, magically, the United States did everything we could to transform our energy system and cut back on carbon emissions, we still have the rest of the world out there. This is a problem that cannot be solved by any one nation. Can you talk a little bit—and I know we have John Kerry who is going to be working on these issues as well, but we are going to have to be reaching out in a way that we have never done, to China, to Russia, to India, to Brazil, and to countries all over

the world, to get them onboard. Do you have any sense of how we can do that?

Ms. GRANHOLM. Well, part of the Executive Order that was issued today really emphasized this very issue, elevating the importance of our international reach and partnership with, not just economic allies, but also competitors, like China. And this is another reason why I think it was, it had a lot of foresight in appointing John Kerry to be the climate envoy, I think is the title.

Senator SANDERS. Czar is what I think it is affectionately called.

Ms. GRANHOLM. Yeah, I wasn't sure if it was czar, but—

[Laughter.]

One way or the other, it's a powerful position that signals our leadership, that we are back and it was the importance of re-entering the Paris Accord as well, but we did not, we could not be an outlier in this and we need to lead by example, but also lead by bringing our allies and competitors along with us.

Senator SANDERS. Look, I mean, China is going to be hard hit by climate. There will be sections of that country underwater. Do you see possibilities of us working together with China, India, and other countries?

Ms. GRANHOLM. I do, but I know that our eyes must be wide open.

Senator SANDERS. Right, right.

Let me ask you this. We talk about the destruction that climate change is and will be bringing to the world. We talk about the potential of good-paying jobs. One of the things I think we don't talk about enough is that, in fact, sustainable energy could lower electric bills for a whole lot of people. Just Jane and I, in our home in Burlington, Vermont, which is not the sunniest, you know, we are not Florida or Arizona, but I think we spent something like \$10,000 with the tax credits that we received, to install solar. Our electricity bill has gone down, I think, by 90 percent. We are going to pay it off in seven years. That means over a 20-year period we are reducing our electric bill by 50 percent. Is that a point that we are getting out enough, and what are we going to do, you know, for the average working-class family, who today may not be able to afford that \$10,000? How do we say, we can lower your electric bill if you move to solar? Do you have any thoughts on that?

Ms. GRANHOLM. Yeah, I think this is a role for the Department of Energy in addition to the jobs piece. For example, the Energy Efficiency Acts that Congress has passed over the years have saved families, just on efficiency, about \$500 per family, per year has been amazingly successful. The same thing we should be taking a look at how, as a nation, we can reduce the upfront costs of installing solar for every—in every state because the sun shines everywhere.

Senator SANDERS. So in other words, if I lend you \$10,000 to invest in solar, and you don't see any increase in your electric bill, in other words, you are going to be paying off the loan.

Ms. GRANHOLM. Right.

Senator SANDERS. Rather than an electric bill. Is that an approach that makes sense to you?

Ms. GRANHOLM. Yes. I would say that my, I mean, I did the same thing and I pay every month as well, but our overall energy bill

has dropped significantly, even by paying off the loan. And that's the kind of information we want to get out there.

Senator SANDERS. That is right, and I think we don't talk about that enough.

Ms. GRANHOLM. Right.

Senator SANDERS. Lastly, Vermont has been a leader for many years in a whole variety of environmental issues, including energy efficiency and sustainable energy. I would love to work with you to see how we can strengthen our connection with some of the national labs, including the National Renewable Energy Lab. Is that something we can work together on?

Ms. GRANHOLM. Of course, of course.

Senator SANDERS. Okay, thank you very much.

Senator MANCHIN. Thank you.

Senator Hoeven, do we have him on virtual? He is not on yet? If not, then we have Senator King.

Senator King.

Senator KING. I want to join my colleagues in thanking Senator Murkowski. Senator, you have done a wonderful job as Chairman of this Committee. I don't care if Joe Manchin is taking over nominally, in my heart, you will always be the Chair of the Committee.

[Laughter.]

I really appreciate the work that you have done.

Governor, welcome. I want to touch on a couple of things rather quickly. My dear friend, the Senator from Louisiana, talked about natural gas prices and the effect of increases on those prices. The most serious threat to the domestic price of natural gas is unfettered exports, and under the Natural Gas Act, as you talked earlier in your testimony, you have to make a public interest finding. I hope you do that analysis, because we now have applications for, the last time I looked, more than half of the domestic production of natural gas for export. That cannot do anything but drive price up, as it has in other places in the world. So I hope that you will have your staff do really good elasticity studies about the effect of those additional export capacities on domestic prices. That has to be part of the analysis. If that is not public interest, I don't know what is. Will you commit to me to look at that aspect when you are looking at these applications?

Ms. GRANHOLM. Certainly. In the balancing test that's required under the Natural Gas Act, that would be one of the things we would look at.

Senator KING. Thank you.

We have talked about wind and wind power. Offshore wind is one of the greatest potential energy sources, and the real frontier is floating where the continental shelf is too deep. I want to mention that the leading research on floating offshore wind technology is being done at the University of Maine. At Orono, they have been working with the Department over the past five years on the Aqua Ventus project. I commend that to you because if we are going to tap the higher capacity factor and the enormous potential for offshore wind, it is going to have to be in deeper water, and that means some kind of floating technology issue, as I mentioned.

So I would like to invite you to the composites lab at the University to see the amazing work that is being done up there in this field.

Ms. GRANHOLM. I would very much like to come and see that.

Senator KING. Next issue. Somebody asked me my priorities on energy and I said, it is storage, storage, and number three is storage.

[Laughter.]

There is research money in the bill that we just passed. There is no more important work that you can be doing. And the example is, someone earlier mentioned the revolution in energy production by hydraulic fracking which, in fact, was invented in large measure because of support from research funds at the Department of Energy. If we can break through with cost-effective storage, that really opens the door to full electrification and full renewable electrification. So I hope that is an emphasis that you will maintain in your work at the Department.

Ms. GRANHOLM. It is and you may be aware that President Biden has established a desire to create some Earthshots, as he called them, sort of like the SunShot that was previously done that brought down the price of solar. And one of those Earthshots is to reduce the cost of utility-scale battery storage by 90 percent.

Senator KING. Well, that is where we need to go, and once that happens, then technologies that are based upon interruptible sources like wind and solar essentially become baseload, and that is really crucial.

A final point I wanted to touch on, and I know Senator Cortez Masto is going to be following me, is nuclear waste disposal. I live about 20 miles from my nuclear plant that was closed about 15 years ago. We have what amounts to a high-level nuclear waste site on the coast of Maine, and it is because of a 70-year unmet promise by the Federal Government to deal with nuclear waste. I believe that nuclear development has a low carbon future in this country, but I am reluctant to support significant new development until we meet that promise.

So I hope that is something that you will pay attention to. I know Senator Cortez Masto is going to steer you away from Yucca Mountain, but we really do have to be honest with ourselves about the fact that what we have now are, I don't know how many, maybe 100 effective, high-level nuclear sites scattered around the country. That is not good, that is not safe from a national security or from an environmental point of view.

Ms. GRANHOLM. I agree with you. It is a very sticky situation and clearly, we have to, maybe, look at what the Blue Ribbon Commission did on this which was to engage in some consensus, site-based consensus, strategies that allow us to determine where that waste should go.

Senator KING. Thank you.

Thank you, Governor. Congratulations on your nomination, and I certainly look forward to working with you.

Ms. GRANHOLM. Thank you, Senator.

Senator MANCHIN. Senator Cortez Masto.

Senator CORTEZ MASTO. Thank you.

Let me echo my colleagues to thank you, Senator Murkowski. You have done an incredible job in working with everybody on the Committee to make sure all of our voices were heard and working with our legislation. So thank you for that great work.

Governor Granholm, congratulations. Welcome to your husband. And thank you for taking the time to talk with me.

I am going to get right to it, and utilize some of the questions that I have that are very specific to Nevada. My colleague from Maine highlighted one of them, Yucca Mountain. We know it has been a failed policy. The Nuclear Waste Act has been there since 1980. We still have challenges with really addressing the high-level nuclear waste storage that we have in this country.

Yucca Mountain is not the answer. And the couple of questions that I have for you is first, what is this Administration's position on Yucca Mountain?

Ms. GRANHOLM. Yeah, the Administration opposes the use of Yucca Mountain for storage of nuclear waste.

Senator CORTEZ MASTO. Thank you.

And will you commit the Department to working with Congress to develop safe and workable alternatives to Yucca Mountain?

Ms. GRANHOLM. Absolutely.

Senator CORTEZ MASTO. Okay.

And will you be sure to have the staff responsible for nuclear waste planning and management engage with my office?

Ms. GRANHOLM. Yes.

Senator CORTEZ MASTO. Thank you.

As well as the Office of Senator Rosen?

Ms. GRANHOLM. Yes.

Senator CORTEZ MASTO. And then you mentioned it, the Blue Ribbon panel. We know that the Blue Ribbon panel made recommendations around a consent-based siting process. Senator Rosen and I, along with the entire Nevada delegation, will reintroduce this legislation to include Nevada in that consent-based siting. Is that something that you and the Administration would support?

Ms. GRANHOLM. Absolutely.

Senator CORTEZ MASTO. Thank you.

The final question around Yucca is just to make sure that if you are confirmed, you and the Administration would commit to engaging the states, tribes and key stakeholders on developing that consent-based siting?

Ms. GRANHOLM. Yes.

Senator CORTEZ MASTO. Thank you.

Let me jump to one other issue, which is the storage of plutonium. Nevada has a National Security Site. We are very proud of it. It creates jobs. We are an important part of the national security, as you well know, in this country. In 2018, the State of Nevada learned that the Trump Administration had secretly shipped plutonium intended for weapons production to Nevada, to be stored indefinitely at the Nevada National Security Site. In working with the Department of Energy, we came to an agreement, which the state used to secure a settlement with the Department last year to begin removing the plutonium from Nevada.

What is the current status of DOE's and the National Nuclear Security Administration's plan for removing the plutonium, if you know?

Ms. GRANHOLM. Yeah, the plan is to follow the agreement that you negotiated.

Senator CORTEZ MASTO. Thank you, I appreciate that.

Let me just add this. In 2014, the Obama Administration and the State of Nevada agreed to establish a senior level DOE-Nevada Working Group to address mutual concerns about operations at the Nevada National Security Site. Unfortunately the Trump Administration did not follow through on that agreement. Will you commit to re-establishing the DOE-Nevada Working Group with regular meetings of senior level personnel?

Ms. GRANHOLM. Yes, I will.

Senator CORTEZ MASTO. Thank you.

Then let me address, in general, the conversation because I so agree. Listen, I support, really, a diverse energy portfolio for all states. Every state is going to be unique. In Nevada, we have natural gas. We have geothermal. We have wind. We have solar. But the outcome for all of us should be reducing that carbon footprint. And I do believe an innovation economy is coming, if it is not already here, and the technology is going to give us that opportunity to really engage in a clean energy portfolio for so many of us. It is going to create jobs. It is going to move us in that direction, and there are opportunities to bring everybody along with us.

Let me talk a little bit about electric vehicles, because this is something that I so agree with you on. I have a suite of electric vehicle legislation. One of them is included in the infrastructure package. If you come to Nevada, and I have offered that to you before, you will see in some of our rural communities that we already have the infrastructure for electric vehicles. I am very proud of that. But let me ask you: one of the pieces of legislation that I have, and I am going to be introducing, is to establish a working group that is co-led by DOE to improve that coordination among local, state, and federal stakeholders to establish a clear strategy and national electric vehicle framework that includes not just cars, but buses as well.

Is that something that you could work with us on or would be willing to engage on?

Ms. GRANHOLM. Absolutely.

Senator CORTEZ MASTO. Thank you, I appreciate that.

I notice my time is up. The rest of the questions I have for you I will submit for the record.

Thank you again, and congratulations.

Ms. GRANHOLM. Thank you.

Senator MANCHIN. Thank you. Thank you, Senator.

Do we have anybody else online? Nobody else online. If not, we will go to a second round, if you are okay with that.

Does anybody need a break?

[No response.]

If nobody needs a break, we will go to a second round. We will start with Senator Murkowski, Chairman Murkowski.

The CHAIRMAN. Thank you.

Governor Granholm, I hope that you have appreciated the range of questions that you have heard here today. I was just sharing with my friend and colleague here. I am riveted here in the conversation that has been going back and forth. Since I am not really chairing anymore, I don't have to sit here, but I think what is being discussed today is so significant and it is so important to the country that I really want to hear your views here. I hope what you have heard is that in certain parts of the country, we are very much your resource anchor whether it is West Virginia coal, or Wyoming coal, or whether it is oil from Alaska, whether it is coal from Alaska, we are your resource anchor.

Now I will let my colleagues speak to the manufacturing capabilities in both Wyoming and West Virginia, but in Alaska we don't manufacture a lot. What we do is we provide for all of you so that in Michigan, in Ohio, in other parts of the country, we are doing all this buy America, made in America, but it has to start from somewhere. And so, when we are talking about this transition to the clean energy jobs and, believe me, Alaskans want those clean energy jobs just like all Americans do. We want to be able to access those resources that we have in the ground, whether it be oil, whether it be natural gas, whether it be coal or minerals. We want to be able to access that in a way that is environmentally responsible, that does work toward reduced emissions. But we still recognize that you are still going to need what we have.

And so, when we are talking about this transition, we have to realize that that transition and where these jobs are and what these jobs are, are going to be different depending on where we are. And so, for us in resource-based states I just hope you hear the concern. It is not that I want to keep us back in, you know, back in time. I want us to be able to move forward. We are a state that is seeing the daily impact of climate change. And so, we know we need to be aggressive, but we also know that we have to be the provider, if you will. And so, as we are talking about how you can come in and assure whether it is the worker in Louisiana or in Mississippi or in West Virginia, that your job may change. I hope you appreciate and understand the anxiety in families and the anxiety in communities and in whole states, in whole states.

My State of Alaska, it is our oil resources that have allowed us to build our schools, build our roads. And so, I share this with you with a great deal of passion because while we transition, we have to ensure that the assets that we have in the ground that will allow us to be energy secure and economically and environmentally secure. You are going to need us. And so, when I think about the asset that we have in Alaska, the Trans-Alaska Pipeline—we have been flowing oil to help the people of California so that they don't have to import as much oil from Venezuela or from the Middle East. We think that that actually helps. We think that our mineral base helps the country. It is not just jobs for us, but it helps us.

So I hope that you would agree that the resource base, the assets that we have, things like the Trans-Alaska Pipeline and why it is important to keep it filled up, are important, not only from an asset perspective, but for the jobs and the security that they provide to the nation.

Ms. GRANHOLM. Yeah, Senator, I completely understand this, and I so appreciate your sincere passion on the part of people you represent who are full of anxiety. I—the experience that I had—I feel like I get this so much because of the experience I had in Michigan seared my soul on behalf of workers who were feeling utter anxiety about who is ever going to hire me. So the amazing opportunity we have, as you and I discussed, is for states, I mean, Alaska, in particular, because of being a state where we can pilot so many different types of technology, but as Senator Barrasso has said, as Senator Manchin has said, the use of technology allows us to be able to ensure families that they can still have a job and we can use technology to reduce carbon emissions and that we can still use the resources we have and we can reduce carbon emissions.

I completely understand what you're saying and I appreciate your sincere passion on behalf of those you represent. I share that, and I look forward to working with you to make sure that we keep people employed.

The CHAIRMAN. But I think you see from our Energy Act that we passed, we focused keenly on that technology.

Ms. GRANHOLM. Yes.

The CHAIRMAN. But again, that technology will allow us to be able to harvest these resources because that is what we are doing, we are harvesting it. We are harvesting them in a cleaner way, but we will still be relying on this base resource. And so, I, again, urge you to focus on that.

Mr. Chairman, if I may, there has not been a question yet raised before the Governor here with regards to cybersecurity. Of course, we all know the recent news about SolarWinds and the hack there, it has really highlighted the need for increased coordination throughout the Executive Branch. I personally think that the move by the Biden Administration to revoke the Executive Order on the Bulk Power System was unwise. I think it puts our electric grid at greater risk for cyberattacks. I am concerned about that. I think this entire Committee is concerned about where we are with the reliability and the resilience of the grid when it comes to cyber.

I am well over my time, but I would ask for your indulgence if Governor Granholm can respond to the question about grid resilience and security there, because I think it is so important.

Ms. GRANHOLM. It's very important and briefly, I mean, we have five million miles of distribution wires, 200,000 miles of high voltage electric wires. I haven't been fully briefed on the, you know, national security and the confidential aspects of the SolarWinds cyber hack, but clearly that's one example and we're getting hacked all the time and attacked all the time. We will have inside of the DOE a person at a very high level that is responsible for making sure that this, the response to this, is coordinated. We have to harden our electric grid for protection of our energy system. I hope that this is a part of the infrastructure package that will be coming from the Administration as well, and I look forward to working with you on it.

The CHAIRMAN. Well, I think DOE has a very specific and very important role as being the sector specific within energy when it comes to cyber is very important.

Thank you, Mr. Chairman. Thank you for the indulgence.

Senator MANCHIN. Thank you, Senator.

Finally, from the great State of North Dakota, we have gotten the computer up and running and Senator Hoeven is on.

Senator Hoeven.

Senator HOEVEN. Thank you, Mr. Chairman. Can you hear me all right?

Senator MANCHIN. All very good, I am glad. Things are a long way away in North Dakota.

Senator HOEVEN. Yes, I appreciate you and, of course, our Ranking Member, for holding the hearing today.

Governor Granholm, it is really fantastic to see you again and I enjoyed, very much, working with you in our days as Governor. You were a tremendous leader then and I believe you will be a strong leader for the Department of Energy. So I am really looking forward to working with you. I appreciated our visit earlier and would just like to pick up on a couple of those themes.

The first one is something that Senator Murkowski was talking to you about and that is that I believe that baseload supply, in terms of energy, is very, very important and one of those very important baseload sources of supply is coal-fired electricity. And we actually are working very hard on carbon capture and sequestration. I think we have everything in place to do a partnership with our industry in our state and we now have passed 45Q which is a tax credit, because again, we could do it technologically, but we have to be able to do it on a commercially-viable basis. We have 45Q in place. We have the regulatory regime in place.

In our State of North Dakota, starting 12 years ago, we worked, went to work, and passed legislation so you would have the legal regulatory environment in place to address the core space. We have EPA approval. As I said, we have been working on this for 12 years. And what we need help with now are two things. One is, you know, the front-end cost to put the technology on the plants. That is Project Tundra where we have a partnership with DOE. We need your help on that. We have appropriated money already, and we need to continue to have funding there to get the front-end cost addressed and partnerships with the state and our companies. So your support for Project Tundra is very important to us.

And then also, the Loan Guarantee because the companies will still have to bear a lot of expense to put that, to retrofit those plants for the technology. There are two sources of guarantees. Both are funded. The money is there. One is through the Department of Energy, and the other is through USDA's Rural Development. Rural Development in some cases might even be easier to access. But both those guarantees are there and they are funded. The money is there to do this and this is about cracking the code, just like we did with horizontal drilling, this is about cracking the code with carbon sequestration and addressing, not only keeping that baseload power, keeping those great jobs, but actually capturing that CO₂ and storing it safely for the long-term.

So I would ask for your thoughts and your commitment to help us get that done.

Ms. GRANHOLM. Yeah, I'm excited about Project Tundra. I'm excited about using your state as an example of the regulatory regime

to facilitate CCUS, and I look forward to working with you on it. And yes, you have my support.

Senator HOEVEN. And you are coming to see us, right?

Ms. GRANHOLM. I'm coming to see you.

Senator HOEVEN. —like Joe Manchin, Joe Manchin has always wanted to come to North Dakota. We told him not yet, but—we will have a great time—we will eventually invite him up but—

Ms. GRANHOLM. Joe, you and I.

Senator MANCHIN. Jennifer and I will be there together. We will bring John with us. The three of us will come up.

Senator HOEVEN. Well, that would be great. I mean it, and we would have fun and—I am sorry, Secretary, you are willing to come join us, come see what we are doing?

Senator MANCHIN. I'm sorry, what?

Senator HOEVEN. You are willing to come see what we are doing, with or without Chairman Manchin?

Ms. GRANHOLM. Yes.

Are you asking me? Yes, absolutely.

Senator HOEVEN. Yes, I'm sorry.

Ms. GRANHOLM. With or without him.

[Laughter.]

Senator HOEVEN. Yes, we would love to have both of you, very much. Thank you.

The other is in the area of federal lands. We have to be able to access energy on federal lands of all kinds and, you know, that is true on our Native American lands as well. In some cases, it is renewable. In some cases, it is fossil fuel. But we have to be able to access energy on federal lands, safely and soundly, with good environmental stewardship and then we have to have transportation. Again, this is for both fossil or traditional energy and renewable. We have to have transmission lines. We have to have pipelines. So please address that, Governor Granholm, if you could.

Ms. GRANHOLM. Yeah, I'm very eager to work with FERC to get transmission lines established, ASAP. I feel like this is a conversation that's been had for years about having the right transmission lines in place to take power from the places of clean power, especially wind, like you see in North Dakota from places that are generating it to the power and load centers. So, I—this is a very high priority to make that happen, and I look forward to working with you on that.

Senator HOEVEN. Yes, we need your help, and we know that you know how to accomplish these things. We know you understand the importance of the jobs and we understand your commitment to the environment, but we have to have your help.

The last thing I will finish up with. I am looking at Governor Angus King, he was Governor with us too back in the day, and he is always looking at new, innovative and creative things in energy. One of places that is doing a lot of that is the Energy and Environmental Research Center (EERC) at the University of North Dakota. We have a partnership on the carbon capture and storage, and we are really trying to drive that technology forward. They are also working on a partnership at the Department of Energy on renewable types of energy as well.

I am asking for your commitment to continue these partnerships that we have with DOE and the EERC and even look to help grow them because of the incredible role that innovation is playing in energy development.

Ms. GRANHOLM. You have my commitment.

Senator HOEVEN. Again, thank you and I look forward to working with you.

Ms. GRANHOLM. Thank you.

Senator MANCHIN. Thank you, Senator.

As we continue our second round, I have a few comments to make, and then we will go to Senator Barrasso and then we have Senator King and Senator Cortez Masto still online, if they wish to have a second round. So we will continue with that.

Let me just say this. You and I had a great conversation on some things that are going on, and I just want to say this. Our first hearing will be next week. Senator Barrasso and I talked about it. It is called Climate Baseline. There are so many deniers out there of what is going on around the world, whose fault it is, and this and that, but what we can do to achieve, truly, some climate changes that will be better for our environment and better for our children and grandchildren, our next generation. We need to get to the facts first. I said, if you are able, everybody should come to this Committee with all the opinions they have and all the input, but we have to work off the same baseline and the facts. So once we establish that, we think we can accomplish an awful lot.

With that, I have said this, I can only talk to you about my State of West Virginia, and my state has been a heavy lifter for over a century, and fought in every war. We have a lot of patriots as far as the military veterans, but most importantly, our coal producers have produced the energy this country has needed to defend ourselves in every war, to win the wars, and propel the industrial might. We continue to do that as one of the leading coal producers with my colleague here in Wyoming. These people feel like they have been left behind, and I think we mentioned that too. Just give them an opportunity to live where they traditionally lived and where their heritage is, and where they want to be, but direct jobs in that direction and don't just leave them in a barren wasteland. That is where there is total animosity, and right now there are a lot of concerns that we are hearing coming out of President Biden's Executive Orders. People are very much concerned that they are going to leave us behind again. It is going down this path where the energy that we provided will no longer be needed, and there are those who have aspirations of elimination in energy sources such as all the fossil fuels, leaving it behind. We are going in a different direction.

The transition might happen. We don't know when it is going to happen, but we are accelerating more quickly than we ever thought we would before. The only thing I am saying on that is, we think technology is the way to go. We think innovation, not elimination, will make that happen. And everybody can be brought along and taken care of if we can direct it and recognize the people that have done the heavy lifting. That is the animosity, the built-up, pent-up, concerns that people have, and that is what has caused the divide

in the rural and urban areas, because most of these heavy lifting states are in rural areas.

Ms. GRANHOLM. Yeah.

Senator MANCHIN. You can see the political divide and how deep it is getting. So I think you have a golden opportunity, Governor, to really try to help bridge that, I really do. I know your personality. I know you well enough to know that you will reach across the aisle and be sympathetic to the people that basically are saying, just give me a chance to provide for myself and my family. That is all they want. And with that, the market will change.

Ms. GRANHOLM. Yeah.

Senator MANCHIN. What they don't want is for you to throw them a life preserver that is weighted down with an anchor when they are trying to survive, and that is what they think has been thrown to them in previous administrations. And we have seen even with the previous administration of President Trump, we have lost more coal jobs than ever before. It is the market that is transitioning. We have to find everything we can in West Virginia and in Wyoming, in all of our energy-producing states, especially fossil-producing states, that they have an opportunity to continue to contribute.

That is my two cents, for what it is worth, but I can tell you, we need to bring this country together. You have a chance to help us heal that, and energy is the biggest thing that can heal us and bring us together, more so than anything else, because it is what divided us too.

Ms. GRANHOLM. Yeah.

Senator MANCHIN. So your thoughts on that, if you will.

Ms. GRANHOLM. Yeah, no, I mean you've said it so beautifully, as you do, Senator Manchin. I cannot tell you how important this is to me, personally, is to make sure that we do not leave people behind. When I was in Michigan we created a program called "No Worker Left Behind" for that reason, because people who have been disproportionately affected by these transitions which are really hard, feel like they have been, they're unseen and they've been forgotten and that's not what's going to happen. In fact, you know, the Biden Administration has pledged to commit 40 percent of the benefits of this clean energy transition to communities that have been left behind and that includes environmental justice communities as well as communities in transition.

And so, the proof will be in the pudding. That's what I'll have to say, is we have to commit to getting job providers into communities with not skills that are completely off for the people who are there respecting where they are and make sure that we put them to work and train them for those jobs and give them hope for the future and keep their children there as well who also want to be part of a future-looking energy balance.

Senator MANCHIN. Well, the thing I would say to my friend, President Biden, and I know we know him well and he has been a dear friend, but the thing of it is, make sure that the Administration, if they want to pause and look and evaluate what has happened and what direction we should be going, that is great because we can all have input. If they come out and say we are going to eliminate this, or put a moratorium on that, it makes it much more

difficult for us, in a bipartisan way, to be helpful and to be constructive. I think they are listening, I hope they do, and we look forward to working with this Administration and with you in your new role too.

I look forward to supporting you in that role, and I will do everything I can to make sure that we can advance that issue because I know you will sit down and work with us. And with that, with my partner, I turn it over to Senator Barrasso.

Ms. GRANHOLM. Great.

Senator BARRASSO. Well, thanks so much, Mr. Chairman. I agree with what you have just had to say as well as what Senator Hoeven had to say, Senator Murkowski, just had to say because collectively we are the resource anchor. That was Senator Murkowski's, but that is West Virginia, that is North Dakota, that is Wyoming, that is Alaska. We are the resource anchor for the country.

So when President Biden says he wants to achieve a carbon pollution free power sector by 2035, California has already committed itself to a carbon free power sector by 2045 and last year we witnessed the results of that. California had to impose rolling blackouts on millions of its residents. The state had to waive environmental regulations so they could run large numbers of emergency diesel generators, and even then they could not keep the lights on. So to make matters worse, California residents are already paying some of the highest electricity prices in the country for unreliable energy.

So what are the facts that show it is possible to actually push the entire nation down this path and to do so ten years ahead of the California schedule without causing the blackouts, without having unacceptable risks and without driving up electricity prices?

Ms. GRANHOLM. We know that there are places in the country that have gotten to that amount, but we need a lot more work and a shoulder to the wheel. That's 15 years from now. I know the goal is there at 100 percent, but the important goal, I think, for this Committee is as well, the 100 percent net carbon zero emissions. And I'd like to talk about emissions because I think that is something that technology can address that keeps people employed and so to be able to work with you on that.

And I know that you are a forward thinker on this, on technology and you're not a climate denier, you are, you understand the importance of technology. And that's why I'm so impressed by the members of this Committee and especially the members who do represent fossil-based economies, because I know that you see the opportunity for that net zero and the use of technology to be able to get there.

Senator BARRASSO. Well, then I invite you to Wyoming, to the University of Wyoming School of Energy Resources where we have our integrated test center, working on carbon capture, air capture, direct capture and then putting it into products that are marketable and——

Ms. GRANHOLM. Yes.

Senator BARRASSO. —resold. The Chairman and I, as well as Senator Murkowski and Senator Cantwell and Senator Whitehouse have gone to locations around the world where research is being done to do that, the XPrize competition. You may have seen Elon

Musk has just committed \$100 million to research to do just the sorts of things that we have been leading the way in Wyoming. So I would welcome you there. That, to me, is a goal.

Right now, you know, I am taking a look at what President Biden said, he said he is going to ensure 100 percent of new sales for light- and medium-duty vehicles will be zero emission and cut the carbon footprint of our national building stock in half by 2035. In other words, his Administration not only wants to create this carbon free sector by 2035, but he wants to saddle the electric grid with the additional burden of powering most cars and trucks in the country, half of the buildings that currently use natural gas. No one wants to see a repeat of California failures.

So can you point to, you said there are some places, but can you point to any state agencies or electric grid operators or utilities that have committed to use such aggressive goals without warning people of the risks that they face if they try to clamp it down?

Ms. GRANHOLM. Well, I would say, I mean, having lived in California for this past year for that, I mean, a lot of the blackouts were due to, honestly, wind, fire, because of the conditions of the climate and it was less about the security of the grid and more about what was happening because of the warming of the planet and the cause of the additional fire danger as a result.

However—

Senator BARRASSO. And also, the way that the forests have been managed and all the other issues related to that.

Ms. GRANHOLM. Right, and a lot of that was federal forests too.

But yes, there has to be a better management of the forests. I don't want to argue about it with you at all. I want to be able to reach across and be a partner in achieving the technologies to get there. I do think that we have so much opportunity in building technologies and the structures, in materials that we reduce CO₂ footprint of buildings, the building sector.

I think that we can work together. I think that the example of the bill that you guys did pass at the end of last year is an example of being able to find the common ground that allows us to keep people employed, employ new people in this clean energy sector and use technology as a way of addressing CO₂ emissions.

Senator BARRASSO. Yes, you know, last year the Governor of California signed an Executive Order banning the sales of new vehicles with internal combustion engines by 2035. President Biden says he wants 100 percent of new sales for light- and medium-duty vehicles will be zero emission. You are a former Governor of Michigan. Do you support banning sales of new vehicles with internal combustion engines?

Ms. GRANHOLM. I think it's, I mean, I don't mean to interrupt, because I do drive the Chevy Bolt and it's been amazing and the best car I've ever had with incredible power. I would love to see a big goal and I know it's going to take us a while to get there and sometimes leaders have to say big goals to move things in the direction that they would like to see. But I do know that the auto industry itself, as Senator Stabenow said, is making big investments in this, not just the domestic auto industry, but internationally as well and it's very exciting to see.

Senator BARRASSO. Thank you, Mr. Chairman.

Senator MANCHIN. Thank you, Senator.

I will say that President Biden does enjoy a Corvette that makes a lot of noise. I do too, and that is going to be around for a while. I don't think he has any intentions of selling his either.

[Laughter.]

With that, we have one final Senator, Senator King, for a second round.

Senator King, I am sorry.

Senator KING. One of the things we are struggling with in this hearing is that the changes in employment patterns occasioned by the movement to a carbon free economy are obvious, and they are occurring. What is hard to calculate is the changes, the drastic changes to our economy, if we don't make this transition and the impacts all over the country in agriculture, in industry, in fisheries, in all of our coastal resources, everything from water in California, you name it. There is an enormous cost on the other side that has to be part of this equation. Those of us who are concerned about climate change and are doing something about it, it is not because it feels good or it looks good on a brochure. There are very practical national security and other implications of this that we really have to take account of and move forward on.

Secondly, I just want to emphasize what Joe Manchin, Senator Manchin, talked about, which is what I call stranded workers, workers who are in traditional industries when there are changes. This is a part of our history. What is different today about our transitions is time. In 1850, something like 94 percent of American workers were working in agriculture in one way or another. Now it is probably five or six percent. That is a huge, earth-shaking transition, but it took 170 years. Now we are seeing transitions that take decades and sometimes, in some communities, a matter of years.

So I agree with Senator Manchin and Governor Granholm, we have to be thinking about how to ease these transitions, and how to take account of them and not just say, oh, well, we are not going to do this and that, and those people can do something else. Often they can't, particularly in the place where they work. So we have to be thinking about a strategy of protecting and transitioning people to a different economy in a hurry, and it can't be something that just is an after thought or something we hope will happen by the nature of things.

So Governor Granholm, I hope you will be thinking about that in your counsel to the Administration. The goals are important for the country, but there are going to be transition problems along the way, and they should be dealt with consciously, deliberately, and compassionately, and I hope that is something you will take back to the President.

Ms. GRANHOLM. One thousand percent.

Senator KING. And by the way, you noticed we had Governor Hoeven, Governor Manchin, myself and yourself. The real secret society that runs this place is former governors, just so you know.

[Laughter.]

Senator MANCHIN. Trust me, she knows that, Senator.

[Laughter.]

Former Governor. That is why she is sitting there.

[Laughter.]

And we have Senator Barrasso to finish up.

Senator BARRASSO. Well, thank you very much, Mr. Chairman.

You will be happy to know, Governor, that you had committed to even coming back at two o'clock for additional questions. We are going to be done well before that. So I do have a couple of quick questions I wanted to go to.

You mentioned the importance of critical minerals and when we talked on the phone you talked about developing our own soup-to-nuts supply chain. Do you agree that accessing some of these mineral deposits are going to have to be on federal land? That is going to be necessary to establish our own supply because that is where some of these minerals are.

Ms. GRANHOLM. Yeah, that's certainly possible.

Senator BARRASSO. All right.

With regard to the renewable fuel standard, unlike larger oil refineries, the small refineries don't have the economies of scale to comply with our nation's biofuels mandate, the Renewable Fuel Standard. That is why Congress allowed the small refineries to petition the EPA for what is known as a hardship relief. Before deciding whether to grant relief, the Administrator of the EPA is required to consult with the Secretary of Energy and that is why I bring this up. Under the last two administrations, Federal Courts have rebuked EPA and the Department of Energy for failing to account for all the challenges that the small refineries face under the Renewable Fuel Standard. So it has happened to both the last two administrations.

If confirmed, will you ensure that the Department fully accounts for the challenges that small refineries are facing when evaluating the petitions?

Ms. GRANHOLM. Yes, sir.

Senator BARRASSO. Thank you.

I want to talk a bit about uranium because it is a big, key part of the Department of Energy. For years, Russia and its satellites have unfairly dumped uranium into the U.S. market as they tried to lower prices and command the world market. As a result, American imports, over 90 percent of them are uranium from other countries. Over 40 percent comes in from Russia, Kazakhstan, Uzbekistan and America's uranium production as a result of these forced onto our markets here has dropped to levels we haven't seen since the early '50s because they have undercut our markets in an effort to try to monopolize the world market coming out of Russia. So it is critical that we maintain our ability to produce and process our own nuclear energy. It is our largest source of carbon free electricity in which, why we have talked about the nuclear reactors and the modern and updated and some of the things that Bill Gates and others are doing in that line.

Last year, the Department requested and Congress provided funding to establish a National Uranium Reserve. Can I have your commitment that, if confirmed, you will be, you will complete the establishment of that reserve, establish a purchasing program and buy American produced uranium this year which is something that we passed last year?

Ms. GRANHOLM. I will certainly act upon the instructions of Congress.

Senator BARRASSO. Thank you.

In addition to our foreign adversaries like Russia, the Department of Energy has actually dumped uranium into the U.S. market. This is something we talked about when Secretary Moniz was Secretary of Energy and Secretary Perry in the past. It has undercut the price of uranium and resulted in the cancellation of uranium projects and the loss of lots of jobs in my home state of Wyoming. The Government Accountability Office repeatedly found that the Department of Energy's actions violated federal law. Thankfully, Secretary Perry largely ended the practice. And I am asking you to have your assurance that, if confirmed, you will not put the Department's excess uranium into the market.

Ms. GRANHOLM. Yeah, I have to be briefed on this, but I certainly hear what you're saying and I'll look at it and work with you on it.

Senator BARRASSO. Thank you.

Finally, Wyoming is the leading producer and has some of the nation's largest reserves of coal, natural gas, oil and uranium. We have it all. We also have world class researchers studying carbon capture technologies. We talked about the University of Wyoming, in Laramie, and in our Integrated Test Center, outside of Gillette. The state is the proud host of the Department of Energy's CarbonSAFE program and it examines the potential of geologic formations to store carbon dioxide, all along the lines of getting to the goals that you have talked about. So in July last year, I sent to the former Secretary of Energy Brouillette a letter encouraging the Department to establish a presence in the State of Wyoming.

If confirmed, will you give serious consideration to this request to create a Department of Energy Office in Wyoming?

Ms. GRANHOLM. Yes, very interesting. I'd love to take a look at that and work with you on it.

Senator BARRASSO. Well, thank you so much, Governor, and congratulations on your nomination.

Ms. GRANHOLM. Thank you.

Senator MANCHIN. Governor Granholm, let me just thank you again. And Dan, thank you for being here. We appreciate you all very much for the service you have given to our country and what you continue to do.

Not only did you come prepared, you came and showed us the diverse knowledge you have of the energy portfolio our country needs in order to maintain our energy independence, and a practical, pragmatic way of moving forward. So we wish you nothing but good fortunes, and I look forward, and I know that Senator Barrasso does, we look forward to working with you, if you are confirmed, which I assume that you will be, very strongly, and look forward to start working as quickly as we can.

We are going to say thank you again. With that, this meeting is adjourned—I am sorry. Members will have until 8:30 p.m. today to submit additional questions for the record, whoever might not have been able to get their questions in. So we look forward to that up to 8:30 tonight. Thank you, we are adjourned.

[Whereupon, at 12:22 p.m. the hearing was adjourned.]

APPENDIX MATERIAL SUBMITTED

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Questions from Chairman Lisa Murkowski

Question 1: If confirmed, will you ensure that the implementation of the provisions in the Energy Act is a priority for the Department of Energy?

Answer 1: Yes.

Question 2: In your view, what are the most important provisions in the Energy Act?

Answer 2: Many provisions of the Energy Act of 2020 will give the Department additional flexibility to push innovation in critical areas for emissions reduction and energy security but several areas stand out to me as particularly ripe for major advances in the next four years: energy storage technology, including the critical minerals supply chain, and advancing carbon capture to be widely applicable in industrial settings. The advanced nuclear, next generation hydro, and energy efficiency provisions are also going to yield game-changing advances in the years ahead.

Question 3: Many Alaska Natives live in rural areas where it is common to spend up to half of one's disposable income on energy expenses, largely for diesel to power generators. DOE is able to provide financial support to help those communities transition away from diesel. In the Energy Act, I authored a provision to give DOE greater flexibility in adjusting matching requirements for that support, and to ensure that all tribal entities – including Alaska Native Corporations – are eligible for all funding opportunities. If confirmed, will you commit to following the law and ensuring that all tribal entities and Alaska Native Corporations are eligible for grants and financial support?

Answer 3: Yes, if confirmed as Secretary, I commit to ensuring that tribal entities will be afforded the opportunity to receive grants and financial support opportunities when eligible consistent with the law.

Question 4: Can you also commit to using the new authority to adjust matching requirements, when appropriate?

Answer 4: Yes, if confirmed as Secretary I will work toward implementing the recent requirements when appropriate as set forth in Section 8013 of EPAAct 2020.

Question 5: Can you discuss the importance of minerals in meeting the clean energy and climate goals that the Biden administration has set?

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Answer 5: I believe a reliable supply of minerals is critical to achieving our clean energy and climate goals. Whether it is through technology development in our National Laboratories or through the responsible development of our mineral resources, the United States can seize the opportunity to maintain a competitive advantage in producing batteries and other technologies that will enable us to advance renewable energy, and other industries supported by critical minerals.

Question 6: How can DOE support greater domestic production and processing of critical minerals, and make us more competitive with Asian and European markets?

Answer 6: I believe DOE can continue to support responsible domestic production and processing of critical materials, and assist in supporting methods that make increased production and processing more sustainable. If confirmed as Secretary, I look forward to learning more about the ongoing efforts in both the Office of Fossil Energy and ARPA-E to investigate new approaches to mining that will increase the efficiency of extraction with minimal waste, while simultaneously using the waste as a feedstock for mineralizing CO₂, which could serve as a feedstock to building materials.

Question 7: Will you ensure that critical mineral projects remain eligible under the loan guarantee program and continue funding for the new Office of Mineral Sustainability? Would you consider using some of the \$40 billion in unobligated loan authority to strengthen mineral supply chains, especially for the minerals that are essential to clean energy technologies?

Answer 7: Critical Mineral projects are eligible for loan guarantees under the Title XVII Innovative Technologies Loan Guarantee Program and the Advanced Technology Vehicles Manufacturing Program. If confirmed as Secretary, I will encourage applications from potential projects that meet the applicable statutory and regulatory criteria involving the production, manufacture, recycling, processing, recovery, or reuse of Critical Minerals and other minerals to advance clean energy and advanced vehicle manufacturing technologies.

Question 8: Given the role that U.S. oil exports play in increasing energy access in the developing world, supporting international energy security, and strengthening U.S. foreign policy, what are your views on the oil export ban and domestic oil and gas production?

Answer 8: Yes. I understand that in December 2015, Congress repealed the previously enacted ban on the export of crude oil produced in the United States. While it is my understanding that the Department

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of Commerce has authority over the approvals of oil exports, I will get further briefed on the issue. If confirmed, I look forward to discussing this with you further.

Question 9: Geothermal energy is a clean, baseload renewable resource that has the potential to provide reliable energy throughout Alaska. In 2018, DOE established the FORGE research site in Utah as an R&D facility and test center for enhanced geothermal systems. I was able to author language to codify and expand DOE's geothermal work through the Energy Act. How will you ensure the continued success of FORGE and a demonstration program for enhanced geothermal systems?

Answer 9: It is my understanding that the FORGE team is expected to begin drilling this year the second test wellbore on the Milford site, which will be the second well ever drilled for geothermal with a long, near-horizontal leg, similar to those drilled in oil and gas. I am enthusiastic about the opportunity that geothermal offers, like hydro- and nuclear power, to provide emissions free baseload power to the grid. If confirmed as Secretary, I will work with my Office of Energy Efficiency and Renewable Energy to continue to move forward with this important project.

Question 10: We provided new flexibility, eligibility expansions, and transparency for the Title 17 loan program through the Energy Act. This will allow the Department to finance more large-scale projects, like Alaska's Makushin geothermal project, and distribute funds through state-level entities to finance smaller projects. How will you approach DOE's loan programs, and how will you approach the Title 17 program, compared to the Advanced Technology Vehicles Manufacturing program?

Answer 10: I am encouraged by opportunities provided in the Energy Act of 2020, and if confirmed as Secretary, will work to implement those new flexibilities, implement eligibility expansion and improve transparency. I will also pursue oversight and full implementation of the Title XVII Innovative Technologies Loan Guarantee Program and the Advanced Technology Vehicles Manufacturing program and will review how the two programs approach loan underwriting to better utilize the available loan authorities.

Question 11: I have long been an advocate for maintaining a robust Strategic Petroleum Reserve, and have defended it from being used to pay for unrelated spending. What are your views of the Strategic Petroleum Reserve? When and how should the SPR be drawn down?

Answer 11: I understand the Congress has mandated a number of sales from the Strategic Petroleum Reserve (SPR) as budget offsets for unrelated legislation. While that is Congress' discretion, I believe it

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is important to look at the intent and historical record of the SPR when considering non-emergency sales of oil from the SPR. Significant draw down has only taken place in the case of emergencies – with only three taking place over the last decade, the most significant being the 30 million bbl in the “Arab Spring” of 2011. The other two events were in 1991 (Iraq, 17M bbl) and 2005 (Hurricane Katrina, 11M). The SPR is robust and maintained for purposes of this kind. If confirmed as Secretary, I will follow the law as enacted by Congress as it relates to the SPR, but also note that Congress created the SPR to be a secure and effective emergency response tool, and if confirmed I would ensure that remains the case.

Question 12: What is the Energy Secretary’s responsibility to Congress on the notification of sales from the Strategic Petroleum Reserves?

Answer 12: It is my understanding that it has been DOE’s long-standing policy and practice to notify Congress in advance of any proposed sale or drawdown from the Strategic Petroleum Reserve. If confirmed it would be my intent to follow that precedent.

Question 13: If confirmed, would you be willing to delay mandated sales from the Strategic Petroleum Reserves based on market conditions?

Answer 13: If confirmed as Secretary, I believe that it is important to be strategic about implementing the sales from the SPR that were mandated by Congress. Those sales should include consideration of market conditions to the extent such considerations are applicable under the constraints imposed by Congress. In the emergency conditions for which the SPR was created, there is flexibility for such considerations in making drawdowns from the SPR.

Question 14: I was able to get my Nuclear Energy Leadership Act over the finish line last year, which supports the development of advanced reactors and small modular reactors, and has the potential to provide long term, reliable, and sustainable energy in rural Alaska. I understand there have been significant technological developments in the nuclear field, especially since some of the plants were built in your home state of Michigan. How do you think advanced nuclear fits into a climate change mitigation strategy?

Answer 14: I believe advanced nuclear energy is an important and promising technology that we should pursue. If confirmed as Secretary I look forward to working with you to advance emission-free technologies, including forms of advanced nuclear technology.

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Question 15: Can you commit to appearing before the Senate Committee on Indian Affairs, if requested, and to sending your budget team over to meet with us when the President submits his budget requests to Congress?

Answer 15: Yes.

Question 16: The Weatherization Assistance Program and State Energy Program are particularly important for communities with high energy costs. In my home state of Alaska, rural communities pay three to five times the rate of electricity in areas connected to the main electric grid. Will you continue funding for these programs and distributing payments for the Weatherization Assistance Program and State Energy Program in a timely manner?

Answer 16: If confirmed, I will be a strong supporter of the Weatherization Assistance Program and the State Energy Program.

Question 17: The Energy Act authorizes multiple new demonstration projects, including for nuclear, carbon capture, geothermal, energy storage, hydropower, and fusion. How will you prioritize these projects to move them towards commercialization, especially with the deadlines that are now in statute, and how will you work with the private sector to accelerate the deployment of the new technologies?

Answer 17: In accordance with the statutory language, the Department will immediately proceed to identify potential demonstration projects to accelerate commercial adoption. Prioritization of new demonstration projects will be supported and informed by the output of earlier stage R&D activities and analysis to identify candidate technologies and projects. Private sector engagement throughout the process will ensure that the demonstration projects address the existing sources of risk that may be impediments to technology adoption and maximize the impact the demonstration project will have on accelerating commercial adoption.

Question 18: If confirmed, will you consider reestablishing the federal advisory committees as standalone, chartered subcommittees, as previously structured?

Answer 18: If confirmed, I will have to learn more about how and why the subcommittees were separately chartered. I will review the Federal Advisory Committee Act and the advisory committees established in the Department.

Question 19: What are your views on pre-commercial methane hydrate research and seismic testing?

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Answer 19: I believe the Department has an important role to play in continuing to pursue the necessary research to better understand and characterize methane hydrates.

Question 20: If you are confirmed as Secretary, will you recognize and instruct the Department to promote hydropower, including hydropower in Alaska, as a clean, renewable resource, particularly within orders and initiatives the administration advances to address climate change?

Answer 20: Yes. I agree that hydropower is a critical part of our energy future, both as a source of clean, renewable energy and as a highly flexible resource that can help us advance other renewables like wind and solar. At the same time, it is essential that hydropower is developed and operated in a way that supports healthy rivers and the communities that depend on them. If confirmed as Secretary, I will support the Department's hydropower program efforts, including the newly announced Energy Transitions Initiative Partnership Program that will work directly with a number of communities in Alaska, and the continued development of new technologies and approaches that ensure hydropower facilities are environmentally sustainable and resilient to climate change.

Question 21: My Energy Act, which was included as Division Z of the recent year-end Appropriations bill, contains provisions that allow the Secretary of Energy to make hydropower incentives available to a broader range of entities, including in rural and tribal communities and within islanded utility systems. As Secretary, will you recognize rural utilities' ability and requests to participate in this program? Will you recognize and provide all appropriate consideration for utilities in Alaska that may apply as part of joint ventures with Alaska Native Corporations chartered under the Alaska Native Claims Settlement Act?

Answer 21: It is my understanding that DOE is working to expand the eligibility criteria of the hydropower incentive to incorporate Division Z of the Energy Act. If confirmed as Secretary, I will recognize and provide all appropriate consideration for utilities in Alaska to apply as part of joint ventures with Alaska Native Corporations chartered under the Alaska Native Claims Settlement Act.

Question 22: Back home in Alaska, we have many opportunities to develop our abundant hydropower resources, and those projects could reduce or eliminate the use of costly diesel fuel in small communities that are not connected to a larger grid. In fact, hydropower is often the best and only way to eliminate current diesel use. If you are confirmed as Secretary, will you work with me, the State of Alaska, and entities throughout our state to improve the feasibility and economics of Alaska hydropower in remote communities through grants, technical assistance, and more?

Answer 22: Yes.

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Question 23: Originally authorized in 2000 under Public Law 106-511, the Northern Transmission Line of the Southeast Intertie provide for a high-voltage transmission line to connect Skagway, Haines, and Juneau. The project would deliver renewable energy to these communities, enable new hydropower developments, and bring economic opportunities to Southeast Alaska. Will you support this project and other projects that seek to modernize Alaska's microgrids and electric grid?

Answer 23: Yes.

Questions from Senator Joe Manchin III

Question 1: NETL is unique among the labs in that it is the only government owned, government operated lab. As a result it lacks some of the flexibility that some of other labs enjoy, such as control over its own hiring. And right now I understand that there are more than 30 vacancies awaiting Secretarial approval to fill at NETL.

- a. Will you turn your attention to approving the hires needed at NETL?

Answer 1a: Yes.

- b. Will you work with me to ensure NETL has the authority over its human resources needed to put it on level footing with the other 16 Labs?

Answer 1b: Yes. I understand that as a government-owned, government-operated (GOGO) national laboratory NETL faces certain challenges that their peers at government-owned, contractor-operated (GOCO) do not have to face. If confirmed as Secretary, I look forward to working with you to ensure a more level footing for NETL within the confines of the law.

Question 2: In 2016, the Department of Energy produced the very first U.S Energy Employment Report as a way to provide a more complete definition and quantification of energy employment across the U.S. economy. The FY 2020 appropriations process provided funding to the DOE's Office of Policy to complete an annual U.S. Energy Employment Report. Funding for this directive was also provided in the last omnibus bill. I want to make sure the report with the employment data from 2020 doesn't fall through the cracks.

- a. Can I have your assurance that you will look into this and make sure DOE carries out this important annual directive, starting with 2020?

Answer 2a: Yes, I value the information contained in the USEER very highly and think that it is critical to set a baseline so that we can understand the jobs challenges and opportunities and

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shape policy accordingly. I also understand that it is a useful resource for industry. If I am confirmed as Secretary, I will work to ensure that the Department will compile and deliver the 2021 USEER (containing data from calendar year 2020) on schedule.

Question 3: I understand that the new Working Group on Coal and Power Plant Communities and Economic Revitalization will be co-chaired by the National Climate Advisor and the Director of the National Economic Council but will include Department of Energy. I think it's very important that DOE has a seat at this table because work in traditional energy jobs is more than a livelihood, it's a part of the culture in places like Appalachia and many skills possessed by traditional energy workers are readily transferrable to other energy-related jobs and those in manufacturing.

- a. Can I have your assurance that the DOE will be an active and vocal member of the working group with this understanding in mind and that you will keep me and my staff updated on this important effort to coordinate investments and other efforts to assist coal, oil and natural gas, and power plant communities like many in West Virginia?

Answer 3a: Yes.

Question 4: As you discussed in today's hearing, prioritizing the cybersecurity of our energy systems is of great importance.

- a. Do you expect to maintain a separate office focused on cyber as the CESER Office has been?

Answer 4a: Yes.

Questions from Senator John Barrasso

Question 1: Technology neutrality should be an important principle to guide funding decisions. It is my understanding that the Department of Energy's (DOE) Loan Programs Office (LPO) has issued a loan guarantee to only one fossil fuel project, a carbon capture project in Lake Charles, Louisiana. On the other hand, LPO has issued guarantees worth nearly \$13 billion in renewable energy projects. Do you commit to treating fossil fuel and nuclear project applicants fairly?

Answer 1: For the Title XVII Innovative Technologies Loan Guarantee Program, Congress authorized loan guarantee authority to deploy a wide variety of new and innovative technologies that avoid, reduce, sequester, or utilize greenhouse gases and other pollutants. This includes Carbon Capture technology deployed at scale. I understand there are a number of factors that go into providing loans, including strong applications from the private sector, which is outside of DOE's control. If confirmed as Secretary,

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I would welcome applicants for loan guarantees for carbon management technologies, and commit to being responsive to all applicants to that program that meet these criteria and ensure they receive prompt and equitable consideration.

Question 2: The United States has “re-joined” the Paris climate agreement. The agreement has not been confirmed by the Senate. Without being ratified, is the Paris Agreement legally binding in any way, including as a legal basis for regulation?

Answer 2: I understand that on January 20, 2021, President Biden signed the instrument to rejoin the Paris Agreement, which will take effect 30 days later. As a United States government level instrument, if confirmed, I will look to the State Department and the Department of Justice concerning the legal force and effect of the instrument.

Question 3: Do you agree the Trans-Alaska Pipeline System is an asset of great importance to our national and energy security?

Answer 3: Yes, I believe the Trans-Alaska Pipeline System has strategic value to the United States.

Question 4: According to the Global Energy Institute’s authoritative energy security indexes, the United States is more energy secure than at any time since 1970 and has the best energy security of 25 of the largest energy consuming countries in the world. This has been a bipartisan goal for decades. The group cites greater domestic oil and gas production from hydraulic fracturing in shale formations as the primary reason for the improvement in energy security. On balance, has hydraulic fracturing been a good thing or a bad thing for U.S. energy security?

Answer 4: The technologies of hydraulic fracturing and horizontal drilling that were pioneered in part by the Department of Energy decades ago have certainly contributed to the nation’s energy security. Similarly, the innovations that the Department has worked on since with its partners in the private sector have continued to increase that security even further by diversifying our energy sources. If confirmed, I will drive the Department to pursue the research that will further this goal while also making our nation more secure by mitigating the threats of the climate crisis.

Question 5: Pipeline certification is already mired in controversy and litigation, causing significant delays. How would you suggest the certification process could be improved such that there is a future for natural gas transportation, production, and financing? Energy producing states such as Wyoming, Alaska, West Virginia and New Mexico and energy consuming states, such as those in New England, rely on the pipelines to enable

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product to get to market. How should the Biden Administration and FERC proceed on pipeline certifications to enable reliable and low-cost energy supply to continue?

Answer 5: DOE plays an important role in natural gas infrastructure, along with FERC and PHMSA. For example, DOE engages in natural gas technologies R&D to enhance pipeline reliability, integrity, and operational flexibility, and to ensure infrastructure security. The certification and permitting processes are important to understanding environmental and economic impacts. If confirmed as Secretary, I will work to ensure that DOE's work helps inform its Federal partners on important issues around certification processes, cost, methane leakage, and other economic and environmental impacts.

Question 6: Isn't keeping American energy costs low critical to our economic success? If confirmed, will you commit to working to foster an environment where natural gas and oil markets remain stable and affordable?

Answer 6: If confirmed as Secretary, I will work to ensure that energy costs are low across the country and foster a market that is fair to all energy sources.

Question 7: The COVID-19 pandemic has clearly had a significant effect on the international economy and specifically, oil markets. As Secretary, what steps would you take to help to stabilize oil markets?

Answer 7: If confirmed as Secretary, I will consult with other agencies across government to ensure that impacts to the energy sector from the COVID-19 crisis are mitigated and energy markets are built back to be more resilient.

Question 8: In May 2014, you appeared to celebrate on Twitter when Stanford University divested coal investments from their endowment. As Secretary, will you encourage other investment funds to stop investing in American energy?

Answer 8: I do not believe it to be the role of the Secretary of Energy to comment on the investments of private institutions, and if confirmed, I do not intend to.

Question 9: Model building energy codes across the country establish baseline standards for building energy efficiency. DOE does not write these codes, but it can be an effective participant in their development by providing technical assistance to analyze energy savings. Over the last few years, however, DOE has increasingly advocated for a prescriptive approach that favors certain products and technologies and pursued aggressive and expensive requirements. Can you explain what you think DOE's role related to model energy codes should be?

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Answer 9: It is my understanding that the Department is directed by the Energy Conservation and Production Act (ECPA), as amended, to provide technical assistance supporting the development by code-development bodies of model building energy code updates, as well as state implementation of building energy codes (42 USC 6836 and 6833). In recent years, the building industry, with DOE's support, has focused increasingly on compliance options that allow greater flexibility and trade-offs among consumer-friendly solutions, known as *performance*-based codes. If confirmed as Secretary, I will work to ensure DOE maintains its technical assistance role, supporting the industry in its ongoing shift toward performance-based compliance options.

Question 10: Building energy codes can limit choice and increase costs for consumers. Building energy codes legislation could pave the way for a federal building code which would erode the cooperative framework that currently exists in the codes process and permit cities to adopt codes that far exceed the model codes—otherwise known as stretch or reach codes. Stretch codes are currently being used to eliminate natural gas in some cities. Please explain the administration's position on stretch energy codes and your plan to ensure that energy choice is preserved.

Answer 10: I understand that building energy codes have a good track record of helping newer technologies and practices be incorporated into new homes and buildings and major retrofits in ways that save consumers money, increase local jobs, and avoid pollution. If confirmed as Secretary, I am committed to a DOE that provides state and local jurisdictions with robust cost and benefit information on their building energy code options as they consider their choices, as directed by the congressional requirements described above.

Question 11: Battery production seemed to be a priority during your gubernatorial terms. What have you learned from your experience with battery production in Michigan that you will take with you, if confirmed? What will you do to enable DOE on your watch to be more successful in this area than Michigan has been?

Answer 11: Battery production and supply must correspond to the demand for EV or energy storage batteries. Ten years ago, the auto industry was poised to make a change to embrace the EV but had not made the transition, and the emerging industry went through some upheaval as supply outpaced demand. Nevertheless, early investments paid off well in Michigan – today approximately one third of all US battery production is in Michigan and the auto industry is promoting EV purchases far more than they

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were a decade ago, which creates demand in the U.S. and globally. Just this week, GM announced that it would be aiming for a zero emissions fleet by 2035, putting Michigan and other U.S. battery manufacturers in an advantageous position in the supply chain. While R&D has helped drive down the price of batteries by 89% in the past decade, I would also prioritize R&D to continue to reduce the cost of energy storage, both for vehicles and the electric system.

Question 12: While you were governor, the Michigan Economic Growth Authority approved billions of dollars in tax credits for 434 projects. A May 15, 2014 analysis by the Mackinac Center for Public Policy found that only 10, or 2.3 percent, of those projects were successful in meeting their job creation promises. In your view, why did these projects underperform their job creation expectations?

Answer 12: When projects were announced, the Michigan Economic Growth Authority (MEGA) credit offered a 10–15 year window to create jobs. The report cited was conducted in 2014, so the full extent of the job creation of projects incentivized in 2009 during the Great Recession was incomplete. It is unclear how that report defined failures. To the extent that they measured companies that only partially met their job creation goals as failures, I disagree with that assessment. In stimulating job growth in a recession, as well as spurring on new industries, some projects must be expected to fail, but in the case of MEGA investments, the vast majority of the projects themselves were not failures.

Question 13: Do you consider “cash for clunkers” a successful model for economic recovery that should be replicated in response to economic conditions resulting from the COVID-19 pandemic?

Answer 13: Cash for Clunkers created demand for fuel efficient vehicles and was very helpful to both automakers and struggling Americans as we pulled out of the Great Recession. A similar economic tool could create demand for American electric vehicles and EV batteries as we try to emerge from the COVID-19 recession.

Question 14: Increasing use of renewable energy and batteries pose significant challenges regarding disposal, including, for example, disposal of toxic chemicals. What role do you see DOE playing to address these issues?

Answer 14: It is my understanding the DOE Office of Energy Efficiency and Renewable Energy focuses on battery recycling, disposal, and reduction of critical materials through the Lithium-Ion Battery Recycling Prize and our ReCell Lithium Battery Recycling R&D Center. If confirmed as

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Secretary, I look forward to reviewing the center's efforts, as well as the Department's Lithium-Ion Battery Recycling Prize, which is focused on developing and demonstrating processes that, when scaled, have the potential to profitably capture 90% of all discarded or spent lithium-based batteries (LIBs) in the United States and re-introduce key materials into the U.S. supply chain.

Question 15: I cited a December 29, 2020 USA Today article at your confirmation hearing. I explained how the article alleged that, as governor, you directed hundreds of millions in taxpayer dollars to battery, solar, and other "green" energy companies that failed to deliver on their job-creation promises. I highlighted one example -- A123 Systems, and asked why we should have confidence that, if confirmed, you will be able to invest taxpayer dollars wisely? You responded as follows: "First, that article is incorrect. In Michigan, we have something called the Michigan Economic Growth Authority that offers tax credits to firms that promise to build, to create a certain number of jobs... But if they don't, they don't get the funds. And so in Michigan, because of the way the tax credit is structured, we don't pay out if firms don't deliver." Is it your position that no Michigan taxpayer dollars were lost in connection with any investment made in or payments made to A123 Systems by any authority of the State of Michigan?

Answer 15: The question was about a variety of clean energy companies and used A123 as the representative example. In stimulating job growth in a recession, as well as spurring on new industries, some projects must be expected to fail, but the experience of both MEGA and the DOE loan program show that such investment pays off in the long run. Michigan's MEGA program still saw a positive return (\$2.30 for every dollar invested) for Michigan's taxpayers, just as the DOE's Loan Program Office has seen a positive return of \$500 million for US taxpayers in fees and interest from the borrowers in spite of losses on some specific guarantees. And that doesn't include the economic benefit of those projects to their local economies and through tax receipts. I believe we should be responsibly betting on American technology and American companies, even if on occasion one may not succeed. If confirmed I will press hard to employ such programs that have a proven track record of economic success.

Question 16: The vast majority of critical defense facilities are supplied power by the civilian electric grid. Your policies will have a direct effect on the reliability and resilience of the grid. How will you ensure our most critical national security assets have reliable power and are resilient in the current cyber and physical threat landscape?

Answer 16: If confirmed as Secretary, I will review the DOE Office of Cybersecurity, Energy Security and Emergency Response for additional cybersecurity monitoring tools and threat information sharing.

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It is my understanding that the Office of Electricity is implementing a Defense Critical Electric Infrastructure strategy and program that is focused on strengthening the reliability and resilience of the nation's energy infrastructure, to include a public-private national security capability focused on cyber and physical threats affecting critical defense facilities. The Department is also investing heavily in microgrid technologies that can be used to isolate and self-power discreet areas such as defense facilities in case of attack or natural disaster affecting the power grid. Additionally, the DOE Office of Electricity is collaborating with eight National Laboratories and relevant stakeholders to develop an integrated North American Energy Resilience Model (NAERM) to conduct the systematic identification of threats to the nation's energy infrastructure, the development of market approaches for resilience investments to reduce exposure to these threats, and enhanced situational awareness and sophisticated analytics to minimize the impact of threats and increase resilience as they evolve in real time.

Question 17: Cybersecurity experts agree that the internet connectivity of many clean energy technologies increase the threat landscape and likelihood for attacks against energy infrastructure. Has the administration outlined an energy cybersecurity plan to accompany this massive build out in vulnerable clean energy technologies? More broadly, do you commit to persisting and improving upon DOE's role as the leader for electric sector cybersecurity? How will you ensure DOE's leadership when working with the Department of Homeland Security?

Answer 17: If confirmed as Secretary, I look forward to improving upon DOE's role as the leading agency for electric sector cybersecurity. It is my understanding that DOE is working to help the energy sector adapt to the changing nature of cybersecurity risk. Specifically, in the past year, DOE initiated an update, in collaboration with DHS, of the list of energy sector critical infrastructure where a cybersecurity incident could reasonably result in catastrophic regional or national effects on public health or safety, economic security, or national security, pursuant to Section 9 of Executive Order (E.O.) 13636, *Improving Critical Infrastructure Cybersecurity*.¹ Also, in the past year, DOE's CESER partnered with the National Renewable Energy Laboratory (NREL) to stand up a Cybersecurity Wind Consortium to partner with industry to increase the cybersecurity of the US wind fleet.

¹ Available at, <https://obamawhitehouse.archives.gov/the-press-office/2013/02/12/executive-order-improving-critical-infrastructure-cybersecurity>.

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Question 18: The Senate depends on the EIA for reliable, non-partisan energy data and forecasts. If you are confirmed, will you pledge to ensure that EIA will not be subject to political pressures to tip the scales in favor of the president's policy preferences?

Answer 18: Yes. If confirmed as Secretary, I intended to protect EIA's autonomy as outlined in the DOE Organization Act of 1977.

Question 19: The President has endorsed the goal of net "0" emissions by 2050. If confirmed, will you work with the Committee to get EIA to model this goal as a side case to the Annual Energy Outlook 2021?

Answer 19: If confirmed as Secretary, I will follow the DOE Organizational Act of 1977. By law, EIA's data, analyses, and forecasts are independent of approval by any other officer or employee of the United States Government. EIA's statistical and analytical products must remain free from political influence. EIA has and will, subject to available time and resources, take requests from Congress, the Secretary of Energy and other parts of the federal government to analyze various policies or scenarios. I encourage Members of Congress to express their interests directly to EIA.

Question 20: The President's Inauguration Day directive to agency and department heads instructs them to "identify ways to modernize and improve the regulatory review process" to promote "policies that reflect new developments in scientific and economic understanding, fully accounts for regulatory benefits that are difficult or impossible to quantify, and does not have harmful anti-regulatory or deregulatory effects"? If confirmed, how will you "fully account" for alleged benefits that are "impossible to quantify"?

Answer 20: If confirmed, I will carry out President Biden's commitment to make policy decisions rooted in the best available science. This includes the regulatory process. One critical step in ensuring benefits are captured in regulatory analyses includes updating the social costs of greenhouse gasses. I understand that the Executive Order reestablished the Interagency Working Group on the Social Cost of Greenhouse Gases, and if confirmed, I would ensure that DOE brings its technical expertise to bear in the process to update the values for these gases. Additionally, if confirmed, I would ensure that all regulatory action taken by the department uses these scientifically based economic inputs and all other reasonable technical and scientific review practices to make all rulemaking analyses as accurate as possible.

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Question 21: Do you support continued use of natural gas for space heating, water heating, cooking, and clothes drying purposes?

Answer 21: It is my understanding that the Department of Energy does not determine what fuels are to be used in the nation's buildings. Congress has authorized the Department to assess the updated building codes resulting from three-year improvement cycles and to see if these updated codes improve energy efficiency over the prior code as well as to provide technical assistance to state and local jurisdictions as they seek to update their building energy codes. If confirmed, I will see that DOE fulfills its responsibilities.

Question 22: What is your view on local bans that attempt to curtail natural gas use in residential and commercial buildings?

Answer 22: If confirmed, my goal will be to assist states and local governments with the technical assistance to better inform their decision-making, not to predetermine what those decisions will be, as directed by Congress.

Question 23: Do you believe the United States should continue to play a leading role in the export of liquefied natural gas to our trading partners in Europe, Asia, and elsewhere?

Answer 23: I believe U.S. LNG exports can have an important role to play in reducing international consumption of fuels that have greater contribution to greenhouse gas emissions. If confirmed as Secretary, I also look forward to working with U.S. industry in ways to reduce emissions associated with this commodity.

Question 24: Do you believe that advanced nuclear technologies can become a significant contributor to a low-carbon energy future?

Answer 24: Yes.

Question 25: Please describe to the committee the importance of secure and reliable supply chains to our nation's energy security. Can you describe how supply chain vulnerabilities have the potential to impact access to affordable energy and economic recovery goals?

Answer 25: As the recent COVID-19 pandemic has clearly illustrated, supply chain vulnerabilities impact all sectors of the economy – including our nation's energy security. For clean energy

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technologies, supply chain vulnerabilities of critical minerals and materials threaten the ability of the U.S. to manufacture and deploy these technologies domestically. If confirmed as Secretary, I will review DOE's strategy for addressing critical minerals and materials --- diversifying supply, developing substitutes, and improving reuse and recycling --- and will ensure that DOE will leverage its expertise and capabilities to work with industry, interagency partners, and international allies to address these vulnerabilities.

Question 26: Do you agree that we need to ensure electricity markets properly value the security and resiliency provided by existing baseload capacity?

Answer 26: Security, resiliency, reliability, affordability, and clean energy are key goals for the grid. The ability of generation capacity to respond when called upon is one of many important attributes of performance that should be valued in the markets.

Question 27: Do you agree with IEA that carbon capture, utilization, and storage (CCUS) technologies are essential to meaningfully reducing carbon dioxide from the atmosphere? Will you ensure that emerging technologies like carbon capture receive the adequate funding necessary to advance towards commercialization, particularly when compared to technologies that are already well-established in the market? How can DOE advance CCUS technologies at a faster pace? How will DOE leverage existing CCUS research and demonstrations ongoing in the private sector, at universities, and at other institutions around the country? Other countries have made serious commitments to CCUS. They understand its real potential for reducing greenhouse gas emissions. How will you work with other countries to share lessons learned, and to collectively advance global greenhouse gas emissions through CCUS technologies? Will you commit to making carbon removal a top priority for your agency and provide necessary resources to launch and fund CCUS programs?

Answer 27: I agree that point source carbon capture and carbon removal technologies are essential. It is my understanding that the DOE Office of Fossil Energy and ARPA-E have innovative programs built around these important areas, and have begun supporting direct air capture for the first time last year. If confirmed as Secretary, I look forward to working with you and other Members of Congress, industry and other stakeholders to support the implementation of the new programs and authorizations around CCUS from the *Energy Act of 2020*. To increase the pace, we need increased deployment, and if confirmed, I will work to ensure that DOE will work with stakeholders in the U.S. and around the world to do so.

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Question 28: Nuclear energy is the largest source of clean energy in the United States. Any realistic clean energy future will necessarily require us to sustain and expand the use of nuclear energy. How will you prioritize the role of nuclear energy technologies?

Answer 28: Nuclear energy provides more than 55% of our clean energy and nearly 30% globally, and it is critical to sustain this share of energy use to meet our carbon reduction goals. If confirmed as Secretary, I will work with the Department to continue to support the research, development, and demonstration of technologies to preserve our existing fleet, deploy advanced reactor technologies, and expand nuclear energy to markets beyond electricity to meet our carbon reduction goals in the United States and globally.

Question 29: What specific actions will you take to ensure the U.S. regains its global leadership in nuclear energy?

Answer 29: Many countries are looking at nuclear energy to meet their growing energy needs and are interested in technologies developed in the United States. If confirmed as Secretary, I will support the whole-of-government approach and work with my counterparts across the Interagency and with Congress to empower the U.S. nuclear industry to develop, demonstrate, and export American-made nuclear technology.

Question 30: The Nuclear Waste Policy Act (NWPA) directs DOE to site, construct, and operate a geologic repository for high-level waste at Yucca Mountain. DOE has failed to fulfil its statutory obligation to move forward with the repository. How will you ensure DOE compliance with the NWPA?

Answer 30: I support examining the recommendations from the “Blue Ribbon Commission on America’s Nuclear Future”, which recommended seeking a consent-based approach to siting our nation’s spent nuclear fuel and high-level radioactive waste. If confirmed, I look forward to working with you and other Members of Congress to make progress towards that goal.

Question 31: It is my understanding that DOE’s Loan Program Office (LPO) sometimes utilizes appropriated dollars to pay for the credit subsidy costs of loan guarantees, which is the long-term amount the guarantee will cost the federal government. Should taxpayer funds pay credit subsidy costs for LPO projects? What is your position on increasing appropriations to cover the credit subsidy costs of loan guarantees?

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Answer 31: In the past, Congress determined it was necessary to appropriate credit subsidy amounts for Advanced Technology Vehicles Manufacturing (ATVM) loans, Tribal Energy Loan Guarantees, and loans for certain renewable energy technologies that qualified for the 2009 American Reinvestment and Recovery Act (the 1705 program). It is my understanding that there is currently \$2.4 billion remaining in appropriated credit subsidy for ATVM, \$8.5 million for the Tribal Energy Loan Guarantee Program, and \$160 million available for renewable energy projects. If confirmed as Secretary, I will review these programs in order to identify potential improvements.

Question 32: DOE recently issued guidance for the LPO, clarifying that the office will encourage applications from potential projects involving the production, manufacturing, and processing of critical minerals, such as uranium. Do you commit to reviewing these potential project applications with the same urgency DOE reviews renewable project applications?

Answer 32: Yes. If confirmed as Secretary, I commit that the Department will be responsive to all applicants under the loan and loan guarantee programs administered by it and will ensure that all applications receive prompt and equitable consideration. Projects under the loan guarantee and loan programs administered by the Department are considered on their merits and must meet all of the eligibility requirements in order to be considered for a loan guarantee or loan.

Question 33: The Experimental Program to Stimulate Competitive Research (“EPSCoR”) is a program within the DOE’s Office of Science. This program is designed to improve energy- related research in 24 largely rural states, including the state of Wyoming. DOE needs to continue to build basic research capacity in EPSCoR States. If confirmed, would you support increasing funding for the EPSCoR program?

Answer 33: If confirmed as Secretary, I look forward to learning more about the EPSCoR program and the role it plays in aiding energy-related research. I look forward to working with you and your staff on this issue.

Question 34: What is your experience and relationship with Wyoming? I appreciate your commitment to visit Wyoming. Will you make your senior staff available to meet with my senior staff to discuss how DOE can collaborate with Wyoming to advance mutual priorities?

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Answer 34: I have been to Wyoming several times on trips to visit our magnificent National Parks there, and look forward to visiting Wyoming again. If confirmed, I will ensure that the Department is available to discuss the many opportunities to collaborate with Wyoming.

Question 35: Multiple nuclear reactors have closed over the past few years. How do you see the future of nuclear energy unfolding in the United States and internationally? What will be DOE's contribution to the future of nuclear power during your tenure?

Answer 35: If confirmed as Secretary, I will support robust research, development, and demonstration of advanced nuclear energy technology and seek to advance DOE's work to commercialize this technology to build and empower American jobs. The Department's Advanced Reactor Demonstration Program (ARDP) will speed the demonstration of a variety of U.S. advanced reactor designs to build a portfolio of new reactors. I will support the whole-of-government approach and work with my counterparts across the Governmental Interagency to empower the U.S. national laboratories, universities, and U.S. nuclear industry to develop, demonstrate, and export American-made nuclear technology.

Question 36: Will you work to ensure that DOE is equipped with adequate funding to continue researching and developing advanced nuclear reactor designs?

Answer 36: Yes.

Question 37: Are you committed to ensuring that DOE is proactive in making energy and scientific data available to the public, consistent with laws protecting privacy and confidential business information?

Answer 37: Yes.

Question 38: DOE is a science-focused agency, and there are several advisory boards and councils that provide the Secretary with advice and scientific recommendations. Will you continue to extend the charters of these advisory boards and councils? What are your priorities for advisory boards and councils?

Answer 38: If confirmed as Secretary, I look forward to more closely reviewing the Department's advisory boards and councils and making recommendations based on that review.

Question 39: How do you define "place-based" workforce efforts as you alluded to them during your confirmation hearing?

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Answer 39: To me, a “place-based strategy” is one in which the economic development program respects and builds upon the local, unique qualities and input of a community, instead of imposing a one-size-fits-all solution on a diverse country with a heterogeneous problem set.

Question 40: Do you commit that you will not only maintain disclosure and conflict of interest policies for our nation’s premier research organizations, and that you commit to identify new policies that can further protect the American people’s investment in new technologies, whether they are in energy, science, or national defense?

Answer 40: Yes.

Question 41: Energy supply chains are becoming increasingly reliant on Chinese-manufactured goods, particularly, for example, components for solar and wind energy. How will the new administration address the issue of energy security threats that can arise from Chinese components?

Answer 41: The increasing complexity of supply chains, coupled with the reduced visibility that comes from proliferating subcomponent suppliers, is an attractive opportunity for adversaries to insert malicious code and hardware during manufacture. The President’s Executive Order Made in America will support the rebuilding of domestic manufacturing. It is my understanding that DOE is supporting supply chain risk assessments to address security threats. If confirmed as Secretary, I will review the Department’s work in this area to ensure DOE is adequately addressing the issue of potential energy security threats.

Question 42: Do you acknowledge the importance of both merchant and small refineries as part of our nation’s critical infrastructure, and pledge to play an active role in the administration to ensure that high Renewable Identification Numbers (RINs) prices will not jeopardize their viability?

Answer 42: Refineries are important to our economic and national security. The DOE’s Energy Information Administration (EIA) provides transparent and detailed annual fuel supply and consumption data to the EPA for its analysis of the RINS market.

Question 43: EIA data consistently show a lack of correlation between ethanol blend rates and the price of RINs, which demonstrates that there are significant structural problems with the Renewable Fuel Standard (RFS) program. Will you commit to using EIA data when advising the Administrator of the Environmental Protection Agency on the RFS program?

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Answer 43: If confirmed as Secretary, I commit to working with EPA and EIA to determine the best path forward on the RFS.

Question 44: Does the Public Financial Disclosure Report (Form 278e) that you signed electronically on December 22, 2020 accurately reflect, for the period covered by the Report, all fees or payments of more than \$5000 that you or any company or firm with which you have been affiliated (e.g., Granholm Mulhern Associates) received from any source for services you performed for that source? If not, please amend or supplement your Form 278e.

Answer 44: Yes.

Question 45: Does your response to Question 14 on the Statement for Completion by Presidential Nominees to the Committee on Energy and Natural Resources (Committee Questionnaire) that you submitted accurately reflect, for the five-year period covered by the Committee Questionnaire, all fees or payments of more than \$5000 that you or any company or firm with which you have been affiliated (e.g., Granholm Mulhern Associates) received from any source for services you performed for that source that are not listed on your Public Disclosure Report? If not, please amend the Committee Questionnaire.

Answer 45: I have listed all sources of fees or payments of more than \$5,000 for my services from January 1, 2018 through December 22, 2020 on my Form OGE-278e. My initial response to Question 14 included all sources of fees and payments for my services from January 1, 2016 through December 31, 2017 that did not extend past December 31, 2017. For clarity, I have amended my response to Question 14, attached, to consolidate all information from calendar years 2016, 2017, and 2018. Information for calendar years 2019 and 2020 is on Part 4 of the Form OGE-278e.

Question 46: With respect to your affiliation with and financial interest in Proterra Inc., please confirm in narrative form the practical limitations that the Committee can expect your ethics agreement to impose upon you, especially as those limitations may bear on DOE's programs that promote or otherwise impact or potentially impact electric transportation, including, for example, the Advanced Technology Vehicles Manufacturing (ATVM) Program. For example, can the Committee assume that you will recuse yourself from matters involving the ATVM Program at least until you can carry out the divestment that you have pledged to make of your interests in Proterra? Should I infer, that you will recuse yourself as appropriate from matters involving electric transportation at least until such time as you divest your interests in Proterra?

Answer 46: If confirmed, I will recuse myself from all particular matters that to my knowledge have a direct and predictable effect on the financial interests of Proterra until I have completed the divestiture.

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Question 47: In your financial disclosure form you list being a co-chair and advisor of American Bridge Foundation which lists on its website that its goal is to “find what Republicans are hiding and make sure voters hear about it.” It also highlights that its research “inundated Republicans with negative news stories” and that the Foundation will be “laser focused on taking back all facets of our government.” Will you recuse yourself from this position?

Answer 47: I have already resigned my position from this organization. If confirmed, I will recuse myself from all particular matters involving specific parties in which the American Bridge Foundation is a party or represents a party for two years from the date of my appointment, as required by regulation and the Biden-Harris Administration Ethics Pledge.

Question 48: You have disclosed that you are currently a Member of the Board of Proterra, Inc., a company that is active in the fields of electric transportation and electric storage. In the last week, Proterra has announced its intention to become publicly listed through a merger with ArcLight Clean Transition Corp. (ArcLight), a special purpose acquisition company (SPAC). It is expected that the company will be valued at \$1.6 billion. Please describe your involvement in the announced merger. Assuming the merger is completed, will you recuse yourself from DOE activities that may bear on or involve ArcLight? To what extent, if any, did President Biden’s intention to nominate you as Secretary of Energy impact your participation as a member of Proterra’s Board, including its announced merger with ArcLight? Was your nomination discussed at any board meeting or with any members associated with Proterra?

Answer 48: If confirmed, I will recuse myself from all particular matters involving specific parties in which ArcLight is a party or represents a party for two years from the date of my appointment, as required by regulation and the Biden-Harris Administration Ethics Pledge. In December, after being nominated, I informed the General Counsel and President of Proterra that I would resign if confirmed.

Question 49: With respect to Techtronic Inc., you disclosed that you were a member of the Board of Directors through November 2020. Do you have or, if you are confirmed, expect to have any continuing involvement with Techtronic? What steps will you take to avoid the appearance of any conflict of interest with Techtronic?

Answer 49: No. If confirmed, I will recuse myself from all particular matters involving specific parties in which Techtronic is a party or represents a party for two years from the date of my appointment, as required by regulation and the Biden-Harris Administration Ethics Pledge.

Question 50: With respect to the California Institute for Energy and Environment (CIEE), you disclosed that you have been a Senior Research Fellow. Do you expect to have any continuing involvement with CIEE? What steps will you take to avoid the appearance of any conflict of interest with CIEE?

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Answer 50: No. If confirmed, I will recuse myself from all particular matters involving specific parties in which CIEE, a part of the University of California, is a party or represents a party for one year from my confirmation, as required by regulation.

Question 51: With respect to the U.S. Global Leadership Coalition, you disclosed that you received an \$18,000 honorarium in 2019. What was the basis for this honorarium? If you delivered a speech, please provide a copy or link.

Answer 51: A panel discussion with Sen. Rick Santorum entitled “State Leaders Summit: Foreign Policy and Politics.” I do not have a transcript, but the video is available here: <https://www.c-span.org/video/?461801-3/state-leaders-summit-foreign-policy-politics#>

Question 52: With respect to the American Public Transportation Association, you disclosed that you received an \$18,014 honorarium in 2019. What was the basis for this honorarium? If you delivered a speech, please provide a copy or a link.

Answer 52: A speech to the American Public Transportation Association. There does not appear to be a video or transcript, and because I usually speak extemporaneously, I do not have prepared remarks. Here is a link to the slides I used as a basis for my remarks: <https://prezi.com/xxfszhlqgiu1/transit-speech/?token=91d884317c50022387bc6baf243438c4136f2c40c55868812ffdf84c5602090a>.

Question 53: With respect to the American Hospital Association, you disclosed that you received a \$20,000 honorarium in 2019. What was the basis for this honorarium? If you delivered a speech, please provide a copy or link.

Answer 53: A bipartisan panel discussion for the American Hospital Association. There does not appear to be a video or transcript, and because I usually speak extemporaneously, I do not have prepared remarks.

Question 54: With respect to the Hood Hargett Breakfast Club, you disclosed that you received an \$18,400 honorarium in 2019. What was the basis for this honorarium? If you delivered a speech, please provide a copy or a link.

Answer 54: A speech to the Hood Hargett Breakfast Club. There does not appear to be a video or transcript, and because I usually speak extemporaneously, I do not have prepared remarks. Here are the

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slides I used as the basis for my remarks: <https://prezi.com/zsovaqtkfvl/8-1-19-are-you-willing-to-relinquish-the-wheel/?token=e3dd6f41ce8c19b704eef3c6b1b6d79ffb6762f2dfcde292a6cd5b78f39c2a31>

Question 55: With respect to the FPA NorCal Conference, you disclosed that you received a \$12,000 honorarium in 2020. What was the basis for this honorarium? If you delivered a speech, please provide a copy or a link.

Answer 55: A speech to the FPA NorCal Conference. There does not appear to be a video or transcript, and because I usually speak extemporaneously, I do not have prepared remarks. Here are the slides I used as the basis for my remarks: <https://prezi.com/ewrlwqizwyih/copy-of-fpa-norcal-conference/?token=435f1e21499a480ff79366e73955126af357e6689c4c3468b2182709ef6f38f3>

Question 56: With respect to UBS Group, you disclosed that you received an \$18,000 honorarium in 2020 from the UBS Election Watch. What was the basis for this honorarium? If you delivered a speech, please provide a copy or a link.

Answer 56: A panel discussion and Q&A with Rep. Paul Ryan at a UBS conference. There does not appear to be a video or transcript, and because I usually speak extemporaneously, I do not have prepared remarks. Here is some information about the event here: <https://www.ubs.com/global/en/wealth-management/marketnews/home/article.1502831.html>.

Question 57: With respect to Chatham University, you disclosed that you received an \$18,000 honorarium in 2020. What was the basis for this honorarium? If you delivered a speech, please provide a copy or a link.

Answer 57: A panel discussion and Q&A with Gov. Susanna Martinez at Chatham University. There does not appear to be a video or transcript, and because I usually speak extemporaneously, I do not have prepared remarks. Here is some information about the event:
<https://www.chatham.edu/pcvp/education/hillman/>.

Question 58: With respect to the JF Maddox Foundation, you disclosed that you received an \$18,000 honorarium in 2020. What was the basis for this honorarium? If you delivered a speech, please provide a copy or a link.

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Answer 58: A panel discussion and Q&A with Karl Rove at the JF Maddox Foundation. There does not appear to be a video or transcript, and because I usually speak extemporaneously, I do not have prepared remarks. Here is some information about the event here:

<https://www.jfmaddox.org/lectures/distinguished-lecture-series/>.

Question 59: Please provide a copy or a link to the following speeches that you disclosed on your Committee Questionnaire: American Institute of Architects (2016); Munk Foundation (2016); Tonkin Manes Law Firm (2016); Williams College (2017); SEB (2017); and Consumers Energy (2016).

Answer 59:

- The American institute of Architects (2016): Video of the speech available here:
<https://vimeo.com/162730951>
- The Munk Foundation (2016): Debate with Rep. Newt Gingrich, Laura Ingram, and Robert Reich. Video available here:
<https://www.facebook.com/munkdebates/videos/munk-debate-on-the-us-election/1291593174186516/>
- Torkin Manes Law Firm (2016): Q&A with a moderator. There does not appear to be a video or a transcript.
- Williams College (2017) I was part of a bipartisan panel with Former Senator Scott Brown. Video available here: <https://www.youtube.com/watch?v=D8zDLS6hxFA>
- SEB (2017): There does not appear to be a video or transcript of the speech, but here find a link to the speech but here is a link to the slides I used as the basis of my remarks:
<https://prezi.com/zyimstsmo-cp/silicon-valley-automation-us-politics/?token=1724987852669c628e5289e21178b5ea8c0826d0e1a93b33ec992123bd7f9df2>
- Consumers Energy (2016): this was a speech to employees. There does not appear to be a video or transcript, and because I usually speak extemporaneously, I do not have prepared remarks.

Questions from Senator Ron Wyden

Question 1: Oregon State University is currently working with D-O-E's Water Power Technologies Office to construct a wave energy testing facility off the coast of Newport, Oregon to help industry develop commercially-viable marine energy technology. The Omnibus included my bill, the Marine Energy Research and Development Act, to pave the way for further development of Marine Energy at D-O-E. To date, there has

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been strong leadership at the Water Power Technologies Office for marine energy and Oregon State's project specifically.

Can we count on your support for additional marine energy investments in the future?

Answer 1: I am a strong proponent of marine energy as a potential emissions-free energy source. If confirmed as Secretary, I look forward to learning more about the Department's efforts in this area and to working with you and your office on this issue.

Question 2: As I mentioned in the hearing, billions of dollars have been spent at Hanford on building technology to turn highly toxic nuclear waste into solid material that can be stored safely, but not a single ounce of waste has been treated yet. The ongoing failures to address the issues have put workers health and safety at significant risk.

How would you increase transparency with respect to worker safety so that we don't have to rely solely on whistleblowers for information?

Answer 2: While the Department should foster an environment where whistleblowers are free from the threat of retaliation, I agree with you that we should not solely rely on whistleblowers for information. That's why if confirmed as Secretary, I will continue, and improve upon, efforts to strengthen programs such as the Department's Employee Concerns Program and the Office of the Ombudsman, among other potential options.

Question 3: Just last month, DOE was among the agencies that confirmed that they were breached as part of a hacking campaign, which the intelligence community has attributed to hackers that were "likely Russian in origin." I am conducting an investigation to find out why the billions of dollars the government has spent on cybersecurity didn't prevent this hack.

Will you commit to making sure that the department fully briefs my staff on this and other cybersecurity matters?

Answer 3: Yes.

Question 4: Energy efficiency is viewed by many as the 'first fuel', the most cost-effective approach to reduce societal carbon emissions. At the same time there is a strong push to electrify everything that can connect to an electric grid where the electrons are generated from renewable sources. Information and communications technology (ICT) and digital technologies generally can play a significant role in advancing both efficiency and electrification.

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What role do you see DOE's Research, Development, Demonstration and Deployment (RDD&D) programs playing in helping advance innovation and market penetration of energy efficiency and power conservation technologies?

Answer 4: DOE's Research, Development, Demonstration and Deployment (RDD&D) programs, which include emerging technologies like AI, Quantum Information Science, and High-Performance Computing, are crucial for US competitiveness. These technologies rely on continual advances in scientific R&D. The Department of Energy plays a critical role in this ecosystem given its management of the national labs. If confirmed as Secretary, I will review these RDD&D programs and consider potential improvements based upon those review so that they can continue to help ensure US competitiveness.

Question 5: Emerging technologies like AI, Quantum Information Science, and High-Performance Computing are crucial for US competitiveness. These technologies rely on continual advances in scientific R&D. The Department of Energy plays a critical role in this ecosystem given its management of the national labs.

As Secretary, how do you plan to ensure the national labs have the resources and direction they need to drive advances in next-generation computing technologies?

Answer 5: In response to the 2015 National Strategic Computing Initiative, the Department established the Exascale Computing Initiative (ECI), comprised of six DOE national laboratories, to deliver an exascale ecosystem in the mid-2020s. ECI remains a high priority for the Department because of its efforts to combine AI with large scale simulations to design energy efficient wind turbines and safer small modular reactors, develop qualifiable metal parts for use in additive manufacturing, identify new materials and develop accurate earth systems models. Additionally, the Office of Science's Basic Energy Research (BES) and Advanced Scientific Computing Research (ASCR) programs have held Basic Energy Research Needs (BRN) workshops to gather community input to identify priority research directions for basic research programs and to provide direction to the national labs, including for ECI.

How do you envision partnering with industry to ensure that the research the labs conduct finds its way to meaningful advancements in society as a whole?

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Answer 5: If confirmed, I plan to build upon the Department’s prior successful efforts of partnering with industry. For example, it is my understanding that within the Office of Science, the Advanced Scientific Computing Research (ASCR) program’s partnerships with industry have been a critical component of developing U.S. leadership in high performance computing (HPC). The outcomes of these investments have been realized in the Oak Ridge Leadership Computing Facility’s Summit supercomputer and are evident in the planned exascale systems. These investments benefit the Department’s programs and the broader community of research -- Office of Science HPC facilities have been used to enable advances in the safety and performance of nuclear power plants, accelerate advances in drug development, and explore neurodegenerative diseases. ASCR also partners with small business through the Small Business Innovative Research (SBIR) program to ensure that open software developed at the laboratories will be used to benefit a larger research community.

Question 6: Energy Storage is a promising technology sector that could serve as a rising tide to complement other technologies such as renewable generation. Energy storage can also serve other important roles such as modulating frequency of power grids and boosting resilience in places where energy infrastructure is aging.

Will you work with my office and others to advance the maturity, lower the cost, and streamline the deployment of energy storage solutions to make deep cuts to emissions and bolster grid stability and resilience?

Do you plan to continue the DOE “Energy Storage Grand Challenge” initiated by your predecessors? What support or programmatic changes do you see as necessary to take this technology from development to mainstream?

Answer 6: If confirmed as Secretary, I commit to working with you and your office to explore how to better and more efficiently and effectively advance and streamline the deployment of energy storage systems. I look forward to supporting the Department’s grand challenges, including the Energy Storage Grand Challenge, and will work with you and your office on potential improvements going forward.

Questions from Senator James E. Risch

Question 1: These are exciting times for nuclear. We are on the forefront of making advanced nuclear reactors a reality, powering missions to Mars and beyond with nuclear energy, and developing microreactors to support the Department of Defense. Nuclear currently provides more than half of the nation’s carbon-free electricity – my understanding is that your home state of Michigan generates about one-quarter of its energy from nuclear power.

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The new administration's goals for reducing carbon emissions will require substantial growth of nuclear energy. If we are to achieve these goals, it is critical that the INL has the resources it needs to provide the R&D to support these efforts. Will you commit to working with me to ensure that there's a robust nuclear R&D budget for the Office of Nuclear Energy and the INL during your tenure?

Answer 1: Yes. If confirmed as Secretary, I commit to working with you and Congressional partners to ensure an adequate budget for nuclear energy R&D activities.

Question 2: The INL site is storing a range of spent fuel, including defense-related spent fuel as well as commercial and research fuel from domestic and foreign reactors. In 1995, Idaho and the DOE entered into a settlement agreement that established a timeline for DOE to treat and remove legacy waste from the state. I want to stress the importance of these cleanup activities at the Lab and encourage you to keep your foot on the accelerator to get this cleanup done – getting it done is good for Idaho, DOE and the future of nuclear energy. As you work with DOE's Environmental Management program, can you commit to prioritizing resources to continue and accelerate the cleanup mission at the INL?

Answer 2: I understand the importance of continuing the Department's legacy cleanup activities at INL. If confirmed as Secretary, I commit to working with you and your staff to help ensure the cleanup of INL is conducted in a safe, effective and cost-efficient manner.

Question 3: The INL has long been the lead nuclear laboratory, but over the past several years it has also taken the spot as one of the lead cybersecurity laboratories. If you are familiar with the Cyberspace Solarium Commission, led by my friend Senator King, the Idaho National Lab was the only lab called out by name in the Commission's report for its work in this space. DOE is the sector-specific agency for cybersecurity for energy industrial control systems and as Secretary you play an important role in ensuring the safety and security of our nation's electric grid. Our energy critical infrastructure continues to be a high-value target for bad cyber actors. What are your plans to ensure DOE continues to play a leading role in protecting our nation's critical energy infrastructure?

Answer 3: It is my understanding that the Department supports the findings of the Cyberspace Solarium Commission and appreciates the Commission's success in initiating many of its key cyber recommendations in the Fiscal Year 2021 National Defense Authorization Act. If confirmed, I will continue the successful partnership with INL to help increase cybersecurity for the energy sector. I will also work to ensure that the Department continues its leadership role over cybersecurity for the energy sector.

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Question 4: On January 20, 2021, as part of his Executive Order on Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Change Crisis, President Biden suspended for 90 days Executive Order 13920 (Securing the United States Bulk-Power System) and ordered you, if you are confirmed, to consider jointly with the Director of OMB whether to recommend that a replacement order be issued. I would ask you to undertake this expeditiously.

Along with my colleague Senator King and eight other senators, I urged the former FERC chairman to consider a ban on equipment, such as solar inverters, made by Huawei from being used on our electricity grid just as the company's products have been banned from our telecommunications network, given its links to the Chinese Communist party, including its intelligence services. I have attached a copy of that letter. The use of these products on our electric grid leaves our infrastructure vulnerable to foreign surveillance and interference. Do I have your commitment that you will examine and take all actions necessary to eliminate the threat that equipment and systems made by Chinese state-owned, state-controlled companies like Huawei pose to our power system?

Answer 4: I understand the concern about the potential vulnerabilities posed by relying on technology associated with a foreign competitor's government. While I will have to be briefed on this particular issue further, if confirmed, I will work to protect the Department and the Nation's power grid against all such vulnerabilities.

Question 5: Last year, I authored legislation with Senator Manchin that was enacted last month as a part of the energy package. The bill requires DOE to formally establish a program for the development of integrated energy systems. The Offices of Nuclear Energy, Energy Efficiency and Renewable Energy, and Fossil Energy are collaborating to support a program that focuses on the integration of nuclear energy with renewables, fossil energy, and other potential applications. Will you commit to continuing the good work that has started at DOE and follow the law to establish this program and accelerate the development of integrated energy systems?

Answer 5: Yes.

Question 6: One area of agreement between the Obama and Trump administrations was on the importance of civil nuclear technology exports as a tool for creating jobs, promoting our safety and nonproliferation goals, and sustaining our global influence. This has become increasingly important as Russia and China have sought to dominate global nuclear energy markets, because they know that selling a nuclear reactor to another nation begins what can be a centuries-long relationship encompassing the exchange of technologies, equipment, and political influence. As Secretary of Energy, you would have an important role in both the promotion and control of nuclear energy exports. Do you commit to continuing longstanding efforts to help U.S. firms compete with the state-owned Russian and Chinese nuclear energy exporters?

Answer 6: Yes, if confirmed as Secretary, I commit to supporting a whole-of-government approach to advancing domestic nuclear technologies in the global marketplace while supporting U.S. nonproliferation objectives.

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Question 7: INL is home to many unique capabilities, but one that I want to call your attention to is the Advanced Test Reactor. The ATR entered operation on the desert site of INL in 1969 and provides a unique capability for testing and evaluating materials and fuels for our nation's nuclear Navy, as well as providing important capabilities for the commercial fleet, the NNSA, and for medical isotope production. The operations at ATR are critical to our national security, and at over 50 years old it is appropriate to explore if it is time to replace the capabilities that ATR provides so that we can prepare for the future.

Over the past few years, at the direction of DOE and Naval Reactors, INL and the Naval Nuclear Laboratory have studied and presented a business case for extending our nation's strategic thermal irradiation capabilities provided by ATR out to 2085.

Should you be confirmed, I would encourage you to meet with Admiral Caldwell and discuss the best path forward to ensure the unique and valuable capabilities of ATR are available for our nuclear Navy in the coming decades. I look forward to your support for maintaining these important capabilities. Will you commit to working with me on this?

Answer 7: Yes. If confirmed as Secretary, I look forward to learning more about the ATR and the role it plays in supporting the U.S. Navy and working with you and your staff on this issue.

Question 8: The Department of Energy and National Labs contain the most cutting edge research and development capabilities in the world. It is important that DOE develops new capabilities so we can continue to support our country's innovators. One such program is the Versatile Test Reactor. This specialized fast research reactor can provide a capability we have lacked since the 1990s, and is a critical part of the government's efforts to develop new nuclear technologies. The VTR will operate as an open-access user facility in the DOE national lab system, facilitating academic, public, and private research. Due to its unique capabilities, the VTR could also support our allies. Currently, the R&D work this asset would facilitate is only available for civilian research in Russia. The Energy Act of 2020 authorized the Versatile Test Reactor, but the project currently is not on track to be successful.

- a. Congress has asked the Department to explore partnerships with private industry and internationally to make the VTR successful, what will you do on that front?

Answer 8a: If confirmed as Secretary, I will work to ensure DOE builds upon the mechanisms of the Versatile Test Reactor Project Team has established. This includes use of intellectual property and cost-share contributions from the US nuclear industry, as well as capitalizing on their decades of reactor design and construction experience. I also am aware that the Department has signed international collaboration agreements that will facilitate the exchange of technical information and lessons learned.

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- b. What actions will you take to ensure that VTR, other major projects at DOE, and the clean energy demonstration projects included in the Energy Act are successful?

Answer 8b: If confirmed as Secretary, I will work closely with Congress and the Department to help ensure that these projects are successful.

Question 9: Since 2013, the Department of Energy's Small Modular Reactor Program has supported programmatic, cost-shared funding with private sector companies to advance the development and deployment of first-of-its-kind advanced reactors. This program is working: In 2020, the NuScale Power reactor became the first SMR technology to complete the Nuclear Regulatory Commission's (NRC) rigorous technical review process. Last year DOE awarded a cost-shared grant to the Utah Associated Municipal Power Systems to partially fund the construction of the first NuScale SMR at DOE's Idaho National Laboratory. If this and other planned advanced SMR demonstrations are successful, the U.S. will overtake China and Russia's nuclear ambitions to provide international markets with U.S. origin nuclear technology. These projects will require a sustained funding commitment throughout this decade. I hope you will build on the Department's successful work with the NuScale project and other advanced reactor demonstrations. Will you commit to build upon the successful work with the NuScale project and other advanced reactor demonstrations, if confirmed?

Answer 9: If confirmed as Secretary, I look forward to learning more about the Department's efforts to support the development of small modular reactors and other advanced reactor technologies and to working with you and your staff on this issue.

Question 10: Our nation's 94 operating nuclear reactors provide about 20% of our nation's electricity and more than half of our carbon-free electricity. This year, five reactors, or 5.1 GW of firm carbon-free electricity capacity, are slated to come offline. The loss of these plants, and additional plants that have announced premature retirement this decade, would significantly set back any deep emission reduction effort. In addition, recent premature nuclear plant closures have also resulted in increased emissions as their electricity is primarily replaced by low-cost natural gas, not renewable energy. How can the DOE continue supporting our existing nuclear plants to decrease costs while maintaining safety so they do not prematurely retire?

Answer 10: I am aware that DOE is currently pursuing several research, development, and demonstration pathways to support existing U.S. nuclear power plants to ensure their continued efficient operation, and support reduced U.S. emissions through plant modernization, risk informed safety analysis, physical security, and advanced materials research. If confirmed as Secretary, I will review these initiatives, and other DOE efforts, to ensure the continued efficient operation of the U.S. nuclear power fleet.

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Question 11: The Idaho National Laboratory's Energy Storage and Advanced Transportation research teams are helping to build the future of advanced vehicle technologies. INL tests performance and predicts the impacts of advanced vehicle infrastructure in different applications and environments. One example of the Lab's robust capabilities is the full scale power grid on site which is used to test the connectivity between EVs and the grid at scale. The research includes high-power EV charging grid interaction and cyber-physical security.

- a. How will your history working with advanced vehicles and industry as governor inform your role as Secretary and how will you work with the DOE laboratories, such as INL, to continue this important research and build public-private partnerships?

Answer 11a: In my experience as Governor and working with the automotive industry, achieving our ambitious goals for a clean, sustainable, and equitable transportation system will require strong public-private partnerships, close coordination between Federal agencies, and collaboration between all levels of government at the Federal, state, and local levels. If confirmed as Secretary, I will work to ensure that DOE's Energy Efficiency and Renewable Energy offices will build upon long-standing industry partnerships.

- b. How do you see the Labs helping to design and achieve the aggressive infrastructure goal of deploying 500,000 EV charging stations by 2030?

Answer 11b: It is my understanding that DOE's Clean Cities Program is well positioned to help achieve the President's goal of deploying 500,000 EV charging stations by 2030. If confirmed as Secretary, I look forward to learning more about this program and how it can help local communities and provide guidance on how to adapt solutions that work for each community, including disadvantaged and underserved communities.

- c. Do you see a role for the Labs to use machine learning and artificial intelligence to accelerate the validation of new battery and energy storage technologies?

Answer 11c: I am aware that DOE is a leader in machine learning and this technology will be critical to accelerate R&D and validation of new battery and energy storage technologies and the integration into our existing transportation and energy system. If confirmed as Secretary, I will work to ensure DOE continues its strong role in this area. I am aware that DOE has recently accelerated the use of machine learning and other high-performance computing tools in the

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development of next-generation battery technology and manufacturing to bring down the cost of batteries, improve their performance and reduce the use of critical materials

Question 12: The Bonneville Power Administration (BPA) plays a pivotal role in providing affordable and reliable electricity to communities in Idaho and the Pacific Northwest. BPA power rates recover all costs related to the construction, generation, and delivery of this power with interest. In annual budget submissions to Congress, many previous presidential administrations have made repeated attempts to divest the transmission assets of the PMAs and move to market rates. These proposals are misguided and would lead to higher electricity bills for my constituents.

- a. Will you commit to engaging with the Office of Management and Budget to ensure that misguided proposals like these are not included in future budget submissions or other proposals?

Answer 12a: If confirmed as Secretary I look forward to working with OMB to ensure that BPA's budget proposals provide the agency the resources it needs to continue its important mission.

- b. As a follow-up, will you commit to speaking with me and my colleagues from the Pacific Northwest before pursuing any legislative or administrative actions that could change fundamental BPA operations?

Answer 12b: Yes, I believe that it is important the Department engages its congressional partners before advancing proposals that could fundamentally change the operations of the Bonneville Power Administration which provides low-cost electricity supplies to ratepayers in portions of eight states in the West and Pacific Northwest.

Question 13: Historically, the Bonneville Power Administration has reported directly to the Deputy Secretary. The previous presidential administration altered the arrangement, with BPA reporting to an Assistant Secretary. I have heard from customers and other stakeholders that this resulted in significant delays in approval of BPA actions and had the interests of Northwest ratepayers represented at a lower level in inter-agency discussions on key issues. BPA is more than an agency within the Department; it is an operating utility that impacts the economic well-being of individuals and businesses throughout the Northwest. The lack of quick Department approvals or underrepresentation can have a dramatic impact. Will you restore the historic organizational structure with BPA reporting to the Deputy Secretary?

Answer 13: I understand the unique nature of the power marketing administrations and their importance to the regions they serve. If confirmed, I plan to do a review of the organizational structure and make

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changes as necessary to improve the function of the Department. I look forward to working with you to make the PMAs as effective as possible.

Question 14: Hydropower is incredibly important to Idaho, providing the majority of our state's energy needs. Do you agree hydropower is a clean and renewable resource?

Answer 14: Yes.

Question 15: At the front end of the manufacturing supply chain for everything from energy infrastructure to electric vehicle and battery storage components, demand for metals and minerals will continue grow significantly. Currently, much of this demand is satisfied by foreign-sourced materials, many of which come from China. Included in the recently passed 2020 omnibus legislation were several provisions directing the Department of Energy to ensure the long-term, secure, and sustainable domestic supply of critical materials and to support critical material supply chain activities from extraction to separation and processing.

- a. Can you please describe your plan to fulfill these requirements?

Answer 15a: I believe the Department is a leader in addressing critical material supply chain challenges through investments in its three-pronged strategy: Diversifying Supply Chains, Developing Substitutes, and Improving Reuse and Recycling. The critical material provisions in the *Energy Act of 2020* will allow DOE to continue to build on its expertise. Through the Office of Energy Efficiency and Renewable Energy, the Department will leverage the Critical Materials Institute to continue essential R&D on recycling, alternatives, and diversifying supply across critical material supply chains.

Question 16: Metals and minerals are the key to clean energy technologies and DOE has taken a lead role helping to support advancements through research and development projects.

- a. Please discuss your plans to continue supporting these priorities and initiatives such as the agency's Critical Minerals Institute or the Office of Fossil Energy's Division of Mineral Sustainability.

Answer 16a: If confirmed as Secretary, I will work to ensure that DOE support in these areas will continue. More production is expected, especially in the area of critical and rare earth minerals, with increases expected for batteries, photovoltaics, and catalysts. It will be important for DOE to engage with DOI, USGS, state stakeholders, and NGOs. In addition, there will be

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efforts made that will enable sustainable production. FE and ARPA-E have been working on programs associated with sustainable mining approaches that couple to CO2 sequestration.

Question 17: The Department's nuclear weapons enterprise has long been underfunded and undervalued. Meanwhile, Russia and China have modernized their nuclear weapons enterprises and improved their capability to produce and sustain their nuclear weapons stockpiles. In recent years, the Department has invested in the U.S. enterprise, but sustained and even greater investments are needed to overcome decades of neglect. **Do you commit to ensure appropriate increases are approved and sustained to modernize the nuclear weapons enterprise?**

Answer 17: Yes.

Question 18: In 2014, Congress passed the U.S.-Israel Strategic Partnership Act authorizing increased cooperation in energy with our leading ally in the Middle East. The legislation led to the creation of a U.S.-Israel Center of Excellence in Energy and Water. This has provided a platform for the two countries to collaborate on energy and water issues. Additionally, the U.S.-Israel Energy Cooperation Program, managed by the Department of Energy, has set the stage for long-term strategic cooperation in the development of new energy technologies. This program represents one of several ways for our country to continue – and deepen – its energy relationship with Israel.

- a. To what extent will the enhancement of our energy relationship with Israel be a priority if you're confirmed?

Answer 18a: Israel remains one of our most important allies in the region and is playing a significant role in the development of energy resources in the Eastern Mediterranean. If confirmed as Secretary, I will continue to strengthen our relationship with Israel through continued engagement in the variety of programs we have created. At the same time, DOE will do a systematic review of all of our international collaboration programs to ensure that they are working well, are delivering goods in the interest of both parties, and are consistent with the overall foreign policy, energy, and climate objectives of the Biden-Harris administration. In addition, I will seek to support the continued integration of Israel throughout the region using energy collaboration as a basis for broader regional cooperation.

- b. What more can be done to strengthen our partnership with Israel in energy cooperation?

Answer 18b: The Department of Energy has a long history of strong and beneficial cooperation and partnership with Israel on shared energy research, and is always seeking to deepen and

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strengthen our relationships with our international partners, including Israel. If confirmed as Secretary, I will work to identify future research and development opportunities that are beneficial to both countries and further enhance that relationship.

- c. In recent years, the United States has helped foster the growing energy relationship in the Eastern Mediterranean between Israel, Greece, and Cyprus. If confirmed, will you continue efforts to foster and expand this relationship?

Answer 18c: Yes. Continued support for the energy security goals of Greece, Cyprus, and Israel will be an important part of the Department's engagement in the Eastern Mediterranean, and establishment of the Eastern Mediterranean Energy Center based in the United States will serve to reinforce the priority of these relationships.

Question 19: The protection of energy and water systems from cyberattack has become a high-profile concern for all nations, including our own. Israel's leadership in the development of cyber technologies, combined with its real-world expertise defending its critical infrastructure against attack has made this a large focus of the Israeli government, and provides us with a natural ally and partner.

- a. What are your thoughts on incorporating the protection of critical infrastructure into the U.S.-Israel energy dialogue?

Answer 19a: The U.S.-Israel energy dialog is a valuable platform for collaboration and cooperation across the spectrum of energy issues ranging from new technologies for renewable energy production and distribution to safeguarding the energy infrastructure that serves as the backbone of our energy systems. If confirmed as Secretary, I will work to ensure that DOE will continue to seek ways to work with Israel on a number of energy security issues including critical energy infrastructure protection, both bilaterally and as part of broader interagency engagements.

Question 20: President Biden has made clear his desire to return to the 2015 Iran nuclear agreement if Iran comes back into compliance, and only then negotiate a follow-on agreement. I am highly skeptical Iran will ever accept an agreement that truly addresses our concerns with its nuclear program, ballistic missiles, and regional aggression.

- a. Please describe the threat you see today from Iran.

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Answer 20a: As you note, Iran poses a number of threats to our national security, including nuclear ambitions, ballistic missiles, and regional aggression.

- b. In the negotiations leading to the Joint Comprehensive Plan of Action (JCPOA), then-Energy Secretary Ernest Moniz played a key role in the talks. What role do you envision for yourself and the Department in future talks with Iran?

Answer 20b: The Department of Energy's National Nuclear Security Agency is the foremost center of work on nuclear non-proliferation, drawing on the experience of decades of safeguarding against the spread of nuclear weapons. The NNSA laboratories have unique experience at analyzing the threats and supporting any diplomatic efforts to contain Iran's nuclear program. While I will not have the same role in such negotiations as did Secretary Moniz because of his unique nuclear expertise, if confirmed as Secretary of Energy, I will assist such efforts in any way that the Department is asked, including ensuring that DOE's technical capabilities and expertise is available to any such efforts.

- c. To the extent the Energy Department is engaged in talks with Iran, will you ensure the Committee is kept fully apprised of that engagement, as required by law?

Answer 20c: Yes.

- d. The National Nuclear Security Administration, within the Energy Department, played a key role in the 2015 nuclear deal. The agency provided key technical expertise in evaluating the deal. However, there were some reports that the NNSA felt pressure to align its analysis to the policy wishes of the Obama administration. If confirmed, will you ensure the NNSA provides accurate information and analysis and in no way is pressured to conform its views to any desired policy outcome?

Answer 20d: The Department of Energy's core strength is its national laboratory system, and if they are not free to conduct scientific and technical analysis free of interference, it undermines the Department as a whole. If confirmed, I will ensure that the DOE—including NNSA—follows a high standard of scientific integrity.

Question 21: With the introduction of mass timber in the nation's preeminent model building code, wood is now approved as a structural material for buildings up to 18 stories tall, a height that encompasses nearly all buildings in the U.S. Mass timber also has a very low carbon footprint, since harvested wood actually stores carbon – and here in the U.S., land is replanted one-for-one any time trees are harvested. Despite access to the

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technology and abundant timber, the United States has only limited manufacturing capability in the mass timber space. Given the current jobs crisis, particularly in rural areas where mass timber plants would likely be located, increasing the ability to put mass timber to use here at home in the U.S. seems like an obvious opportunity. The Department of Energy plays an important role in energy efficiency.

- a. If confirmed as Secretary of Energy, how do you think you would be able to drive the growth in manufacturing of low-carbon materials like mass timber?

Answer 21a: I am aware that as part of the Advanced Buildings Construction Initiative (ABC), the Department is working with public and private sector partners on mass timber in both new construction and in the renovation of existing buildings. Advanced materials like cross laminated timber can dramatically reduce the building sector's carbon footprint. If confirmed as Secretary, I would continue to support work on this innovative, exciting, job creating technology.

Question 22: Vladimir Kara-Murza, a prominent opposition activist in Russia, nearly died in 2015 and again in 2017 from suspected poisonings in Russia. Following both illnesses, samples of his blood were accepted for testing by the FBI, and tests may have been performed in part by Department of Energy national labs. However, the results of those tests and the FBI's assessment of the cause of Mr. Kara-Murza's apparent poisonings have been withheld from both Congress and Mr. Kara-Murza himself. In July 2018, I understand that Mr. Kara-Murza submitted a Freedom of Information Act request to the FBI (FBI FOIPA Request No. 1410820-000) for documents relating to his poisonings, including the results of tests performed by U.S. government agencies.

- a. Has the Department of Energy, or any element of the Department, including one or more national labs, received from the FBI or the Department of Justice a referral of documents responsive to Mr. Kara-Murza's FOIA request?

Answer 22a: As I understand it, the Department has received a referral of documents by the FBI in this matter.

- b. If such a referral has been received,

- i. What is the estimated date for completion of the review by the Department?

Answer 22bi: If confirmed as Secretary, I will take steps to ensure that the review by the Department is completed as soon as possible.

- ii. Do you commit to expediting the release of as many responsive documents as possible to Mr. Kara-Murza, as soon as possible?

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Answer 22bii: If confirmed as Secretary, I commit that the Department will cooperate fully with the FBI regarding their release of any documents to Mr. Kara-Murza.

- c. Does the Department of Energy, or any element of the Department, including one or more national labs, have additional documents, records, evidence, or other materials relating to the poisonings of Mr. Kara-Murza, and do you commit to releasing them?

Answer 22c: I am not aware of any additional documents, records, evidence, or other materials, regarding this matter, but if confirmed to be Secretary, I will follow up with the appropriate Departmental elements.

- d. Will you commit to briefing me and my staff on the Department's efforts surrounding these incidents, including any tests that may have been conducted and their results?

Answer 22d: I commit to following up with you about this matter.

Questions from Senator Maria Cantwell

Question 1: HANFORD: TRI-PARTY AGREEMENT COMPLIANCE DATA

According to the Tri-Party Agreement, DOE is required to identify its compliance-level funding requirements.

- Can you commit to providing me and the state of Washington the Tri-Party agreement the funding compliance numbers for FY 2022 as soon as they are finalized?

Answer 1: Yes, if confirmed as Secretary, we will provide you and the state of WA the compliance-level funding requirements for FY22.

Question 2: HANFORD: MANHATTAN PROJECT NATIONAL HISTORICAL PARK

The Manhattan Project National Historical Park is a unique partnership between DOE and the National Park Service at three sites across the country, including at Hanford in Washington state. Part of the Department of Energy's responsibility for the Park is to maintain the infrastructure at key facilities.

- Would you please share your thoughts on DOE's role in supporting the Manhattan Project National Historical Park, including the need to maintain facilities like the roof of the historic B Reactor which has deteriorated to the point where it could impact public tours in the near future?

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Answer 2: I strongly support the Manhattan Project National Historical Park and, if confirmed as Secretary, DOE will continue to fulfill its obligations outlined in the 2015 NDAA and the MOA between DOE and DOI particularly in the areas of facilities maintenance, access, and safety.

Question 3: NATIONAL NUCLEAR SECURITY ADMINISTRATION WORKFORCE

Ensuring a diverse workforce as the National Nuclear Security Administration is necessary to build the capable and highly skilled workforce we need maintain the Nation's nuclear deterrent.

- Will you work on ensuring a diverse workforce within the NNSA, with a particular focus on increasing diversity and inclusivity in the NNSA's security forces?

Answer 3: Yes.

Question 4: DEFENSE NUCLEAR FACILITY SAFETY BOARD

The Defense Nuclear Facility Safety Board has provided an independent, essential role in ensuring the safety of our nuclear security and environmental management workers for more than three decades, including at the Hanford site.

- If confirmed, do you commit to work constructively and cooperatively with the Board and respect its independence and advice on all manner of safety issues within the complex?

Answer 4: Yes, if confirmed as Secretary I look forward to working closely with the Defense Nuclear Facilities Safety Board and advancing conversations on an MOU between the Department and DNFSB.

Question 5: CLIMATE CHANGE

I share the concerns you expressed about the looming climate crisis and agree that products that reduce carbon emissions represent a multi-trillion market opportunity.

- Do you believe that an economy wide price on carbon, applied upstream where fossil fuels enter the economy, is the most efficient mechanism to decrease carbon emissions at the necessary scale and speed?

Answer 5c: I believe it is critical that we accurately understand all the costs of carbon pollution on our economy. There are many externalities that are not currently captured in our existing markets, and these hidden costs harm communities across the country. Regardless of whether there's a price on carbon or not, the Department of Energy's mission is—through RD&D—to

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drive down the cost of emissions-free technologies so that they are competitive with any other energy source, and will lower the cost for consumers while diversifying our energy mix. If confirmed, I will continue to push the Department's R&D to bring down the cost of energy technologies.

- Do you believe that a predictable, market-based carbon price will incentivize the markets to reduce carbon emissions faster and more efficiently than could be achieved through direct regulation of emissions within specific industry sectors?

Answer 5b: History shows us that when we factor-in the externality costs of pollutants, market forces respond. More than ever, private sector players are recognizing not only the existential threat that climate change poses to their businesses and the nation, but also the incredible opportunity to take decisive action on climate change. Regardless of whether there's a price on carbon or not, the Department of Energy's mission is—through RD&D—to drive down the cost of emissions-free technologies so that they are competitive with any other energy source, and will lower the cost for consumers while diversifying our energy mix. If confirmed, I will continue to push the Department's R&D to bring down the cost of energy technologies.

Question 6: POWER MARKETING ADMINISTRATIONS (PMAs)

Recent Administrations have proposed selling the PMAs, changing the cost-based rate structure, and otherwise deviating from the “beneficiary pays” principle that has governed the PMAs' operations well for decades. Bipartisan majorities in Congress have rejected these ill-conceived proposals.

- Will you commit to working with Congress and customers to ensure the PMAs can continue their statutory mission to provide cost-based power?

Answer 6: Yes.

Question 7: PMA REPORTING STRUCTURE

Historically PMAs have reported directly to the Deputy Secretary of Energy, a structure that proved beneficial for both DOE and BPA as it preserves BPA's operating and authority independence while the Department maintains an oversight role at the highest level. The Trump Administration modified that longstanding reporting structure so that PMA's reported to an Assistant Secretary, which resulted in new administrative burdens that translated to additional costs to many ratepayers in my state.

- Will you assess the current reporting structure and consider restoring having PMAs report to the Deputy Secretary or the Under Secretary for Science and Energy?

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Answer 7: I understand the unique nature of the power marketing administrations and their importance to the regions they serve. If confirmed, I plan to do a review of the organizational structure and make changes as necessary to improve the function of the Department. I look forward to working with you to make the PMAs as effective as possible

Question 8: COLUMBIA RIVER TREATY

As you know, the United States is currently renegotiating the Columbia River Treaty with Canada. This Treaty is absolutely critical to power operations, flood control, and conservation in the Pacific Northwest. Through Bonneville Power Administration's role as Chair of the negotiating entity under the Treaty and technical expert, the Department of Energy is critical to moving negotiations forward.

- Can you commit to working closely with the Pacific Northwest delegation as the negotiations move forward?

Answer 8a: Yes.

- Can you also commit to supporting the Bonneville Power Administration's role as the expert both in the Treaty and in the needs of the Pacific Northwest throughout the negotiation process?

Answer 8b: Yes.

Questions from Senator Steve Daines

Question 1: Governor Granholm, if confirmed, do you commit to be source neutral or will you prioritize wind and solar over baseload sources like hydro, coal, or nuclear?

Answer 1: To reach our net zero emissions goals, the United States will need to employ technology solutions for all fuel sources. If confirmed, I fully plan to commit resources to carbon management across the fuel and technology spectrum. I am particularly excited by the opportunities for game-changing advances in carbon capture and advanced nuclear technologies in the next several years.

Question 2: Governor Granholm, Do you believe it should be the policy of the U.S. to close existing coal power plants and kill those jobs in order to lower emissions or do you believe that DOE should promote innovative technologies like carbon capture on existing plants to reduce emissions and build jobs?

Answer 2: If confirmed as Secretary I look forward to exploring CCS and CCUS opportunities for our fleet. I also look forward to supporting the scientific work being done at the DOE's National Labs and in

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federally partnered projects across the country and taking that research to scale and deploying it to create jobs for Americans.

Question 3: Governor Granholm, as I noted during the hearing, Montana is home to four petroleum refineries. All four refineries qualify for the Small Refinery Exemption, which helps reduce the stress of high renewable fuel purchasing demands. Unfortunately, the 2019 and 2020 exemptions have not been granted and refineries in Montana are on the brink of closure. DOE plays a major role in the Small Refinery Exemption. If confirmed, will you work with EPA to ensure that the 2019 and 2020 exemptions for Montana are swiftly approved?

Answer 3: DOE provides a recommendation to EPA in the Small Refinery Exemption process. The determination is based on demonstrated disproportionate economic hardship to the refinery. If confirmed, I look forward to working with you on this issue.

Question 4: Governor Granholm, actions taken by government officials can have serious impacts on local communities. In Montana, we have many small communities that are built around different industries, whether that be towns built around a grain elevator with just a post office and a local bar, or a bustling town of over two thousand supported by a coal plant. Unfortunately, with a stroke of the pen a Secretary or President can completely decimate an entire community often without any thought to the jobs, livelihoods, and well-being of those communities. If confirmed, that power may rest in your hands and Montana communities may be at risk by actions you take. Will you as secretary, meet with and hear from these communities that are often overlooked when crafting national policies?

Answer 4: Yes, if confirmed as Secretary, I look forward to gaining input from Members of Congress, States, Tribes, and local communities in developing national energy policies.

Question 5: Governor Granholm, the development of a robust renewable energy program will require raw materials such as copper, silver, rare earths, iron and more. The U.S. has always been a leader in responsible mining and Montana is home to many of the raw materials needed to build renewable energy projects. If the Biden administration continues down the path of prohibiting development of natural resources on our public lands, we will be forced to continue to rely on those materials from less environmentally friendly countries. Do you believe that raw materials for renewable energy should be sourced domestically or should the U.S. continue to source these materials from China, Russia, and others?

Answer 5: Yes, I think it's important to promote responsible mineral development that will protect the environment and provide the United States a competitive advantage in producing batteries and other technologies that will enable us to advance renewable energy, and other industries supported by critical

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mineral development. If confirmed as Secretary, I am eager to work with you and others to make sure that the United States has its own critical mineral supply.

Question 6: Governor Granholm, nuclear power already provides carbon-free, baseload power throughout the United States. Advancements in new nuclear technologies such as small modular reactors, and fission and fusion reactors will only increase the United States ability to provide carbon-free, baseload power to customers. Unfortunately, the United States is falling far short in the production of uranium and other elements needed to power reactors, forcing us to rely on foreign countries for our supply. From a national and energy security point, how important is it for the U.S. to increase production here at home, and what role do you see the newly created Uranium Reserve at DOE playing in preserving domestic production?

Answer 6: Nuclear energy is an important resource that provides emissions-free baseload electricity generation at competitive prices. If confirmed as Secretary, I will follow the direction provided by Congress in allocating \$75 million to the creation of the Uranium Reserve in the *Fiscal Year 2021 Consolidated Appropriations Act*.

Question 7: Governor Granholm, DOE plays a major role in the research, development, and commercialization of carbon capture technology. Will you continue and expand upon the existing CCUS work at DOE? What are some of your goals for CCUS?

Answer 7: Yes. These technologies have great promise. For instance, in the areas that are difficult to decarbonize in the industrial sector: cement, steel, hydrogen production, and refining industries. They can leverage DOE's progress in this space. We will also focus on the conversion of CO₂ into products. The CO₂ captured will need to be managed, and both dedicated storage and conversion will be important aspects of DOE's portfolio.

Question 8: Governor Granholm, the Energy Package passed at the end of 2020 included a number of new authorities for DOE to advance carbon capture. This includes direct air capture, and industrial and fossil fuel power plant projects. What steps will you take to implement these new authorities and ensure demonstration and commercialization projects are successful?

Answer 8: I am aware that there are already steps being taken to leverage existing carbon capture facilities to include direct air capture testing. If confirmed as Secretary, I will work to ensure that DOE will continue to build on their legacy of strong partnerships with industry, government labs, and

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academia to ensure successful projects when implementing new programs for carbon capture in the *Energy Act of 2020*.

Question 9: Governor Granholm, in response to questions during the hearing, you stated that you want to focus on placing new industries, jobs, and projects into states that are most affected by the transitioning of the energy economy. Do you consider Montana as one of those states?

Answer 9: Yes.

Question 10: Governor Granholm, Montana is the proud home to one-third of our nation's inter-continental ballistic missiles. Many of these are now over 50 years old. Maintaining a credible nuclear deterrent is vital to our national security, and a core mission of the Department of Energy. If confirmed, will you ensure that the Department remains focused on that mission?

Answer 10: Yes. If I am confirmed as Secretary, I will focus on three missions. First and foremost being the important responsibility of advancing the national security of the United States by ensuring the National Nuclear Security Administration has the tools and resources required to protect our nation.

Question 11: Governor Granholm, earlier this month, Congress passed the National Defense Authorization Act which requires a greater degree of cooperation between the National Nuclear Security Administration and the Pentagon to adequately fund our nuclear modernization efforts. If confirmed, will you commit to maintaining our competitive edge through a robust and credible nuclear deterrent?

Answer 11: Yes.

Question 12: Governor Granholm, over the years the Department of Energy has played a key role in the advancement of the 45Q tax credit, which helps promote carbon capture investment. Do you support the 45Q credit?

Answer 12: Yes.

Question 13: Governor Granholm, studies show that the Pacific Northwest faces near-term power shortages during peak load conditions. This means that demand will exceed supply at times when energy is needed most, such as extreme hot and cold weather. At present the integration of intermittent generation like wind and solar requires flexible capacity such as coal and natural gas resources to ramp up and down in order to maintain a reliable and stable service. The concern that supply won't meet peak demand will be further exacerbated if the Biden administration moves quickly to shut down coal and gas plants without sufficient new energy production. It is further complicated in a state like Montana where temperatures get below the operating capability of wind, the wind blows too fast or too slow due to pressure systems, and when solar is unable to operate at night when temperatures reach their lowest. Montanans are concerned that the goals of President Biden's Climate Agenda

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do not take into consideration real world energy demand in states like Montana and fear the ability of utilities to deliver heat and electricity during peak load times. If confirmed, do you plan to oppose new fossil fuel generation on principal or are you willing to evaluate based on individual circumstances? Further will you commit to work with states in addressing their energy shortages, even if it means that new fossil-fuel generation may be required so that energy is available around the clock?

Answer 13: If confirmed as Secretary, DOE will work in partnership with industry, and its regulators to prioritize system reliability and resilience. Key measures include the development of advanced planning tools, energy storage, transmission, and firm generation. The research at the Department will support increased system flexibility and we will continue to work with states and industry partners to ensure energy needs are met through the development of clean energy resources and carbon capture natural gas systems.

Question 14: Governor Granholm, U.S. polysilicon has long been targeted by retaliatory tariffs by China in part due to its Made in 2025 agenda and these tariffs are threatening hundreds of high-wage manufacturing jobs in Montana and across the country. Polysilicon is an important component in critical products, such as semiconductors and batteries. What can be done to strengthen the U.S. semiconductor and battery supply chain and reduce our dependence on China for these critically important materials?

Answer 14: I agree that polysilicon is a key component in a number of critical products that I want to see manufactured here in the U.S., including batteries, semiconductors, and solar panels. I am a strong proponent of ensuring the U.S. has a robust battery supply chain. If confirmed as Secretary, I look forward to learning more about the Department's R&D efforts that are intended to support innovation to strengthen the U.S. semiconductor and battery supply chain, and will collaborate across the federal government to identify opportunities to strengthen U.S. supply chain independence.

Question 15: Governor Granholm, as you know President Biden recently signed an executive order removing a permit and effectively killing the Keystone XL Pipeline. I have also heard that the President plans to stop all new oil and gas leasing on federal lands. Both of these will have dramatic negative impacts to Montana and the nation, including the loss of thousands of jobs and billions in investments during a critical time in our economy. It also has a major impact on our energy security. If oil and gas demand in the United States remains the same, as is predicted, would you agree that if the United States is producing less oil and importing less from our Canadian allies that this will increase oil imports from the Middle East and ultimately harm the American energy independence and national security?

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Answer 15: Importantly, existing leases will not be impacted by the President's executive order. In addition, expanding renewable infrastructure will add millions of clean jobs to the economy as well as contribute to energy security and independence.

Question 16: Governor Granholm, DOE recently published an assessment on the energy potential at non-powered dams in the United States. In this report, DOE estimated Montana could produce an additional 88MW of power at existing non-powered dams. As you know, hydropower is a renewable resource that provides baseload power, unlike intermittent solar and wind. It also has a far smaller physical footprint than other renewables. How can DOE work to increase hydropower in Montana and how can we use this assessment to increase hydropower throughout the U.S.?

Answer 16: I agree that hydropower is a critical part of our energy future, both as a source of clean, renewable energy and as a highly flexible resource that can help us advance other renewables like wind and solar. In addition, pumped storage hydropower accounts for 95% of all energy storage on the grid and is currently available for long-duration storage. If confirmed as Secretary, I will actively support the Department's substantial hydropower program efforts, including the newly announced Energy Transitions Initiative Partnership Program that will work directly with a number of communities in Alaska, and the continued development of new technologies and approaches that ensure hydropower facilities are environmentally sustainable and resilient to climate change.

Question 17: Governor Granholm, in 2018 the President signed the National Quantum Initiative Act (Public Law No: 115-368), which includes new authorities for DOE to work to make the U.S. leaders in Quantum Computing. Montana is home to a booming quantum industry and making sure the U.S. is a leader in this issue is very important for national security and creating jobs. If confirmed, what plans do you have to fulfill the goals set out in the National Quantum Initiative Act?

Answer 17: I am aware that since enactment of the National Quantum Initiative Act (NQI) in 2018, the Department has announced five National Quantum Information Science (QIS) Research Centers (Centers) in FY2020. The Department also has strong partnerships with both the National Science Foundation (NSF) and the National Institute for Standards and Technology (NIST), and works closely with other agencies in this area. I am aware that DOE supports the National Quantum Initiative Advisory Committee (NQIAC) to provide advice on the trends and developments in quantum information science and technology. If confirmed as Secretary, I will review DOE's quantum efforts to help best position the Department to meet the goals set out in the Act.

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Question 18: Governor Granholm, over the years we have seen attempts to expand DOE's role in the local building and energy code development process. A national or top down mandate or DOE driven code development process is at odds with locally created and publicly driven process that produces specific standards for specific areas. Building and energy code in Montana, where we have long cold winters with deep snow and hot summers, are inherently different from codes in more consistent or tropical southern states. What do you believe should be the role of the federal government in the code development process?

Answer 18: I am aware that the Department is directed by the Energy Conservation and Production Act (ECPA), as amended, to provide technical assistance supporting the development by code-development bodies of model building energy code updates, as well as state implementation of building energy codes (42 USC 6836 and 6833). In recent years, the building industry, with DOE's support, has focused increasingly on compliance options that allow greater flexibility and trade-offs among consumer-friendly solutions, known as *performance*-based codes. If confirmed as Secretary, I will work to ensure that DOE maintains its technical assistance role, supporting the industry in its ongoing shift toward performance-based compliance options.

Questions from Senator Bill Cassidy

Question 1: Two of the Department's Strategic Petroleum Reserve (SPR) sites are in Louisiana. In upcoming years, the Department has to sell oil from the SPR to fulfill certain Congressional mandates leaving a significant amount of unused capacity available. I believe the Department could capitalize on this unused capacity by leasing a percentage of it back to the private sector.

Doing so would create a revenue stream to invest back in SPR maintenance and upgrades as well as reduce emissions required to build above ground storage.

What are your thoughts on leasing unused SPR capacity for the purposes I mentioned?

Answer 1a: In general, I believe the SPR is designed for emergencies and leasing could create unnecessary risk. That said, the amount of unused capacity would have to be examined. There may be an opportunity to invest back in maintenance and upgrades, which would be useful to the sites in Louisiana.

What role do you see for the SPR in the future?

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Answer 1b: I see the role of the Strategic Petroleum Reserve (SPR) as one to provide the security needed when an emergency arises. Historically, significant SPR draw down has taken place in the case of emergencies – with only 3 taking place over the last decade, the most significant being the 30 million bbl in the “Arab Spring” of 2011. The other two events were in 1991 (Iraq, 17M bbl) and 2005 (Hurricane Katrina, 11M). The SPR is robust and maintained for purposes of this kind.

Question 2: Over the last three fiscal years, including FY 2021, Congress has provided funding in the annual Energy & Water Appropriations bill for the Department to utilize the North American Energy Research Alliance as a tool to improve energy research coordination between the United States, Mexico and Canada. Although the Alliance already exists and is comprised of several leading research universities in each of the three nations, the Department has, so far, not utilized the funds as Congress has intended.

Will you commit to complying with congressional intent on this issue and pursuing this effort to improve research coordination with our Nation’s largest trading partners?

Answer 2: Yes. If confirmed as Secretary, I look forward to continuing to advance coordination between the United States, Mexico, and Canada to achieve our shared energy and national security goals.

Question 3: Louisiana was decimated by three major hurricanes in 2020. FEMA and the disaster assistance it provides have been tremendously helpful in putting the pieces back together. One of the areas where we need assistance is in repairing and strengthening the electric transmission system that serves not only Louisiana communities but also Department of Energy facilities and other critical national infrastructure.

Will you commit to being an advocate within the Administration for repairing and making our transmission system more resilient and support any relevant waivers that may be necessary for this?

Answer 3: Yes. If confirmed as Secretary, I look forward to working to increase the resiliency and sustainability of critical electric infrastructure.

Questions from Senator Mazie Hirono

Question 1: President Biden has stated his commitment to target federal investment in disadvantaged communities and to start addressing a long history of racism and economic inequality through federal programs. How will the President’s commitments influence your work at DOE? How will you adjust DOE programs to ensure that its investments are advancing environmental, economic, and racial justice?

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Answer 1: President Biden has made a commitment to invest at least 40% of the benefits of the response to the climate crisis in communities that have been historically disadvantaged by climate change or GHG pollution. If confirmed, I will ensure to use all of the tools at the DOE to live up to this commitment and am enthusiastic about doing so.

Question 2: In recent years, Republicans have made repeated attempts through the National Defense Authorization Act (NDAA) to increase the Department of Defense's role in setting budget priorities for the nuclear weapons program at the DOE's National Nuclear Security Administration (NNSA). I worked with Senators Manchin and Murkowski and others on the Fiscal Year 2022 NDAA to maintain DOE's budget authority over the NNSA. Do you agree with me it is imperative that the weapons program remain under civilian control at the DOE?

Answer 2: Yes, I agree that it is important for DOE to retain its authorities as it relates to the National Nuclear Security Administration and its budgetary responsibilities while also committing to maintaining coordination and transparency with our Department of Defense partners.

Question 3: Last year, there was an effort by some Republicans to resume nuclear weapons testing. This would set a dangerous example to the world and is unnecessary because NNSA's scientific experts certify the safety and security of the nuclear weapons stockpile every year. Will you commit to working with the Secretary of Defense and others in the Administration to oppose any effort to return to nuclear weapons testing?

Answer 3: I am committed to the continued support of the science-based Stockpile Stewardship Program which has enabled us to maintain confidence in the nuclear stockpile without requiring additional nuclear tests for the past 20 plus years.

Question 4: Under the previous Administration, the DOE failed to meet deadlines to update approximately 28 different appliance standards, such as for refrigerators and clothes dryers. A recent report by the Appliance Standards Awareness Project found that updates to national appliance standards could save average households hundreds of dollars in their utility bills while significantly cutting carbon pollution emissions. Will you ensure that the DOE diligently pursues these carbon and energy bill savings through its appliance standards program?

Answer 4: Yes, I will ensure that the DOE diligently pursues carbon and energy bill savings through its appliance standards program.

Question 5: The number of staff at the DOE's Office of Energy Efficiency and Renewable Energy declined during the Trump Administration, even as Congress increased funding for the office substantially. I questioned the previous leadership of DOE during budget hearings on their plans to reduce staff at EERE. I understand that

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when career employees left EERE over the past four years, their positions were often left unfilled or the replacement hiring process was slowed down. Will you commit to staff the EERE and other DOE offices at a level to allow them to carry out their missions effectively?

Answer 5: Yes.

Question 6: Congress created the Department of Energy's Established Program to Stimulate Competitive Research (EPSCoR) to ensure that research opportunities are available to students and faculty in every state. With strong bipartisan support, Congress recently modernized DOE EPSCoR to better scope the program to utilize the strengths of eligible states.

- a. As Secretary, will you commit to working to quickly implement the new authorities provided by Congress?

Answer 6a: The DOE Established Program to Stimulate Competitive Research (EPSCoR) is committed to realizing the goals outlined by Congress in the *Energy Act of 2020*. If confirmed as Secretary, I commit to strengthening investments in energy research for states and U.S. territories that do not historically have large federally supported academic research programs and to improving the capability of designated states and territories to conduct nationally competitive energy-related research; train new scientists and engineers; and build collaborative relationships between scientists and engineers in DOE laboratories.

- b. What will you do as Secretary to ensure that students and faculty in EPSCoR states are able to participate in meaningful DOE research?

Answer 6b: EPSCoR funding opportunities focus on topics that address the breadth of the energy technology, environmental, and science missions of DOE. If confirmed as Secretary, DOE will issue, consistent with the Congressional language, biennial funding opportunities for infrastructure through the Implementation Grant program and, on alternate years, funding opportunities to enhance partnerships between EPSCoR jurisdiction institutions and DOE national laboratories through the State-National Laboratory Partnerships program.

Questions from Senator Cindy Hyde-Smith

Question 1: We have seen and heard how nuclear filtration is an essential asset to DOE. How do you envision the future of partnerships with Universities that are capable of providing a facility to promote the DOE

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confinement ventilation systems and technology, which has applications in not just the energy field, but the medical, and pharmaceutical fields as well?

Answer 1: Filtration is indeed very important to our Nation. As we have seen over the past year during the COVID-19 pandemic having adequate filtration capabilities and personal protective equipment is critical to protect our front-line workers and first responders and this has been a national challenge. As of yet, the role that DOE's national laboratories and universities have played and are playing in response to the pandemic crisis is not well known and has not been broadly advertised. This is an area of potential growth that I look forward to pursuing if confirmed as Secretary.

Question 2: Multiple countries and intergovernmental organizations have declared that forest management and biomass play an essential role as part of an all-in approach to reduce dependence on fossil fuels. Gov. Granholm, what role can sustainable biomass play in our nation's overall energy strategy, and how do strong forest product markets benefit rural communities?

Answer 2: I believe that bioenergy, as part of a comprehensive sustainable transportation strategy, has significant potential in decarbonizing difficult to electrify modes of transportation, specifically aviation, marine, and long haul diesel. I also agree that healthy forests provide benefits particularly in rural communities. In addition, industries built on healthy forest management can increase a highly skilled workforce in rural communities with needs for employment in forest ecology, hydrology, and wood engineering.

Question 3: With the Administration instituting a broad moratorium on leasing and permitting activities on federal lands, tens of thousands of jobs will be negatively impacted and likely lost. Of particular concern is the impact on the oil field services industry which is still reeling from the demand collapse of the spring and summer. With few options available to retain these crews and the expertise necessary to retain the US global position as a leader in innovation, one of the few viable options the Biden administration can offer under this scenario is extensive mitigation work in reclaiming orphan and abandoned wells. Will the Administration support orphan and abandoned well legislation currently being negotiated by the Senate?

Answer 4: Orphan and abandoned wells can continue to release significant amounts of methane and other pollutants that harm public health, safety, and the environment. As you noted, these risks can be mitigated through remediation. If confirmed as Secretary, I look forward to working with you and other federal agency leaders to better understand how the technologies in the lab and in the field can be brought to bear to support this mission.

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Question 4: The oil and gas industry is one of the most innovative and forward thinking of all industries in the adaptation and deployment of technology and cost effective mitigation efforts. One of the best practices for mitigation is to simply offer best in class monitoring and inspection of producing wells and orphan and abandoned wells using remote sensing technology. When numerous off the shelf technologies are combined with AI, machine learning and mesh networking technologies, combined with other steps industry has already taken, these simple measures can provide a very clear and accurate portrayal of methane emissions. What steps might the Department take to identify these best practices and promote their use and implementation to industry and other regulatory agencies?

Answer 4: I agree that advancing these efforts will help in minimizing methane emissions. There are existing programs at the Department that I intend to leverage if confirmed as Secretary.

Question 5: One of the significant challenges industry faced during the demand collapse of the spring was the lack of available storage space for product. The prior Administration wisely made storage space available to industry to alleviate short-term storage constraints. Will you commit to continue this policy of making space available to industry for short term storage needs when the markets are under pressure as they were last year?

Answer 5: If confirmed as Secretary, this is a question that I look forward to considering based on reasons for demand reduction if, and when, those reductions occurred.

Question 6: Industry broadly supports the Strategic Petroleum reserve modernization efforts and therefore supports the mandatory sales designed to fund the modernization efforts. However, the Strategic Petroleum Reserve mission should be updated to better reflect the changing status the US has gained as the world's leading producer of crude as well as its strategic mission. Do you anticipate the need for authorizing legislation to update the strategic petroleum reserve mission and authority?

Answer 6: If confirmed as Secretary, this is an issue that I look forward to discussing with the team in the Office of the Strategic Petroleum Reserve.

Question 7: One of the additional concerns industry has repeatedly expressed is the poor timing of SPR sales and the impact on markets. When significant volumes of SPR product is put to market, concern has been expressed when those sales take place when prices are low, which puts additional price pressure on the markets. We applaud the effort made by SPR to provide better outreach to industry to give indication as to when sales are planned. Do you intend to continue this practice of providing the markets notice of sales several weeks in advance?

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Answer 7: If confirmed as Secretary, I will continue to work with congressional partners and professionals in the Office of the Strategic Petroleum Reserve to account for all factors in managing SPR sales.

Question 8: The Department has issued in recent weeks a particularly compelling report demonstrating the impacts that a hydraulic fracturing ban would have on national security and economic growth in the United States. Do you support the findings that DOE made in that report and do you agree that a hydraulic fracturing ban would have devastating economic impacts while significantly diminishing our geopolitical leverage and standing against Russia, Saudi Arabia, Venezuela and other competitors. Would this be a wise policy to institute a ban on this widespread industry practice?

Answer 8: President Biden has stated that this administration does not plan on instituting a ban on the industry practice of hydraulic fracturing.

Question 9: In recent years, the United States has helped foster the growing energy relationship in the Eastern Mediterranean between Israel, Greece, and Cyprus. If confirmed, will you continue efforts to foster and expand this relationship?

Answer 9: Yes.

Questions from Senator Angus S. King, Jr.

Question 1: What is your philosophy on nuclear weapons stockpile stewardship, and do you support the bi-partisan consensus of maintaining the nuclear triad and continuing critical infrastructure and warhead modernization directed by President Obama in 2010?

Answer 1: If confirmed, I will continue to support the Stockpile Stewardship Program (SSP) and its role in maintaining the nation's nuclear deterrent. The White House and Department of Defense (DoD), in its role of identifying the requirements to meet the nation's nuclear deterrent objectives, determines whether the nuclear triad represents the optimal approach to meeting those requirements. The Department of Energy will continue to meet the requirements identified by the White House and DoD and execute the warhead and infrastructure modernization programs begun under President Obama in 2010.

Question 2: President Biden has said that, subject to Iran's return to compliance, the United States will try to rejoin the Joint Comprehensive Plan of Action (JCPOA) as a starting point for follow-on negotiations with Iran

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to strengthen and extend the nuclear deal's provisions. What are the key uranium and plutonium provisions you would like to see strengthened and extended, and what role do you envision for the Secretary of Energy in potential negotiations with Iran on an improved version of the JCPOA?

Answer 2: If confirmed, I look forward to working with the Administration on how best to constrain Iran's nuclear ambitions and ensuring the technical and scientific expertise of the DOE national laboratories are made available to support our nonproliferation goals and potential negotiations.

Question 3: Given the role of the Department of Energy as the Sector Specific Agency and Sector Risk Management Agency for the energy sector, what do you consider to be the greatest cyber threats to the sector that need to be addressed early in your tenure if confirmed?

Answer 3: Our nation's energy delivery infrastructure includes not just information technology (IT) but also operational technology (OT) that control real-time physical processes. Cybersecurity threats to the energy sector continue to grow, as increasing segments and components of energy systems are interconnected and managed remotely. Sophisticated nation state adversaries are targeting energy systems and demonstrating an increasing interest in cyber attacks that can result in physical damage to our energy delivery systems resulting in economic impacts and potential loss of life.

Questions from Senator Catherine Cortez Masto

Question 1: As Governor of Michigan, you focused on reviving the auto industry, in part by investing in clean energy and advanced manufacturing, including battery manufacturing. Should you be confirmed, I look forward to working with you to grow the use of zero-emission vehicles across the country in a cost-effective, equitable, and maximally beneficial way.

- a. What role do you see the Department of Energy (DOE) playing in accelerating the deployment of zero-emission vehicles, including medium- and heavy-duty vehicles such as school and transit buses and commercial trucks?
- b. Do you commit to elevating DOE to be a strong federal partner in helping our schools as they work to improve the health of their students and communities by reducing transportation emissions and investing in EV school buses?
- c. In your opinion, should DOE use its expertise to assist schools, especially those in disadvantaged school districts, with EV school bus deployment by providing infrastructure, vehicles, and needed technical assistance?

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Answer 1: If confirmed as Secretary, I look forward to working to help accelerate the role of zero-emission vehicles across the U.S. economy. Under my leadership, DOE will:

- Continue to lead the R&D to develop batteries, motors, and charging technologies that make EVs affordable, minimize use of critical materials, and can recharge quickly. This includes both light duty vehicles and medium/heavy duty trucks.
- Work across the Federal government to ensure a manufacturing base for EVs and jobs for U.S. workers in the transition to an electrified transportation system.
- Work with stakeholders to help ensure that a national EV charging network is integrated with the grid and can support the move to renewable electricity, including smart charging technology and communication standards that connect utilities, chargers, and vehicles.
- Conduct demonstration and deployment programs that provide replicable models for EVs with a strong focus on historically underserved communities, both in cities and rural areas.

DOE has worked to develop electrified school bus technology, including the use of school buses for vehicle-to-grid applications, which can help school districts improve affordability and resilience in the case of power outages. DOE can further help by improving the technology and providing technical assistance through our Clean Cities Programs.

Question 2: The Tribal Energy Loan Guarantee Program (TELGP) has yet to issue any loans. This is a missed opportunity to help Tribes as they look to deploy renewable energy. The Fiscal Year 2021 Consolidated Appropriations bill included language encouraging DOE to better market the program.

- a. If confirmed, will you commit to reviewing the TELGP and expedite efforts to make the program more accessible to Tribes?

Answer 2: If confirmed, I commit to reviewing the Tribal Energy Loan Guarantee Program and expedite efforts to make the program more accessible to Tribes.

Question 3: In Nevada, we have growing lithium production, battery manufacturing, and battery recycling industries, which reduce our need to source materials from other countries and increasing domestic job opportunities.

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- a. What more is DOE planning to do to jumpstart the domestic battery recycling economy, keep critical minerals in the domestic supply chain, and bring good jobs home?

Answer 3a: It is my understanding that DOE has multiple efforts aimed at strengthening the U.S. battery supply chain through increasing lithium ion battery recycling rates. The ReCell Center conducts R&D specifically focused on economic recovery of material from batteries through advanced processing technology development. In addition, along with the Departments of Commerce and Defense, DOE recently launched the Federal Consortium on Advanced Batteries (FCAB), which provides an interagency framework for cooperation on advanced battery technology and establishing a domestic supply of lithium batteries. Lastly, DOE just announced several projects to strengthen battery critical material supply chains – including a field demonstration effort to produce battery grade lithium hydroxide from claystone resources in Nevada. If confirmed, I will work to ensure that DOE applies its competencies and emerging capabilities to the needs of the U.S. critical supply chains, including lithium-ion battery manufacturing and recycling.

Question 4: The State of Nevada is recognized as a national leader in not only clean energy technology and innovation, but also in data storage security. When we spoke, I extended an invitation for you to come see all that Nevada has to offer.

- a. When you visit Nevada, will you take time visit with and learn from our local leaders who are working to help DOE improve and secure its data storage?

Answer 4a: Yes.

Question 5: As our nation's school buildings age, the need for widespread investments in improving energy efficiency is becoming more apparent, not only to make communities healthier and improve learning conditions for our students, but to reduce energy costs for our school districts. For instance, simply updating a school's lighting is projected to save the school district thousands of dollars over time. That is why I plan to reintroduce the *Renew America's Schools Act*, which would help schools become more energy efficient, build-out renewable energy technologies, and purchase zero-emission buses and charging equipment. The bill would also be complementary to the work being done through DOE's Better Buildings Challenge.

- a. Will you commit to supporting policies that ensure we as a nation are investing in energy efficiency to reduce emissions, protect the health of our communities, and cut costs for essential public services, such as education?

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Answer 5a: Yes, if confirmed as Secretary, I look forward to leveraging the expertise of the Office of Energy Efficiency and Renewable Energy (EERE) to advance sustainable solutions that will also benefit local communities.

Question 6: The priorities of the Biden Administration for equity, climate, and economy can be addressed, in part, by smart investments and incentives for energy efficiency and distributed energy resources, including renewable energy and storage.

- a. How do you plan to leverage the DOE's resources to ensure benefits get to those who are most burdened by energy costs and are most vulnerable to climate impacts?

Answer 6a: President Biden has made a commitment to invest at least 40% of the benefits of the response to the climate crisis in communities that have been historically disadvantaged by climate change or GHG pollution. If confirmed, I will ensure to use all of the tools at the DOE to live up to this commitment and am enthusiastic about doing so.

Question 7: While Nevada has been a leader in adopting minimum energy efficiency standards for new light bulbs, national appliance standards, including efficiency standards for light bulbs, have suffered over the past four years with numerous missed deadlines and regulatory rollbacks.

- a. Is there a schedule or plan in place for DOE to catch up on missed appliance standard deadlines in order to help DOE meet its legal obligations?

Answer 7a: I recognize the importance of national appliance standards, including efficiency standards for light bulbs, and am aware of the backlog of updating efficiency standards that exists today. If confirmed as Secretary, updating efficiency standards and catching up on the backlog will be a priority for me.

- b. Is there additional help or support needed from Congress?

Answer 7b: I look forward to working with you to ensure that DOE has all the resources and commitment from Congress we need to make energy efficiency a priority in this administration.

Question 8: Recent Administrations have proposed selling off Power Marketing Administration (PMA) assets, either in whole or in part. These proposals have included Federal transmission assets for the PMA that serves

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Nevada, the Western Area Power Administration (WAPA). However, bipartisan majorities in Congress have rejected these proposals.

- a. Will you commit to working with Congress and customers to ensure the PMAs can continue their statutory mission and that consumers would be protected from potential increases to their energy costs?

Answer 8a: Yes, my understanding is that these types of proposals have been rejected numerous times by the Congress. Should I be confirmed, my approach will be to have direct and collaborative engagement with the PMAs, in support of their statutory missions.

Question 9: The protection of energy and water systems from cyber-attack has become a high-profile concern for all nations, including our own. Israel's leadership in the development of cyber technologies, combined with its real-world expertise defending its critical infrastructure against attack has made this a large focus of the Israeli government, and provides us with a natural ally and partner.

- a. What are your thoughts on protecting critical energy infrastructure from cyber-attack?

Answer 9a: As we have seen recently, the threat of cyber attacks on the homeland are very real. If confirmed, I will make protecting critical energy infrastructure from cyber-attack a significant priority for the Department of Energy, and will work closely with the Department's Office of Cybersecurity, Energy Security, and Emergency Response and Office of Electricity to bolster our nation's capacity to protect our critical energy infrastructure.

- b. What are your thoughts on incorporating the protection of critical infrastructure into the U.S.-Israel energy dialogue?

Answer 9b: The U.S.-Israel energy dialog is a valuable platform for collaboration and cooperation across the spectrum of energy issues ranging from new technologies for renewable energy production and distribution to safeguarding the energy infrastructure that serves as the backbone of our energy systems. If confirmed, I will continue to direct the Department in working closely with Israel on a number of energy security issues including critical energy infrastructure protection, both bilaterally and as part of broader interagency engagements.

Question 10: In 2014, Congress passed the U.S.-Israel Strategic Partnership Act authorizing increased cooperation in energy with our leading ally in the Middle East. The legislation led to the creation of a U.S.-Israel Center of Excellence in Energy and Water. This has provided a platform for the two countries to

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collaborate on energy and water issues. Additionally, the U.S.-Israel Energy Cooperation Program, managed by the Department of Energy, has set the stage for long-term strategic cooperation in the development of new energy technologies. This program represents one of several ways for our country to continue – and deepen – its energy relationship with Israel.

- a. To what extent will the enhancement of our energy relationship with Israel be a priority if you are confirmed?

Answer 10a: Israel remains one of our most important allies in the region and is playing a significant role in the development of energy resources in the Eastern Mediterranean. If confirmed I will continue to strengthen our relationship with Israel through continued engagement in numerous established forums we have with our Israeli counterparts such as the U.S.-Israel Energy Dialogue and associated platforms. At the same time, I will ensure that DOE conducts a systematic review of all of our international collaboration programs to ensure that they are working well, are delivering goods in the interest of both parties, and are consistent with the overall foreign policy, energy, and climate objectives of the administration. In addition, I will seek to support the continued integration of Israel throughout the region using energy collaboration as a basis for broader regional cooperation.

- b. What more can be done to strengthen our partnership with Israel in energy cooperation?

Answer 10b: The Department of Energy has a long history of strong and beneficial cooperation and partnership with Israel and is always seeking to deepen and strengthen our relationships with our international partners, including Israel. If confirmed as Secretary, I will work to examine ways in which to enhance that relationship.

- c. In recent years, the United States has helped foster the growing energy relationship in the Eastern Mediterranean between Israel, Greece, and Cyprus. If confirmed, will you continue efforts to foster and expand this relationship?

Answer 10c: Yes. Continued support for the energy security goals of Greece, Cyprus, and Israel will be an important part of engagement in the Eastern Mediterranean, and congress has requested that DOE establish an Eastern Mediterranean Energy Center based in the United States

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to serve these relationships. To date I don't believe the Department has received funding from Congress to enact this mandate and I look forward to working with Congress on this issue.

Questions from Senator John Hoeven

Question 1: I'm alarmed at the actions already taken by the Biden administration that will serve to close off access to energy reserves on federal lands. These actions will raise prices for consumers, increase our reliance on foreign energy sources and prevent the construction of the infrastructure needed to capture natural gas and prevent flaring.

Every industry and every household relies on a dependable and affordable supply of energy resources. We have abundant reserves of natural resources and the fact remains that global demand for fossil fuels will continue to rise. Having the necessary infrastructure to transport energy from where it is produced to where it is consumed is critical, and this includes both pipelines and transmission lines.

Will you commit to supporting pipeline infrastructure projects that ensure consumers have access to reliable and affordable supplies of energy?

Answer 1: If confirmed as Secretary, I will work to ensure Americans have access have access to reliable, affordable, abundant, and clean energy supplies. Pipeline infrastructure is important, especially for CO2 to decarbonize our use of fossil fuels.

Question 2: Will you commit to supporting pipeline infrastructure projects needed to capture natural gas and prevent flaring?

Answer 2: Yes, this will be a priority given the impact of methane emissions on climate.

Question 3: If confirmed, will you continue to follow the law as written and embrace policies that reflect our all-of-the-above approach, which includes coal, oil, and natural gas?

Answer 3: If confirmed as Secretary, I will follow the law and also work with congressional partners and other stakeholders to advance policies that reduce carbon emissions from fossil fuels.

Question 4: Will you commit to fully supporting power sector carbon capture support programs included in the FY21 Energy and Water Appropriations Act?

Answer 4: Yes.

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Question 5: The recently enacted Energy Act of 2020 includes a program for two demonstration projects focused on carbon capture from coal facilities. North Dakota is at the forefront of carbon capture, use and sequestration (CCUS) technology and is already partnering with DOE on multiple innovative projects to reduce emissions. Will you commit to implementing this program and ensuring it is sufficiently funded?

Answer 5: If confirmed, I will ensure that DOE follows the congressional mandates from the *Energy Act of 2020*. Sufficient appropriations will be needed to support the new authorizations.

Question 6: The Energy & Environmental Research Center (EERC) at the University of North Dakota plays a critical role in the research and development that has made North Dakota into the energy powerhouse that it is today. The EERC is a former Department of Energy (DOE) laboratory and has had a cooperative agreement with DOE's Office of Fossil Energy in place since 1983. The agreement allows DOE to leverage EERC's assistance and expertise on a non-competitive basis, and is a cornerstone of a longstanding, successful partnership between EERC, the state, and the federal government.

To build off these efforts, along with the rest of the North Dakota delegation, I have been working with the Department to establish a similar agreement with DOE's Office of Energy Efficiency and Renewable Energy (EERE).

If confirmed, will you work with us to strengthen the relationship between EERC and DOE?

Answer 6: Yes. If confirmed as Secretary, I look forward to learning more about the role of EERC and its work with the Department.

Question 7: Minot Air Force Base in North Dakota is the only base with two legs of the nuclear triad. As such, I closely follow efforts to extend and refurbish our nuclear warheads, including the W87-1 ICBM warhead that will be fielded on the Ground Based Strategic Deterrent (GBSD) and the W80-4 warhead that will be used on the Long Range Stand Off (LRSO) Missile that will replace the aging Air Launched Cruise Missile now carried on the B-52.

With five warhead modernization programs underway, NNSA is executing an unprecedented variety of complex component development and production work. Do you support the life extension programs for the W80-4 and W87-1?

Answer 7: The Department of Defense has established the deterrent requirements being addressed by the W80-4 and W87-1 life extension programs. If confirmed, I will continue to support those on-going life extension programs.

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Questions from Senator Mike Lee

Question 1: Governor Granholm, Congress recently received a report from the Department of Energy requested in the FY 2018 National Defense Authorization Act. DOE estimates that we could accelerate the timeline for the legacy cleanup of the Nation's nuclear defense complex by roughly a decade and potentially save the U.S. taxpayer in excess of \$200 billion dollars if management and disposal of nuclear waste within the complex is based on the radiological risk of that waste to human health and the environment rather than relying on what activity led to the formation of the waste.

The Department's recent report makes clear that while using an approach that defines and characterizes nuclear waste based on the materials risk characteristics can lead to great savings, it does not yet represent a policy decision for complex-wide implementation. I do understand that this new approach has been successfully demonstrated with respect to certain tank waste at the Savannah River site and that a second demonstration is underway.

- a. Will you pursue the management and ultimate disposal of radioactive waste in the complex based on the radiological risk that the constituent elements of that waste present to public health and the environment as opposed to the activity that produced that waste?
- b. Can you assure that the DOE will promptly complete the ongoing environmental assessment so that the second demonstration of this risk-based definition concept can proceed?

Answer 1: If confirmed as Secretary, I will work to ensure the Department is conducting its important legacy cleanup activities in a safe, effective and cost-efficient manner. I will examine how the Department's Office of Environmental Management's high-level waste (HLW) interpretation can support those efforts.

Question 2: Section 3121 of the recently enacted FY '21 National Defense Authorization Act requires the Secretary of Energy to make an annual statement of environmental liabilities for each facility in the complex. Section 3122 of that law requires future year cleanup plans to identify missed milestones for each site. It seems to me that it would be most useful to the Department, the Congress and the affected members of the public if these annual statements also identified an inventory of discrete waste streams at each facility that would benefit from application of this risk-based approach, the impact of such application to overall liabilities and milestones at each facility and a budget estimate for implementation. Would you concur and make that commitment?

Answer 2: If confirmed as Secretary, I will review the Department's implementation of the HLW interpretation to ensure the Department is conducting its important legacy cleanup activities in a safe, effective, and cost-efficient manner.

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Question 3: Over the last several years we have seen tremendous growth globally in research & development in using hydrogen in long-term electricity storage. Additionally, I have the world's largest renewable energy storage project being developed by Mitsubishi Power and Magnum Development in Delta, UT. The project utilizes renewable energy and Green Hydrogen to create clean power that can be stored for significant periods of time and released out to the Western Electricity Grid when needed during peak use periods. The project is expected to improve electricity reliability in the west, while significantly reducing emissions and fuel costs over time. What ongoing programs does DOE oversee regarding this fuel source?

Answer 3: DOE has been funding hydrogen and fuel cell activities for over 4 decades, led by the Hydrogen and Fuel Cell Technologies Office (HFTO) within DOE's Office of Energy Efficiency and Renewable Energy (EERE) and including other DOE offices, such as Fossil Energy (FE) and Nuclear Energy (NE). Key hydrogen production programs include hydrogen from fossil fuels with carbon capture (FE), electrolysis using renewables (i.e., "green" hydrogen) and the integration of electrolyzers with nuclear plants (NE). HFTO funding has enabled over 1,100 U.S. patents and 30 commercial technologies in areas of hydrogen production, delivery, storage and fuel cells.

DOE has also invested more than \$4 billion over the last 20 years in various areas such as advanced water splitting and electrolyzers to produce hydrogen, advanced gasification and turbines to produce and use hydrogen from fossil fuels, and diverse fuel cell technologies for multiple applications. DOE also recently announced relevant projects including the first data center, marine, nuclear to hydrogen and hydrogen turbines and energy storage projects. Examples like the Utah project demonstrate the potential for hydrogen at scale and showcase the value of regional initiatives. Reducing cost is a priority and we have launched a new consortium (H2NEW) to help reduce the cost of electrolyzers to produce green hydrogen and reach a goal of \$2 per kilogram to make green hydrogen competitive with conventional hydrogen using natural gas.

Question 4: Federal hydropower marketed by the Power Marketing Administrations (PMAs) is an essential energy resource in many places across the country, including in my home state of Utah. Of particular importance is managing PMA (and especially WAPA) costs, especially given the extreme drought conditions across much of the West that may require the PMAs to purchase power to meet power supply obligations. Do you have any plans that will impact costs for municipalities and other non-profit entities that receive PMA power?

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Answer 4: The Power Marketing Administrations, specifically the Western Area Power Administration, is an important asset as it provides electricity supplies to more than 40 million Americans over a service area that spans portions of 15 states. As such, if confirmed as Secretary I believe it's important the Department continues to support WAPA in its efforts to provide low-cost electricity supplies to its ratepayers.

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Attachment regarding Question 45 from Senator John Barrasso

14. Clients: At any time during the past 5 years, have you or any company or firm with which you have been affiliated, received a fee or payment of more than \$5,000 from any source that is not listed on Schedule D, Part II of your SF 278, for services you performed for that source? If so, Please identify the source of the payments, the nature of the service you performed, and the period of time when you performed the service. Additional paid work from the years 2016, 2017 and 2018:

- 1) University of California Berkeley – 2016, 2017 and 2018. The following were entities with whom I held positions as a result of my employment at the University of California Berkeley:
 - a. Berkeley Center for Information Technology Research in the Interests of Society – 2016-2018
 - b. California Institute for Energy and Environment – 2017-2018
- 2) Granholm Mulhern Associates – 2016, 2017 and 2018. The following entities were entities for which Granholm Mulhern Associates received a fee or payment of more than \$5,000 for work I performed:
 - A) Correct the Record - Advisor to political advocacy firm - 2016
 - B) ABC - Senior Political Commentator - 2016
 - C) Chargepoint - Consultant to electric vehicle charging company - April to August 2016
 - D) Talmer Bank – Director 2016-2017
 - E) Cable News Network – 2017-2018
 - F) American Bridge Foundation – 2017-2018
 - G) Media Matters for America – 2017-2018
 - H) Marinette Marine Corporation – 2017-2018
 - I) Proterra, Inc. – 2017-2018
 - J) Techtonic – 2018
- K) **Paid Speeches**
 - 1) American Institute of Architects 2/16, through Keppler
 - 2) United Steelworkers Policy Conference, 4/16, through Harry Walker
 - 3) Munk Foundation, 9/16, through Keppler
 - 4) Torkin Manes law firm, 10/16, through Keppler
 - 5) Canisius College Buffalo, 10/16, through Keppler
 - 6) Williams College, 11/16, through Keppler
 - 7) Warburg Pincus, 6/17, through Harry Walker
 - 8) SEB (Swedish group), 11/17, through Keppler
 - 9) Consumers Energy, 12/17, through Harry Walker
 - 10) Spertus Institute for Jewish Learning and Leadership, 3/18, through Keppler
 - 11) Accenture Public Sector Strategy Conference, 6/18
 - 12) RBC Capital Markets, 10/18, through Keppler
 - 13) California Transit Association, 10/18, through Keppler
 - 14) Leshner Foundation, 2018, through Keppler
 - 15) Crystal Cruise, 2018, through Keppler
 - 16) Rancho La Puerto, 8/2018
 - 17) Personal PAC, 10/18, through Keppler
 - 18) American Israel Public Affairs Committee, 2018
 - 19) AIPAC New England, 2018

From: [Jim Casha](#)
To: [fortherecord \(Energy\)](#)
Subject: Nomination Hearing - Jennifer Granholm for Energy Secretary - Jan. 27th, 2021- URGENT
Date: Tuesday, January 26, 2021 2:32:03 PM

Dear Senator Murkowski,

I wish to submit to you my testimony on the appointment of Jennifer Granholm to be Energy Secretary. I swear, the testimony I am about to give is the truth and nothing but the truth ...so help me God. You can't make this '*stuff*' up.

Please don't do it.

This will not be good for our Nation.

Bad appointments result in bad government ...as you shall see.

This is my third attempt to contact you. The other two were several years ago (8 & 10 years ago) at the completion of my 658 mile walks from the Michigan State Capitol in Lansing, Michigan to your office in Washington, D.C.. The purpose of the walking was to get help for Michigan's foster children suffering from Prenatal Alcohol Exposure (FASD), an issue I know you strongly supported. Granholm wouldn't help me.

I met with members of your staff but, unfortunately, were not able to meet with you. In that respect, my walks were ...'failures'.

But, this is not about me but about Jennifer Granholm. Under then Governor Granholm's watchful eye and leadership, Michigan's Foster Care Program came under, and is *still* under, **Federal Oversight** as a result of 40 years of neglecting these innocent children. Michigan refused to acknowledge, and still refuses to this day, that many, if not most, foster children suffer from the lifelong damage caused by prenatal alcohol exposure. I trust you know differently. Many Michigan foster children, and foster and adoptive families, have suffered ...and some died ...as a result of Michigan's failed leadership.

I bring up this issue as it highlights many of Granholm's shortcomings.

"Because she's was '*not*' the Governor ...her husband is"

Early on, I met with a lobbyist dealing with the issue of 'juvenile crime'. I asked her: 'How come the Governor, a woman and mother, cannot see the need to address the issue of prenatal alcohol exposure? She looked at me as if I was from Mars and said: "Because she's '*not*' the Governor ...her husband is." I was 'shocked' but not surprised, as a politically astute friend, who went to high school with Dan Mulhern, Granholm's husband, had already told me this. It was widely known in Lansing, and even reported, that Dan Mulhern wanted to be Governor ...but knew he could never get elected ...so he got his wife elected ...and of his influence over her. Dan was/is not a very nice guy.

You can't make this '*stuff*' up

Do you want to be responsible for the appointment of someone to be Energy Secretary, in

charge of the Nation's nuclear arsenal, who, not only has ZERO scientific background and knowledge (she's a lawyer, and 'Persecutor' [Prosecutor]), but someone who could be easily influenced by an un-appointed individual, also without knowledge, and a bad person as well?

"She's 'dumber than a box of rocks'."

The Iranians will 'eat her alive'. This is how Governor Granholm negotiated with an Iranian.

My brother, a welder, did work for a brilliant **Iranian engineer** who was developing a small-scale windmill (a bicycle wheel, literally) for home use. He went to Granholm to negotiate for a multi million dollar grant to produce these in Michigan. He got the money ...but the windmills didn't work. My brother asked him for his impression of Granholm. The Iranian engineer replied:

"She's 'dumber than a box of rocks'."

You can't make this '*stuff*' up.

Do you want to be responsible for appointing an Energy Secretary, to negotiate nuclear arms deals with brilliant Iranian engineers and scientists, who is not a brilliant engineer or scientist, and, who is 'dumber than a box of rocks' on the subject of windmills and ...nuclear arms?

36 YEARS! of FEDERAL OVERSIGHT over DWSD ...culminating in the Poisoning of an American City (Flint)

If anyone has any doubts about the danger of bad political appointments they need look no further than Michigan, the lead poisoning of the City of Flint by their government and ...Jennifer Granholm.

First of all, 'it's not always the last thing you ate ...that made you sick.'

The 'root cause' of the Flint Water Tragedy can be traced back to bad political appointments ...in the early 1970's. The changes that allowed for these bad political appointments were made by none other than a young aspiring politician ...former loooong-serving U.S. Senator from Michigan ...Carl Levin.

Back in the early '70's, Detroit City Council President Carl Levin authorized the changing of the Detroit City Charter, *eliminating* the requirement that the Director (**then known as 'Chief Engineer'**) of DWSD (Detroit Water & Sewerage Department) no longer had to be a tenured, Professional Engineer (P.E.), FREE from political influence, but could now be an 'appointee (read 'lackey') of the Mayor' without ANY knowledge of water and wastewater treatment. The first one went to prison for corruption.

Thanks Carl ...for ruining what was then ...the largest, and best, regional water and wastewater operation ...in the WORLD!

In only a few short years (by 1976), DWSD would come under FEDERAL OVERSIGHT as a result of an EPA Pollution Lawsuit ...so don't blame Gina for Flint ...and remain that way ...for 36 YEARS! I told Gina this when I attended the Flint Water Hearings in D.C..

The corruption at, and mismanagement of DWSD (obscene \$5 BILLION debt) ...**Flint's long time water supplier** ...would ultimately 'lead' to the lead (Pb) poisoning of the entire City of Flint. From the cleanest GREAT LAKE drinking water on the planet to ...water pulled out of a drainage ditch.

What did Jennifer Granholm do as ... Asst. U.S Attorney for Eastern MichiganWayne County Chief Counsel (the location of DWSD and it's water supplier) ...Attorney General for the State of Michigan ...and then ...Governor of the State of Michigan for 8 years ...to end this lawsuit? Nothing. That's rightNOTHING.

You can't make this '*stuff*' up.

Do you want to be responsible for the appointment of an Energy Secretary who would let an issue of public health and safety, environmental pollution, and corruption, languish ...without any action or leadership ...for 36 years?

The labs ...what about the labs?

The Energy Secretary is responsible for overseeing the Nation's research labs ...arguably ...the finest in the world. So, how did Governor Granholm utilize the Nation's ONLY research facility dedicated to maternal health care ...the NIH's PRB (Perinatology Research Branch) ...located in Detroit, Wayne County and Michigan for decades?

The PRB is located at Wayne State University (WSU) the location for much of the early research on the effects of prenatal alcohol exposure and in **Detroit ...an American city ...with a third-world birth-rate.**

How did Governor Granholm utilize this key national asset to provide Proper Prenatal Care for Michigan moms, to prevent prenatal alcohol exposure, AND reduce infant mortality? She ...didn't.

How did the current Mayor of Detroit? To benefit his girlfriend.

Michigan doesn't deserve this jewel.

You can't make this '*stuff*' up.

Do you want an Energy Secretary with no scientific and/or research background running these labs?

All too little, too late ...and then ...done wrong

One more thing. A long time close childhood friend of mine was Governor Granholm's appointed Michigan State Police (MSP) Director. Prior to that he was her bodyguard.

In the waning days of Detroit Mayor Kwame Kilpatrick's (a lawyer) 'Reign of Corruption' (you know, the one Trump just let out of prison), Granholm's (a lawyer) 'appointed' unqualified, incompetent, Director (another lawyer!) of the MDEQ (Michigan Department of Environmental Quality) was trying to 'ram down' Detroit City Council's throats ...Monica Conyers presiding ...yes, John's wife ...\$600 million in 'tainted' tunnel construction contracts. I

told them all not to do it. Monica told me to shut-up ... and she did it anyway.

Monica would shortly thereafter go to prison. Kwame went, his friend went, over corrupt DWSD contracts, and the Mayoral appointed Director of DWSD was charged, escaped prison, but ...his life ruined ...by the corruption in Michigan.

I took the issue to my friend (MSP Director), telling him this would not look good for Granholm. Shortly thereafter ..the approved contracts were cancelled ...costing the ratepayers of DWSD ...many of them poor Detroiters getting their water shut-off ...\$30 MILLION ...for no work done.

You REALLY can't make this 'stuff' up.

Do you want an Energy Secretary who would appoint such an unqualified MDEQ Director ...who should have been negotiating the end of Federal Oversight of DWSD instead of furthering the corruption...in charge of your nuclear weapons arsenal?

So, why should you believe me? You can 'Google' it. I speak the truth.

You might even see my picture, standing next to Flint's appointed (by Governor Snyder) Emergency Manager, getting ready to tell him to switch back to DWSD water IMMEDIATELY, while residents held up nasty bottles of water that the State of Michigan just told them was 'safe to drink'.

They did switch back ...10 MONTHS later.

If I were you and your Committee, I would look somewhere other than a former Michigan Governor to be Energy Secretary.

Respectfully,

Jim Casha
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January 27, 2021

TO THE MEMBERS OF THE COMMITTEE ON ENERGY AND NATURAL RESOURCES:

The U.S. Chamber of Commerce applauds the Committee for scheduling today's hearing to consider the nomination of Governor Jennifer Granholm to be Secretary of Energy. The Chamber looks forward to working with Gov. Granholm, her team at the Department of Energy, and others in the Biden Administration on several key energy policy priorities of the business community.

In particular, the Chamber looks forward to supporting the work of the Department to implement the Energy Act of 2020—the most significant climate and energy innovation legislation of at least the last decade. The business community stands strongly behind this law to spur the development and commercialization of technology platforms, such as advanced nuclear, energy storage, and carbon capture, utilization, and sequestration, which are critically important components of global climate solutions. While American businesses have already committed billions of dollars to these efforts, the Department can push them to the next level.

We also welcome President Biden's move to rejoin the Paris Climate Agreement. It is critical that the United States restores its leadership role in international efforts to address the climate challenge, and we look forward to working with the Department and others in the Administration and Congress as a revised Nationally Determined Contribution (NDC) plan is prepared as part of this effort.

Moving forward, the Chamber believes a diverse set of energy resources are needed to address climate change and maintain America's economic competitiveness. The shale revolution was enabled by market innovation that created jobs, lowered energy costs, and drove down greenhouse gas emissions. Shale development has also put the United States in a strong competitive position of energy security. In 2019, the United States became a net total energy exporter for the first time since 1952. It is important that the Department and energy sector work to build upon and expand this important achievement.

Thank you for considering Governor Granholm's nomination. We look forward to working with her as Secretary of Energy and with the members of this Committee to pursue these important objectives.

Sincerely,



Neil L. Bradley