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COMMITTEE ON
ARMED SERVICES

UNITED STATES SENATE

HEARING TO
RECEIVE TESTIMONY ON CHALLENGES IN THE
DEPARTMENT OF ENERGY’S ATOMIC ENERGY
DEFENSE PROGRAMS
IN REVIEW OF THE DEFENSE AUTHORIZATION
REQUEST FOR FISCAL YEAR 2019 AND
THE FUTURE YEARS DEFENSE PROGRAM

Thursday, March 22, 2018

Washington, D.C.

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U.S. Senate
Committee on Armed Services
Washington, D.C.

The committee met, pursuant to notice, at 10:04 a.m. in
Room SH-216, Hart Senate Office Building, Hon. James M.
Inhofe, presiding.

Committee Members Present: Senators Inhofe
[presiding], Wicker, Fischer, Cotton, Rounds, Ernst, Tillis,
Sullivan, Cruz, Graham, Sasse, Scott, Reed, Nelson,
McCaskill, Shaheen, Gillibrand, Blumenthal, Donnelly,
OPENING STATEMENT OF HON. JAMES M. INHOFE, U.S. SENATOR FROM OKLAHOMA

Senator Inhofe: Our hearing will come to order.

They are the force sitting right behind you, Rick. So you wave at them.

The committee meets today to hear testimony from the Department of Energy’s atomic energy programs.

We welcome our witness, Energy Secretary Rick Perry, a good friend of all of ours.

The DOE houses a number of defense programs, such as the National Nuclear Security Administration and the Office of Environmental Management that are under the jurisdiction of the Armed Services Committee.

Even so, a hearing like this is rare. Our committee has not called a Secretary of Energy to testify for over 10 years. You ought to feel good about that.

Secretary Perry: I am trying, sir.

[Laughter.]

Senator Inhofe: The DOE’s defense programs, including the cleanup of nuclear waste, have gone without sufficient oversight.

Chairman McCain has asked that we read into the record a statement that he would like to make concerning this hearing today, so I am quoting. The Department of Energy’s defense atomic energy programs are critically important to
our national security. Unfortunately, in recent years, the DOE has run up a long list of cost overruns, schedule delays, and violations of safety and security. Put simply, too often they have failed to meet mission requirements with billions of dollars in the DOE funding authorized by the NDAA each year. The Senate Armed Services Committee has the opportunity to conduct the kind of oversight that will help the Department correct course.

The fiscal year 2019 budget request for the NNSA and the Environmental Management totals over $20 billion. That comprises about 70 percent of the Department of Energy’s proposed budget for fiscal year 2019. And it is up to us to ensure vigorous oversight of these taxpayer dollars.

Secretary Perry, it is a pleasure having you here.

Senator Reed?
STATEMENT OF HON. JACK REED, U.S. SENATOR FROM RHODE ISLAND

Senator Reed: Well, thank you very much, Mr. Chairman. And welcome, Mr. Secretary. Thank you very much.

The last Secretary of Energy to testify before the committee was Secretary Chu in 2010. The Augustine-Mies Commission which evaluated the effectiveness of the NNSA recommended in 2015 that the Secretary of Energy appear before the Senate Armed Services Committee on an annual basis. This appearance I hope fulfills that recommendation and becomes a recurring part of the committee’s posture hearings given that the atomic energy defense funding in the Department of Energy totals approximately $19 billion, which is more than two-thirds of the Energy Department’s fiscal year 2019 budget.

Secretary Perry, there are a number of issues I am hoping you will address today.

First and foremost is the ability of the Department and the NNSA to build 80 pits a year by 2030, as mandated by the 2014 National Defense Authorization Act. This requirement was ratified by the Department of Defense based on a series of modules to be built at Los Alamos after spending about $600 million to design a prior building there, whose costs became out of control and was canceled. The modular approach was also approved by the DOD and the NNSA and was
authorized in the 2013 National Defense Authorization Act. I understand that you may again be reconsidering or considering a large building design rather than the modules. Since a single building approach failed in 2013, I am interested in your thinking on this issue.

Second, the Department is modernizing six weapon systems, and while at the same time is modernizing an infrastructure that in some cases dates back to the Manhattan Project, which includes the NNSA uranium and the plutonium infrastructures. For fiscal year 2019, $3 billion, or about 20 percent of NNSA’s overall budget, is dedicated to this effort. Maintaining momentum on modernization will be a daunting challenge, and I am interested in your views on sustaining this effort.

Third, I would like to know about the Department’s plan to clean up the Hanford nuclear site. In 2014, after spending close to $8.3 billion at the Hanford site to treat approximately 55 million gallons of radioactive waste in 177 underground tanks, the Department paused its efforts to treat and turn into glass the waste in those tanks. In addition, the Department now only intends to turn the low-activity waste into glass while leaving the high-level waste treatment, which is about 10 percent of the site, to a later date. I would like to know the status of the low-activity waste effort, when will you return to treating the high-
level waste, and what is the estimated total cost.

Finally, I would like to know how the Department is addressing the flow of loose nuclear material particularly from Russia. In just one example, a British newspaper has reported on four thwarted attempts in Moldova to stop the sale of nuclear material on the black market. In some cases, the sale is linked to Russia and buyers were linked to extremists in the Levant region. Proliferation of nuclear materials is one of the greatest threats facing our nation and I hope is the top focus of the Department of Energy.

Again, I look forward to your testimony today and hope this becomes an annual event for this committee. Thank you, Mr. Secretary.

Senator Inhofe: Thank you, Senator Reed.

And, Secretary Perry, thank you again for being here, and we would like to have you give us your opening statement. Your entire statement will be made a part of the record. And you are recognized.
STATEMENT OF HON. J. RICHARD PERRY, SECRETARY OF ENERGY

Secretary Perry: Chairman Inhofe, thank you, to each of the members. Some of you I have worked with through the years. It is always good to see a governor or two in the crowd. So, Mike and Governor Shaheen, thank you for your kindness. And it is my honor, Ranking Member Reed, others to be in your presence, and at your request, I will be here as often as you need me, sir. So I hope I can answer your questions, discuss this very important issue with you today, and in a succinct way, as we talk about the President’s 2019 budget request for the Department of Energy.

But before I get started, I just want to share with you I had a wonderful conversation yesterday, a phone call, with Chairman McCain. He was lively, focused. Anyway, he sent his regards and said that you would ably chair the committee, Senator Inhofe. So, anyway, it was good to talk to him. Certainly I know I think all of you keep him in your prayers and wish the best to him and his family.

Mr. Chairman, this budget request capitalizes on the Department of Energy’s scientific capabilities to advance our nuclear security, support our nuclear Navy, and reduce the threat of nuclear terrorism. It also confirms our commitment to clean up the environmental legacy of America’s past efforts to maintain nuclear security. And I appreciate
this committee’s steadfast support for these missions as they pertain to our efforts, past and present, to keep America safe and strong.

I firmly believe that we have a moral obligation to protect the American people from adversaries who are wishing to do us harm. And for the past 70 years, our government has advanced this goal by maintaining our nuclear deterrent.

The Department of Energy’s role in our national security is one I undertake with utmost seriousness. In the last year, I visited our national security facilities at Los Alamos, Pantex, Y-12, Kansas City. Next week, I am going to have the pleasure to go out west to Sandia and Lawrence Livermore. For these visits, I have identified key challenges facing our Department and its national security mission.

First, through DOE’s National Nuclear Security Administration, NNSA, we need to ensure that our nuclear strategy responds to the threats of today while anticipating those of tomorrow.

Second, through our Office of Environmental Management, we need to increase the pace of cleaning up the legacy resulting from decades of nuclear weapons production. We aim to address both challenges through our partnership with our national laboratories. Those crown jewels are, I think, irreplaceable. They are clearly great incubators of
innovation.

The 2019 $30.6 billion budget request for the Department meets both of those needs that I have just pointed out.

When it comes to our nuclear posture, we have long embraced a two-pronged strategy of deterrence and nonproliferation. We have sought to deter aggressors by maintaining a powerful nuclear arsenal and infrastructure, and we have sought through nonproliferation to prevent those foes from gaining such weapons for themselves or providing them to others.

But since the end of the Cold War, we have not kept pace with rising threats to our nation and its allies. These include threats from borderless enemies and the potential sale of nuclear materials to bad actors. They also include new challenges from Russia and China who are upgrading their nuclear capabilities and, of course, the challenge posed by North Korea.

Mr. Chairman, let me pause for a moment and just say thank you to you specifically, the committee as a whole. This committee understands that we have to keep pace with modernization. You understand that we have deferred maintenance for too long, that it is going to take a multiyear approach to get us back to a position of strength. Thankfully with your help, our administration is starting to
turn the corner on this arena. Coupled with the National Security Strategy, the President’s recently released Nuclear Posture Review, it reaffirms our nuclear triad as the bedrock of the nation’s deterrent. This strategy necessitates that our capabilities be more robust, more resilient, and more flexible than ever before.

The President’s budget provides the resources to do exactly that. This budget will help us modernize our nuclear forces by extending the life of existing warheads, replacing them with systems that use today’s technologies. It will ensure the safe and reliable operation of our nuclear-powered submarines and aircraft carriers and meet the Navy’s requirement for modernized nuclear propulsion. It will help us replace our aging nuclear security infrastructure, much of which dates back to the Eisenhower administration, and it will keep nuclear weapons out of the wrong hands by aiding in nonproliferation efforts.

While the President’s fiscal year 2019 budget request provides much needed resources for our nuclear security enterprise, we must be mindful that those resources are not unlimited, and we have a responsibility to the American taxpayers.

I recently visited the Savannah River site, and it is a national asset, populated with some amazingly capable, patriotic men and women. Savannah River is a critical
partner in our national security and our environmental management missions, and it has a very bright future ahead of it.

We have a solemn moral duty to address the environmental legacy left at the sites, which produced the materials that helped us end a world war and to secure the peace. We also have a moral duty to the taxpayers to use scarce resources wisely, effectively.

I will report to you that our Environmental Management has made undeniable progress in advancing its mission. It has completed cleanup activities in 91 sites in 30 States. However, there is still a lot of work to be done, and Mr. Chairman, we are committed to doing it. We will commission and start up the salt waste processing facility at Savannah River. In addition to our work at Savannah River, we will continue our progress at Hanford. We will ramp up activities to increase shipments of transuranic waste to Senator Heinrich’s district out at WIPP -- for his State. Excuse me. And we will complete design and initiate construction of the Oak Ridge mercury treatment facility, and we will continue to press forward with tackling these aging and excess facilities in some cases at various sites.

So I want to thank you again for your hospitality and for your continued support of our mission and for having me here this morning. I will attempt to answer your questions,
as you have them, sir.

[The prepared statement of Secretary Perry follows:]
Senator Inhofe: That is great, and I appreciate that very much.

We are going to have 5-minute rounds, and I am going to adhere to it myself.

And I think you said it in your last few statements that we have catching up to do, and people do not realize that. You know, the Department of Defense recently completed its Nuclear Posture Review, and the administration’s defense strategy and nuclear posture -- they both highlight the acute threat that China and Russia are to us as peer competitors. Now, we are not used to that in America, but they are. And we just got back from the South China Sea and we saw what they are doing with reclaiming land down there, and they are in the driver’s seat in many parts. And people question is it China or the United States who we should be partners with.

Secretary Mattis put it the best way. He said we looked reality in the eye as the world sees us as it is not as we wish it were. And that fits in with the National Defense Strategy because nuclear weapons are an unavoidable part of our return to great power competition, whether we like that or not.

So we are talking about China and Russia in this part of our review.

I would just first ask you just to get this out of the
way. Do you support the recommendations of the Nuclear
Posture Review? Just yes or no?

Secretary Perry: Yes, sir.

Senator Inhofe: Okay. That is good and I agree.

Now, I want you to elaborate on that only if there is
time because I have two other questions I need to get out of
the way first.

Both China and Russia have a robust nuclear arsenal and
a triad. Now, we are talking about missiles and the bombers
and submarines. In 2018, the Nuclear Posture Review
recommends the development and procurement of a low-yield
warhead for submarine-launched ballistic missiles. Now,
this has become controversial, and I know there is honest
difference of opinion at this table on this. And sometimes
we talk about, well, we do have it now. We only have it
with bombs. And so that would assume then a B-52 could get
through, which I am not ready to assume. So the
recommendation is to have this capability with the idea that
if we ever got into something with Russia and they have a
low-yield and we do not, it might put us in a position of
having to respond with something that we would not want to
start that could lead to mutual assured destruction.

So I would just ask you, Secretary Perry, how does the
NNSA plan to provide this capability?

Secretary Perry: Senator, I will try to be very brief
in this answer. This program will be a modification of the W-76 warhead using the existing components that we have. And I respect the arguments on both sides of this, but I will say from my perspective is that I think it is necessary for us to go forward with this program to achieve our tailored deterrence objective. I do not think this raises the threshold for use of nuclear weapons. I think it will deter others, which is exactly from my perspective the role that we should have. And we are working with DOD on the specific requirements, and obviously we will work with OMB and this committee going forward for the necessary authorization to begin the engineering and production side of that.

Senator Inhofe: And I think also people need to understand when they talk about low-yield, we are talking about up to 10 kilotons. Hiroshima was 15 kilotons. So we are talking about a lot of power and a lot of destructive power.

Back when they were putting together the deal, when John Kerry was, with the Iran deal, I was opposed to that all the way through. But the Joint Comprehensive Plan of Action was established to ensure that Iran’s nuclear program would be exclusively peaceful. And I think a lot of people are walking around now believing that they want to have their enrichment program. They do not want to use that as
weapons but for energy, for peaceful reasons. Now, let us assume that they are right on that, which I do not think they are. The most significant flaw in this agreement is they have the sunset provisions where they ease after a period of years, and another flaw is that does not apply to ballistic missiles or terrorism activities.

So in the short time that we have here, Secretary Perry, how can the United States mitigate proliferation potential in Iran after these provisions expire, if they go beyond the expiration date?

Secretary Perry: Senator, I support the President’s desire to put America in a stronger position relative to this agreement. My role, the Department of Energy’s role is in a technical position. We are really not in the policy side of it. We will respect what you, this committee, Congress, and the President working together does relative to that.

Senator Inhofe: Thank you very much.

Senator Reed?

Senator Reed: Well, thank you very much, Mr. Chairman. And thank you, Secretary Perry.

The issue of proliferation is one that is critical, and one aspect of this that you have already been asked about on your visit to the House is you have been in discussions with Saudi Arabia about the transfer of nuclear technology for
power production. But there are indications that there may be a waiver of the traditional standards we insist upon, which is no nuclear enrichment, the so-called gold standard. In fact, we have arranged with the UAE, the Emirates, in which they have to adhere strictly to the gold standard.

I think you already know that if such a deal was proposed where the Saudis would not be liable to and required to adhere to this standard, I would oppose it and I think many others would too. So I just wanted to make that clear on the record, Secretary Perry.

Secretary Perry: Yes, sir.

Senator Reed, I think it is really important to look at each of these agreements not in a vacuum but certainly with the specificity of what we are looking at here. And I like to remind people that our choice is at this particular point in time, it appears to me either Russia or China is going to be a partner in building civil nuclear capability in the Kingdom of Saudi Arabia or the United States. I am very confident that the prior two have no requirements of nonproliferation. So I think it is really incumbent upon us to sit down to work as closely with the kingdom to not only bring them into our fold from the standpoint of being able to build that for them, our technology, our jobs being created, et cetera, but also from having those additional protocols and the International Atomic Energy Agency with
their ability to go in and make sure that they are in fact
not involved in any activities that would be untoward.

So I think it is important for us to negotiate in a
powerful way, but recognizing that the alternative of who
they are going to be doing business with is of great concern
to me.

Senator Reed: No. I appreciate that point. I think
the proliferation dangers are so great that we should be
able to wield all of the influence we have, which goes way
beyond just this one transaction, to insist upon the same
standards we applied to the Emirates, and there should be no
difference.

Let me turn quickly to the issue of pit production.
General Hyten was here testifying, and he was very, very
clear that we need 80 pits by 2030. In 2013, after spending
$600 million on a design at Los Alamos, both Congress, NNSA,
DOD, and this committee agreed in 2014 that we have to go
ahead and proceed with the modular facilities there. And
frankly, we are in a rush to get those 80 pits done by 2030.

But now there is talk of sort of stopping and
recalculating and looking at another approach. I just do
not think we have the time to do that. So your comments.

Secretary Perry: Yes, sir. Senator Heinrich and I
have discussed this at length many times. I have been to
Los Alamos and visited P-4 and the other facilities out
there. It is populated with some extraordinary men and
women. They have done fabulous work, pits 0 through 30.
Los Alamos is going to be the center for plutonium
excellence for as long into the future as there is a future.
We are committed to that.

0 through 30 will be done there. I think it does make
some sense to have -- we have been given the directive with
this analysis of alternatives to take a look at with GAO
best practices. You know, there were two options that were
identified, Savannah River and Los Alamos. And that
engineering study has not been done yet, but when it does,
we will report to you on a very timely basis. I think we
know to get the job done, I think 2026 is when the calendar
is for the 30 pits per year to be done. And then that 31
through 80 -- it is important for us to be able to send a
clear message that we can get it done, we can get it done on
a timely basis and get it done in a way that the taxpayers'
respect is thoughtful about their concerns.

Senator Blumenthal: Thank you, Mr. Secretary. I might
follow up with some questions about Hanford and otherwise.
But thank you very much.

Senator Inhofe: Thank you, Senator Reed.

Senator Fischer?

Senator Fischer: Thank you, Mr. Chairman.

Welcome, Secretary Perry.
The Nuclear Posture Review states the longstanding goal of building a responsive nuclear infrastructure but notes that despite being highlighted in all previous NPRs, the United States has failed to make sufficient progress to achieve this objective.

Are you committed to making the necessary investments to ensure that we meet the Department of Defense’s requirements and the objectives described in the Nuclear Posture Review?

Secretary Perry: With Congress’ blessing and funding, absolutely.

Senator Fischer: Thank you.

Can you speak to how you will implement the NPR’s recommendations and what steps you can take to ensure the goals of this Nuclear Posture Review result in real action when it comes to modernizing the nuclear complex?

Secretary Perry: Well, I want to remind the committee that I just had the privilege of naming a new director or administrator, I should say, of the NNSA, Lisa Gordon-Hagerty, a brilliant, capable, and I might add, the first female that ever headed up that administration, that agency. So she is very capable.

When you look at the work that has to be done -- and I think we all recognize this is going to be multi years.

This Congress’, this administration’s focus on the increase
in funding I think was very important, whether it is the
modernization of those warheads or whether it is the
facilities. And again, I have not been to all of the
facilities we have. I am en route to get to all of them.

But when I go to Oak Ridge and I am in facilities that
were built in some cases before I was born -- and that was a
spell ago -- then it becomes abundantly clear to me that
both on the modernization side having the workforce, having
the resources to dismantle in my home State of Texas with
Pantex, being able to process those whether it is over in
Senator Heinrich’s district or whether it is at some of the
other facilities, that is going to require a long commitment
for as long as I am the Secretary of Energy and for years
down the road. I hope that what we are doing today with
this budget sends the message that modernization is a
priority, dealing with these facilities is a priority, and
putting America in a position to be stronger and do it in a
way that our taxpayers recognize is very efficient.

Senator Fischer: Thank you.

I was pleased to see in your opening statement that you
committed to achieving the required production capacity of
those 80 plutonium pits by 2030 and affirms that there is no
margin for further delay in modernizing NNSA’s capabilities
and infrastructure.

Secretary Gordon-Hagerty, who I have strong confidence
in, made similar points during a recent hearing that I chaired in the Strategic Forces Subcommittee, and I welcome that sense of urgency that you are both bringing to this important issue.

Since the Department of Energy’s budget was finalized before the Nuclear Posture Review, do you anticipate seeking funding increases for the National Nuclear Security Administration, the NNSA, beyond the out-year projections included in this budget request in order to implement the NPR’s objectives?

Secretary Perry: I do not. I think that the budget that is -- actually the omnibus that was finished last night, the 2019 budget is the appropriate amount of dollars. My commitment to you is that those dollars will be spent as efficiently, as effectively. As a former governor of a State and a manager of some pretty big line items, I hope I give some comfort to not only the governors that are represented around this table but to all of the members here that the management of the Department and into those enterprises that are outside of Washington, D.C. will be run as efficiently, as effectively as they have ever been in their history.

Senator Fischer: Thank you, sir.

Thank you, Mr. Chairman.

Senator Inhofe: Thank you, Senator Fischer.
Senator Shaheen?

Senator Shaheen: Thank you, Mr. Secretary, for being here. I think it is very important for this committee to have more insight into what you are doing at the Department of Energy to address our defense requirements.

There was a story in the “New York Times” on March 15th that was based on information provided by the Department of Homeland Security that talked about the Russian Government’s series of cyber attacks targeting U.S. and European nuclear power plants, as well as water and electric systems. And separately on that day, there was also a story about a cyber attack on a Saudi petrochemical plant by the Iranian Government, or the suggestion was that it was the Iranian Government.

And I wonder if you could talk about what you are doing within the Department of Energy to try and address cyber attacks and the threat of cyber attacks on our nuclear infrastructure.

Secretary Perry: Senator, thank you. A year ago in front some of my committees, I made the statement that cybersecurity was one of the priorities of the Department. That has not changed. If anything else, it is even highlighted more by those activities that you mentioned here.

So as we looked at the agency, NNSA has some cyber work
that they do and over at the enterprise level in the Forrestal building. We saw a lot of bifurcation, a lot of fragmentation, if you will. So what I asked the agency to do was to come back with a plan where that we could really consolidate, we could focus, we could have as tight a process as possible to really focus on this issue of cybersecurity. As you well know, DOE is the sector-specific agency in the electrical side of things. So the grid, the reliability, the resiliency of that grid, attacks from cyber-- all of that is statutorily in our house.

So with all of that said, we laid out to you, to the Members of Congress, this concept called CESER, the acronym. It is Cybersecurity, Energy Security, and Emergency Response. And we bifurcated the Office of Electricity. Those two have assistant secretaries now that are equal.

The reason I think this was wise from my perspective -- it is certainly worth having a conversation about -- to create a clear, important, and a chain of command on this issue of cybersecurity.

Senator Shaheen: And I am sorry to interrupt. My time is running.

Secretary Perry: I am sorry.

Senator Shaheen: But I agree with you on the chain of command issue. I think that is very important.

What I am concerned about is whether we have a chain of
command throughout the whole of government. And who do you
report to or who is it throughout government who is taking
charge of this issue? Do you know?

Secretary Perry: When you say this issue, sector-
pecific it is DOE and it is me through my Under Secretary
of Electricity who will be in charge of this.

I think what you are talking about, Senator, is do we
have global relationship. And we do. We work very closely
with the Department of Homeland Security. She also sits on
the National Security Council.

Senator Shaheen: So in terms of national security
threats from cyber, it is the Department of Homeland
Security who you understand to be in overall --

Secretary Perry: But not in the electrical sector.

There is a clear bifurcation, if you will, statutorily. DHS
has a role. They are very comfortable with that. They are
working on it. We coordinate. We talk to them. We got a
great relationship with DHS. But sector-specific when it
comes to the electrical grid, when it comes to protecting
that grid, when it comes to having a cyber effort in place
for that, that is in the Department of Energy.

Senator Shaheen: And can you brief members of this
committee about specifically what you are doing to address
the potential for cyber attacks?

Secretary Perry: In a smaller room.
Senator Shaheen: Thank you.

Thank you, Mr. Chairman.

Senator Inhofe: Thank you, Senator Shaheen.

Senator Sullivan?

Senator Sullivan: Thank you, Mr. Chairman.

And, Mr. Secretary, good to see you again.

I appreciate your focus in your testimony here on the nuclear modernization issue. It is an important issue. I think it still remains -- I hope it still remains -- a bipartisan issue. You and I had the opportunity to present at a forum at the Reagan Defense Forum a couple years ago, and that is when President Obama was still in office and I was touting their nuclear modernization program as important, something that we should all get behind. It seems to me the Trump administration’s modernization program is very similar to the Obama one. So I certainly hope we can have a bipartisan support for that. It is an important issue that should transcend politics.

But I wanted to actually talk about another element of energy that you have been talking about. I actually read your interview in “The Examiner” this past week, a good picture there. So congratulations on that. But it is the issue of energy as a new instrument of American power, and whether it is renewables or natural gas or oil, we are on track, because of States like yours and States like mine, to
become once again the world’s energy super power, a position we had occupied for decades until a couple of decades ago. So just given your experience, I think it is important to kind of get on the table as a former governor of Texas -- I am a former Department of National Resources commission in Alaska -- we clearly have the highest standards in the world -- our country -- in terms of producing and exploring energy than any other place, say, like Russia or Iran or Kazakhstan or Saudi Arabia, other places that produce energy. Do we not, Mr. Secretary?

Secretary Perry: Yes, sir.

Senator Sullivan: So can you talk to us a little bit more about how you see energy as an instrument of American national security and economic security and jobs? You know, a lot of my colleagues -- I consider myself part of it -- are looking at ways to push back against Russia. The "New York Times" recently reported that, quote, Russia is increasingly wielding oil as a geopolitical tool, spreading its influence around the world and challenging the interests of the United States.

Yet, Senator McCain and I had a meeting about a year and a half ago with a very senior Russian dissident, someone that is trying to undermine the Putin regime, which I think a lot of us want to do, push back on that regime. At the end of that meeting, he said the number one thing we can do-
number one thing we can do -- to help push back against Putin is produce more American energy.

So can you talk about that? It is this incredible opportunity we have. I think it should be bipartisan. You are clearly an expert on it with a lot of experience. I would love to hear your views on what we can do more and then what we should, as the Congress, do more to take advantage of this great American energy renaissance, American energy dominance, as you and Secretary Zinke and the President talk about it, but how it helps our national security, helps our allies. I would love to hear whatever you think we should be doing on this issue. You have been a leader on it and we appreciate it.

Secretary Perry: Yes, sir. I will try to go fast. For a southern boy, I will talk as fast as I can.

Senator Sullivan: Well, I have about a minute and a half left. So go for it.

Secretary Perry: We all remember 15 years ago there was a person traveling around the country giving a pretty good speech called peak oil. We found it all, and even if we were going to produce anymore, it was going to be incredibly expensive.

Senator Sullivan: And we were going to be importing LNG.

Secretary Perry: Yes, sir. And George Mitchell, with
the help of national labs I might add -- George Mitchell was an old geologist from down in Texas, a Texas A&M graduate I might add, who along with our national labs on hydrologic fracturing and directional drilling changed the world literally. And so today, the geopolitical geography, if you will, has truly changed and it has changed because America decided that it was going to produce and we had the technology to do it and the innovation to do it.

And it is not just on the fossil fuel side. I mean, my home State of Texas produces more wind than any other State in the nation. We did that in a decade period of time because we want to have a portfolio that was clearly diversified. And I think when we talk about a bipartisan way to do this, I mean, whether it is wind, whether it is hydro, whether it is solar, whether it is LNG -- I mean, we are sending LNG shipments to 27 countries now. I mean, the idea that American LNG was going to be anything -- well, there was not an American LNG. We were going to import.

So it is the most fascinating time to be --

Senator Sullivan: How does that help our national security here on the --

Secretary Perry: And certainly from the standpoint of - that dissident gave you good advice. Anytime that we can deliver LNG, for instance, whether it is sending it into Poland to that LNG facility up there, it sends the message
to the rest of the European Union, you do not have to be held hostage by Russian gas.

Senator Sullivan: Thank you.

Thank you, Mr. Chairman.

Senator Inhofe: Thank you, Senator Sullivan.

Senator Gillibrand?

Senator Gillibrand: Thank you, Mr. Chairman.

Thank you so much, Mr. Secretary, for joining us.

One of the primary responsibilities of the Department of Energy is to promote international nuclear safety and nonproliferation. However, President Trump recently waved sanctions on Iran under the JCPOA but threatened not to do the same again unless Congress put forth legislation to rewrite the agreement to meet his list of demands.

Is the Department preparing to address any damage to international nuclear safety and worldwide nonproliferation efforts that would be caused by the United States reneging on a nonproliferation agreement that it helped to negotiate?

Secretary Perry: Senator, I am going to support the President’s position when it comes to JCPOA. I agree with him that if we can get a better deal, that we certainly ought to have that conversation.

My role in that and the Department of Energy’s role in that is from a technical standpoint to give him the technical expertise as he goes forward on that. We are not
in the policy business.

Senator Gillibrand: Yes, but as you know, the technical expertise is really important --

Secretary Perry: Yes, ma’am.

Senator Gillibrand: -- because when we negotiated the JCPOA, the Department of Energy was very heavily involved, and your predecessor was in the room for all negotiations. So I hope that you can focus on that technical support but recognize that if we do walk away from this agreement, I think it will undermine nuclear nonproliferation.

Do you have a plan to address any responses to us walking away from the agreement?

Secretary Perry: Here is how I will address that. Our responsibility in the nonproliferation side of the equation is clear. We will use every means that we have, whether it is our ability to have detectors used, well, anywhere in the world for that matter, our scientists, the training of scientists in other countries. Our commitment to nonproliferation I think is as strong as it has ever been in this country. I intend to make it even stronger. So you have that commitment, Senator.

Senator Gillibrand: So I have a related question. Earlier this week, the Commander of Strategic Command testified that the effect of weapons of mass destruction in the hands of transregional terrorist organizations could be
catastrophic. Yet, at the same time, the 2018 NPR states that the current environment makes further progress towards nuclear arms reductions in the near term extremely challenging.

What is the Department of Energy doing to mitigate the possibility of nuclear materials ending up in the hands of terrorists?

Secretary Perry: And, Senator, that may be a conversation that we need to have in a smaller room.

Senator Gillibrand: Okay.

Secretary Perry: But know that we are committed to that.

Senator Gillibrand: Can I then ask for that briefing in closed session? And if you prefer by letter, that is fine.

Secretary Perry: Yes, ma’am.

Senator Gillibrand: Thank you.

One more issue. The safe and efficient cleanup of sites that are contaminated with legacy nuclear material is critically important to the communities that surround them. I appreciate your commitment to prioritizing your Department’s responsibilities to clean up those sites.

However, I am concerned that the DOE’s fiscal year 2019 budget request would decrease funding by 8.5 percent for the West Valley Demonstration Project. West Valley is a project
authorized by Congress for decommission of a facility in western New York that was used to process high-level waste prior to 1980. It has been nearly 40 years since the facility closed down and the site remains highly toxic. A decrease in funding for this project will result in further delays while the site continues to pose a threat to health and safety of western New Yorkers.

I know that in our omnibus we are going to restore some of that funding, but will you commit to prioritizing the West Valley Demonstration Project within DOE’s Office of Environmental Management to ensure that the cleanup does not fall behind schedule?

Secretary Perry: Yes, ma’am.

Senator Gillibrand: Thank you.

Thank you, Mr. Chairman.

Senator Inhofe: Thank you, Senator.

Senator Heinrich?

Senator Heinrich: Thank you, Chairman.

And welcome, Secretary Perry.

For the record, I want to associate myself with the comments of the ranking member with regard to maybe looking at doing this annually. I think the Secretary of Energy’s importance to DOD cannot be overstated.

Secretary, I would like to start with DOE’s capacity to produce plutonium pits. When General Hyten testified here
on Tuesday, he reinforced DOD’s requirement of up to 80 pits per year by 2030 with the initial 30 per year by 2026 taking place with the existing facilities at Los Alamos. As I see it, General Hyten is really DOE’s customer here.

Secretary Perry: Yes, sir.

Senator Heinrich: Are you fully committed to meeting STRATCOM’s requirement for pit production of 30 by 2026 and 50 by 2030?

Secretary Perry: Yes, sir.

And, Senator, if I could, I just add one thing. I think it was Senator Fischer that asked about the budgeting side of it and if we were going to have the resources in the omnibus in the 2019, and I said yes. But the caveat here that I think is important is that we are going to work with DOD and the OMB on any issues that may come out about that, any equivalency. So I just wanted to, for the record, make sure that she recognizes, you all recognize that the budget, as written, appears to be sufficient. If DOD has additional requirements, then we will address those.

Senator Heinrich: We will certainly work on the budget side of things.

I asked that in part, Secretary, because spending 3 years on what I have viewed as a flawed analysis of alternatives does not exactly inspire confidence with regard to the timeline. And as you know, I had serious doubts
about NNSA’s analysis of alternatives to meet the 80 pits per year. And in December, I sent you a letter expressing specific concerns with the AOA and that the modular approach at Los Alamos had not even been considered at that time.

The AOA has now taken a full 3 years. We were assured that Administrator Gordon-Hagerty intends to meet the May 11th deadline to make a decision on NNSA’s recommended strategy for pit production. General Hyten testified Tuesday that he would be concerned if there is any further delay in that timeline. So as these delays stack up, it means there is simply no room for error at this point.

So can you assure me that the modular approach at Los Alamos will be fully considered in this process?

Secretary Perry: I join General Hyten in telling you that that timeline is correct, and I will be greatly concerned if it is not met. And yes to your question.

Senator Heinrich: Will you and the Deputy Secretary also commit to do a careful review of that recommendation by the May 11th deadline?

Secretary Perry: Yes, sir.

Senator Heinrich: Finally, can you assure me that the best available cost estimates are used and that the recommended option will meet STRATCOM’s required capacity by 2030?

Secretary Perry: Yes, sir.
Senator Heinrich: I am going to shift gears a little bit right now, Secretary, and talk a little bit about trusted electronics. The Nuclear Posture Review confirmed the need to maintain a robust capability for both research and also a production capability of trusted radiation-hardened microelectronics.

The Mesa facility at Sandia National Labs was built in the 1980s. It must be upgraded to meet future national security requirements after 2025. A plan is now being developed to upgrade Mesa to meet NNSA’s requirements through 2040.

Do you agree that NNSA should maintain the unique capability at Mesa for both the R&D side but also the production capability of strategic radiation-hardened microelectronics?

Secretary Perry: Yes, sir. And I hope before the next 7 days are up to have visited that site.

Senator Heinrich: Yes, I look forward to that. Thank you very much for making that a priority.

I was also really pleased to see an increase to $403 million in the request for WIPP to help restore full operations at that facility. I know you are familiar with that facility and I thank you for that. I had been concerned about the growing backlog in maintenance and repair at that facility, and so it is good to see an
additional $47 million to look at those systems and structures, including a significant fire suppression system and an existing salt hoist there that are going to be very important to maintaining that in a safe way.

Secretary Perry: Yes, sir.

Senator Heinrich: I want to thank you for your focus and your commitment to funding WIPP in a way that ensures proper maintenance but also safe operation because we cannot afford to have a deviation from the safe operation of that facility.

Secretary Perry: Indeed.

Senator Heinrich: Thank you.

Secretary Perry: Yes, sir.

Senator Inhofe: Thank you, Senator Heinrich.

Senator Kaine?

Senator Kaine: Thank you, Mr. Chair.

And thank you, Mr. Secretary. Good to be with you.

Secretary Perry: Thank you.

Senator Kaine: I am really glad we are having this hearing, to the chair and ranking. One thing this hearing does is it kind of points out the somewhat arbitrary distinction that we often make between defense and non-defense spending as we are talking about budget caps.

This is an agency, the DOE, with a $30 billion budget and $25 billion of it is defense programs. Those programs
are authorized in the NDAA but then appropriated through not
the SACD but through the domestic committee. And so having
this hearing is really important because it shows the way we
talk about budget caps and things can be a little bit
arbitrary. These expenditures are critical to the nation’s
defense.

And, Mr. Secretary, I know that you know that in
Virginia we care a lot about this. The Lynchburg area of
Virginia -- it is kind of odd how it developed, but is the
center of production of nuclear reactors for the carriers
and subs that are a critical part of the work we do. They
are developed there in Lynchburg by amazing craftsmen and
women and then on trains down to the shipyard where they are
installed into carriers and subs. And so the deal we budget
is absolutely critical to the nation’s defense.

And I thank you for the work that you are doing to make
sure, and I am happy with the omnibus that I hope that the
Senate will vote in the next day or so because I think it
portends well for the consistency of those investments.

I actually want to go, though, to a different space,
which is you have a pretty amazing track record as a
governor in a number of areas. Your tenure was pretty
historic. But Texas and renewables. Texas produces more
renewable energy than any State. Texas is in the top few in
terms of the percentage of its energy that has been produced
by renewables. If I got this right, I think Texas did a renewable portfolio standard in 1999 and then a new one in 2005, and yet whatever standard was set by the governor and legislature, Texas innovators and industry beat the standard. And my sense, from everything I have studied, is that sort of a combination of policy and then private sector innovation has been not only an environmental good but also an economic good for Texas. Would you agree with that?

Secretary Perry: I could not have written it any better, sir. That was an awesome display of what we were able to do in the State, and I totally agree with you.

Senator Kaine: How did Texas beat its standard? So you set CAFE -- I mean, not CAFE standards -- renewable portfolio standards. And often we hear a debate about, oh, that is going to pit the environment against the economy. And yet Texas beat the standards again and again. How did that happen?

Secretary Perry: I will try to be brief.

One of the ways we did it was by giving incentives to companies. For instance, we had a program called the Texas Emissions Reduction Program. We gave incentives on the franchise tax for fleet operators to remove old, inefficient burning engines and replace them. We subsidized -- the State did -- the building of a CREZ line from out where the wind blows to where the people are. And so there were
incentives to get the private sector to do particular things.

The result of that and one of the things, Senator, that I am really proud of -- Texas is a pretty good sized place, the 12th largest economy in the world. And we created a lot of jobs while this was going on. The rural economic development from the wind energy was fascinating to watch happen. But we lowered emissions: NOx by over 60 percent, SOx by over 50 percent. The total carbon dioxide footprint in the State of Texas during that period of time was almost 20 percent in a State that grew by 7,000 people. That is a lot of pickup trucks on the road.

Senator Kaine: Right. So a growing population, growing economic activity --

Secretary Perry: And lowering emissions. And it was driven by two of those. The third one that really drove it was changing out, shifting out those old, inefficient power plants, replacing them with natural gas plants.

Senator Kaine: Well, I think Texas just offers such a bit of evidence for the country. We have had at least one vote during my time in the Senate on a national renewable portfolio standard. And I think Texas and the States that have done it have demonstrated that if we are bold enough to lead, we will actually be surprised and go farther than the standards that we set.
And I remember a visit with Shimon Peres once where he said the same thing to me about the Middle East that was stated to you about Russia, Senator. He said, look, the best thing you could do for the Middle East is reduce your reliance upon oil, reduce your reliance upon foreign energy. And I think Texas gives us a path forward, and I wanted to praise you for your work there. And I hope we would embrace that kind of a policy as a nation.

Senator Inhofe: Thank you, Senator Kaine.

Senator Blumenthal?

Senator Blumenthal: Thanks, Mr. Chairman.

And thank you for being here, Mr. Secretary.

As I know you are aware, DHS and the FBI highlighted a series of cyber attacks targeting United States Government entities and critical infrastructure sectors, occurring since at least March 2016, notably on the nuclear energy and water sectors. The “New York Times” reported last week that by 2013 researchers had linked Russian hackers to hundreds of attacks on United States and European energy grids. In my view, those attacks are an act of war. Would you agree?

Secretary Perry: I would tend to agree with you, sir.

Senator Blumenthal: Thank you.

And by December of 2015, in fact a noticeable change of strategy occurred. The Russians had gone from intelligence gathering to actually possibly seeking to shut down these
operations, a more serious act of war.

We know that Russia is willing to go much, much further. We know that fact from what they have done in the Ukraine in 2015 and 2016 when Russian Government hackers, in fact, executed cyber attacks against Ukraine’s critical infrastructure that in fact vastly disrupted electrical grids and disabled control systems that impacted hundreds of thousands of people.

Can you assure us that the United States of America has taken dramatic action to deter such Russian attacks?

Secretary Perry: I can.

Senator Blumenthal: You can.

Secretary Perry: I can.

Senator Blumenthal: And what kinds of actions have the United States taken?

Secretary Perry: That conversation probably needs to occur in a smaller room, Senator.

Senator Blumenthal: Well, I am asking what kinds of attacks. Are these verbal messages? Are they covert actions? Are they cyber messages of some kind?

Secretary Perry: Senator, we are making, I think, every effort to protect the electrical grid from those types of attacks. And, again, I am a bit -- I am not a bit uncomfortable. I am quite comfortable telling you that we need to have this conversation in a room where we can talk
Senator Blumenthal: Is one of those actions to congratulate Vladimir Putin on his election? That kind of congratulations seems to, in effect, remove the deterrent effect of any action that we have taken.

Secretary Perry: Senator, I think there are a lot of ways that we will be sending messages. My bet is that people call people from time to time that they are in great competition with and maybe tell them thank you on one sense, nice competitive work, but on the other side, rapping their kneecaps pretty hard to get their attention. And in some other areas, you are making some big, big mistakes.

Senator Blumenthal: Do you agree that Russia has to pay a price?

Secretary Perry: I agree that the United States and the rest of the world need to send some very powerful messages to Russia relative to some of their activities.

Senator Blumenthal: Do you agree that the only message the Vladimir Putin understands is one that makes him pay a price?

Secretary Perry: And that is exactly why the United States having an energy policy where that we can deliver energy to Eastern Europe, for instance, where we are a partner with people around the globe where they know that we will supply them energy and there are no strings attached is
one of the most powerful messages that we can send to Russia.

Senator Blumenthal: Do you agree that there has to be more cooperation between your Department and the utilities that are privately run and owned?

Secretary Perry: Yes, sir.

Senator Blumenthal: And what steps are you taking to do that?

Secretary Perry: We are working closely with that sector. With some specific companies, we are working even more closely with. There are some of these pieces of information that get into very sensitive areas. And so one of the conversations that we need to have, Senator Blumenthal, is being able to speed up the process of which we can get individuals classified so that if we need to bring them in and talk to them in a classified setting, we can do that. I know this is a little off subject here, but the point is I think it is really important for you and the committee to know that the process to get individuals classified so that they can do work is very slow and onerous. And I think we need to have this conversation about how to speed that up and to be able to get these people into a classified designation.

Senator Blumenthal: My time has expired.

But, Mr. Secretary, it is not off topic. It is a very
relevant issue in this space and in protecting our election system, as was raised yesterday in the Department of Homeland Security or, I should say, the Intelligence Committee hearings involving the Department of Homeland Security.

But I would just emphasize to you that the Russians almost certainly know everything that you would tell me in a closed setting. They already know it. The ones who do not know it are the American people. They are the ones who deserve to know it. I would respectfully suggest that you and other leaders who are responsible in this area owe it to the American people to come in an open forum like this one and explain what we are doing to fight back against the Russians who are attacking our country every day not only our Department of Defense but also our critical grid.

Thank you, Mr. Chairman.

Senator Inhofe: Thank you, Senator Blumenthal.

Senator Peters?

Senator Peters: Thank you, Mr. Chairman.

Thank you, Secretary Perry, for your testimony here today.

Secretary Perry, as you know, your Department plays a key role in national security particularly in advancing nuclear nonproliferation and promoting nuclear safety generally across the globe. This includes working with the
international community and the International Atomic Energy Agency.

One area that the IAEA is involved in deals with the production and the reprocessing of plutonium. And I would argue that the United States should take a leading role in pursuing strict enforcement of the IAEA agreement that requires participating countries to manage their production and their reprocessing of plutonium to maintain a balance between the supply created, as well as the demand for their peaceful purposes, the rightful peaceful purposes that they are conducting within their countries.

Currently, however, there are countries that are members of this agreement that are not in compliance with the best practices of balance between plutonium production supply and peaceful use demand. And I would also argue the United States should encourage strict compliance with the principle of supply and demand balance of plutonium and then work to the next standard which we should employ which is to have a supply/demand balance for highly enriched uranium as well. This I think has the advantage of strengthening our global position in terms of nonproliferation norms before the JCPOA expires in the years ahead.

If the United States takes swift action and can show the global leadership to raise and not lower international nuclear standards so that the JCPOA provisions, when they
expire, will find a very different diplomatic environment
where the world community understands that we need to have
this balance and we are taking strict action now, I think it
will help us move to a place where Iran does not begin the
commercial and large-scale reprocessing of -- or, I should
say, enrichment of uranium, which would be a global threat
to us.

So, Secretary, my question is I would like you to share
your views on this issue and whether or not it makes sense
to try to push for a balance of supply and demand as is
required in plutonium agreements and to move to highly
enriched uranium as well.

Secretary Perry: Yes, sir. I can answer that very
briefly and directly. Yes, I believe that that should be
our goal.

Senator Peters: So what sort of diplomatic efforts
will you be engaged in to promote that?

Secretary Perry: My role is more on the technical
side, Senator, than being a diplomat. That is the State
Department. The State Department leads these types of
efforts. So we have not a secondary role but I would say a
supporting role on the technical side. So I try to stay in
my lane when it comes to -- if the President asks me to be a
diplomat in a particular way, I will certainly take my
instructions.
But let me go back and have a conversation with the folks in our office about the specificity of what you talked about, the balancing of that, and get back to you if I may.

Senator Peters: Well, I would appreciate that, Mr. Secretary, because I think this is critically important. And certainly as a member of the cabinet with these responsibilities, your voice will be important. And if it is something that you believe we need to pursue, I would certainly like to work with you to give a nudge to the administration to move in that area, particularly given the fact the JCPOA -- every day we wait we get closer to its expiration, and we could see the production of enriched uranium.

And I think that is also related to a question that was asked by Senator Reed as well, that in dealing with Saudi Arabia, that we really need to push to make sure that they also agree to the gold standard that the UAE agreed to. I think it would set a horrible precedent to allow Saudi Arabia to begin enriching uranium and perhaps to higher levels at the same time we may be getting close to the JCPOA expiring. So I would certainly hope that you would push aggressively to make sure that Saudi Arabia is held to the same standard that we should hold every single country to really across the planet.

Secretary Perry: Yes, sir. Count on it. As we are
asked to engage in whatever way, we will. But I always remind people that the alternative is not good. If Russia, China, or who are going to be chosen to do the civil nuclear projects in the Kingdom of Saudi Arabia, there will be no oversight.

Senator Peters: And that is why we need to push to make sure we have this balance of supply and demand. Certainly both China and Russia need to be a part of that as well. This is going to take a very large diplomatic effort, which I believe the United States should lead. This is common sense, and if we can implement that with other nuclear powers, we will make a safer world.

Secretary Perry: Indeed.

Senator Peters: Thank you.

Secretary Perry: Yes, sir.

Senator Inhofe: Thank you, Senator Peters.

Senator Cotton?

Senator Cotton: Thank you, Mr. Chairman.

Welcome back, Mr. Secretary. Always good to see you.

Senator Peters and I had a little vacation over the weekend. We went up -- just a little, short flight up to the Arctic icecap where we got on a fast attack submarine and sailed underneath the ice and then surfaced about 24 hours later. It was a lot of fun. I would recommend to all of you that you do it. The quarters in the submarines are a
little tight, though, I have to say.

But we had a chance to tour the nuclear reactor on the submarine. And Naval Reactors is considered probably the gold standard within our nuclear enterprise, one of the best run organizations, maybe one of the best run organizations in the entire government. Now that you have been on board for a little over a year, you have had a chance to get to know your organization and observe Naval Reactors. I just wanted to know what your thoughts are about what has made Naval Reactors such an outstanding organization for now 40-plus years, maybe what lessons could we learn from that and apply to some of the other more troubled parts of our nuclear enterprise or, for that part, across the government entirely.

Secretary Perry: I will suggest to you it has had good leadership. Frank Caldwell is an incredibly capable leader. You look back to the man who started it, an extraordinary Admiral Zumwalt. So you have some really fine leadership. They have a tight focus. They basically stay in their lane. They have not gotten outside of that. They have a mission, and Naval Reactors has well run an operation, as I have had the opportunity to -- and that is not to say that there are not some other places at the DOE and other areas of government that are not as capable. But I think your observation is very succinct that they indeed are well run.
Senator Cotton: I agree. It is really important for an organization to have leadership. There is no substitute for it. That is why we depend as a Congress on you and your people and the American people depend on all of you. As Secretary Gates used to say, when he was the Secretary of Defense, to his people, we can solve problems here with a scalpel or we can wait till Congress solves them with a meat clever. You have got some of the most important challenges that our government faces, not always pleasant business to think about these kind of things, but the American people are depending on you and the Department of Energy to make sure that our nuclear deterrent is safe, reliable, effective, credible.

I want to turn to one specific point now in your testimony, in which you state that you are building the capability and capacity to produce 80 pits per year by 2030. Is the main risk of missing that mark lack of adequate and certain funding for your organization?

Secretary Perry: I think if the adequate funding was not in place, you would be correct. At this particular point in time in this budget cycle, it is adequate. In the out-years, I cannot respond to that because I do not know what those numbers are going to be. But for us to continue to build those pits to have those 30 pits per year ready by 2026, obviously the funding has to stay in line.
Senator Cotton: And if the threats from Russia and China and Iran and North Korea, potentially other now or future nuclear states were to grow and our leaders determine that we need to produce more than that number of pits per year, with additional funding do we have the technical ability to achieve that?

Secretary Perry: Yes.

Senator Cotton: Good.

While we are talking about funding requirements as well, the Nuclear Posture Review, in addition to your testimony, observes that more than half of NNSA’s infrastructure is over 40 years old. More than a quarter of it dates back to the Manhattan Project in the 1940s. Your budget request had an increase of about $200 million for infrastructure and operations, much of that going to deferred maintenance for NNSA infrastructure.

Secretary Perry, is the budget that we passed last month, the spending bill we may be on the verge of passing going to give you the money you need to make real progress on this infrastructure backlog?

Secretary Perry: Yes.

Senator Cotton: Good.

Thank you very much for what you do, and thanks for all the men and women at the Department of Energy.

Secretary Perry: Thank you, sir.
Senator Inhofe: Thank you, Senator Cotton.

Senator King?

Senator King: Thank you, Mr. Chairman.

Mr. Secretary, Governor, welcome.

Secretary Perry: Thank you, sir.

Senator King: For 70-plus years, there has been no use of nuclear weapons since 1945 in the world, and that has principally been because of the strategy of deterrence, that there are nuclear-armed countries, but the deterrence strategy of if you use them, you will suffer horrendous consequences has worked.

My concern is that the whole strategy of deterrence breaks down if you are talking about terrorists having nuclear weapons or a nuclear device. They have indicated they do not care about dying. They do not represent a nation state, and we really do not have a strategy to deal with that except nonproliferation.

And what bothers me is that in your budget under NNSA, there is a significant increase for weapons activity. There is a significant increase for naval reactors. There is a decrease for nonproliferation. It is not a big decrease, but it is a decrease. And it seems to me this is one of the most serious issues that we face in terms of the danger of nuclear weapons or even one nuclear device falling into the hands of either a small rogue state or more dangerously a
terrorist organization.

Why in the world in this situation are we seeing a decrease in the activities of the Department in nonproliferation instead of an increase?

Secretary Perry: Senator, I do not think you are seeing a decrease in the activities. You may be seeing a decrease in the funding line item, but the focus of the Department -- and if my information is correct, we actually have an increase of the entire nonproliferation budget. I think it is approaching 4 percent.

Senator King: Well, perhaps I am misinformed. I have got a Department of Energy budget request fact sheet, February 12th. It says 1.98 for defense nuclear nonproliferation, $17 million below fiscal year 2017 enacted. So maybe we need to get together offline and straighten out those numbers.

So you are committing to me a serious and unrelenting commitment to nonproliferation.

Secretary Perry: Regardless of what that budget may be, sir.

Senator King: Thank you.

NNSA has had some difficulty over the past years managing the life extension program, which is a very important part of the Nuclear Posture Review of recapitalizing. There have been cost overruns, schedule
delays, reductions in numbers of weapons refurbishment.

What are you doing to get a hold of that program and tighten the management so that we can meet the deadlines and also the cost limitations?

Secretary Perry: I am sorry. Repeat that again, Senator.

Senator King: On the life extension programs for nuclear weapons, there have been cost overruns, delays. And the question is can we rely on the Department to focus management skills on this problem because this is going to be a part of the Nuclear Posture Review’s recapitalization.

Secretary Perry: Excuse me for making you repeat that, Senator.

What I found a year ago when I came into the agency, there are a number of programs that had some pretty big cost overruns. There were some pretty big programs, whether it was in the environmental management side of things or whether it was in the programmatic side of life extension programs.

We have a new NNSA Administrator. She and I have had very pointed conversations about the management of the modernization of the arsenal, the life extension programs. And I will suggest to you and I hope that you will see a commitment to managing those programs where that the result is not only up to your satisfaction, but the expenditures
are within the realm of thoughtful, efficient use of our taxpayer dollars.

Senator King: Thank you.

In just a few seconds, just a comment. You mentioned it earlier. The issue of clearances is a huge problem throughout the government. We had a hearing in the Intelligence Committee a couple of weeks ago just on this subject. It turns out there is a backlog of 791,000 people awaiting secret or top secret clearances, which is impeding our ability across the government, but I know it is in your Department. We discovered in that hearing that OMB seems to be the center of where this is focused, and I hope that you will work with OMB and add your voice to those of other departments that we have just got to solve this problem.

Not only is it slowing down the activities, but we are losing good people. I know people who have been in the queue for a year and a half or 2 years, and finally they said I am going to go off and get a job in the private sector. I cannot wait for this anymore. And I think that is a real loss. That is an opportunity lost to our country.

Secretary Perry: I will not sit here in front of you and defend OMB, sir.

Senator King: I want you to raise this with them and be insistent as only you can be.

Secretary Perry: Yes, sir.
Senator King: Thank you, Mr. Secretary.

Senator Inhofe: Thank you, Senator King.

Senator Cruz?

Senator Cruz: Thank you, Mr. Chairman.

Good morning, Mr. Secretary.

Secretary Perry: Senator.

Senator Cruz: Welcome. Let me say first of all congrats on the Aggies beating North Carolina. I know you were celebrating loudly, and we all were. That was a good victory and I hope more to come.

Secretary Perry: On to Michigan.

Senator Cruz: And it should have been Houston. That would have made an even better game. But alas, it was not to be.

Mr. Secretary, often when people talk about the work of the Department of Energy, they think about physicists in laboratories and models being developed on supercomputers. But an important part of it is that we also have to be able to build and produce the things our scientists design, and for that we need production capacity like at the Pantex plant outside of Amarillo, Texas. We used to have huge production capacity in this country, but we have closed much of that down at the end of the Cold War. Now we have a few places left and a lot of the buildings in those places are too old and too small to do what we need to have them do.
The Nuclear Posture Review the Department of Defense recently released mentions, quote, developing a National Nuclear Security Administration road map that sizes production capacity to modernization and hedging requirements. Could you elaborate a little bit on what that means and what kind of production capacity we need that we do not have right now?

Secretary Perry: Senator, I think the issue that you rightly focused in on -- it is as much as, in a global sense, looking back over the last 25 years after the end of the Cold War, if you will, the peace dividend that we all appreciated. Then the world has changed since then. And the requirement, whether it was in facilities, whether it was in modernization of our weapons, whether it was in keeping a supply chain in place, is a slight diversion here. It is the same challenge that we have got on our civil nuclear side, is that those got pushed back on the back burner.

And we are faced now with, on the civil nuclear side, a real challenge, whether it is keeping our companies engaged in this in a worldwide way, developing the engineers and the technology and the expertise to go forward with. And the same is true in the sense of our weapons program. You have visited Pantex before. You have visited Senator Graham’s facilities out at Savannah River. Oak Ridge has some
facilities that are older than I am. And for a building
that is old.

But my point is that this Nuclear Posture Review and
this committee needs to be, as I said in my opening remarks,
thanked for recognizing that we have got to have the
resources to be able to get this country back on track from
the standpoint of building the life extension programs, the
modernization of the fleet. If we do not, then we put
America in a place of jeopardy that I do not think anyone on
this committee wants to see us in.

Senator Cruz: Is the Department looking at expanding
facilities in existing plants like Pantex?

Secretary Perry: I do not know whether we are looking
at expanding facilities. One of the things that is very
close to being is a new headquarters building at Pantex that
is going to get them out of some early 1950s buildings that
are scattered around and all over that complex into one
facility where I can assure you that your constituents that
are getting up in Randall County every day and going to work
are really going to like going to work there because it is a
first class facility, but it is long overdue. So the
facility side of this is a real challenge, and we should not
be asking some of the people who are involved in some of the
most important work in this country keeping us safe and
deterring those that would do us harm from having to go to
work in buildings that, quite frankly, are an embarrassment in some cases.

Senator Cruz: Thank you, Mr. Secretary.

Senator Inhofe: Thank you, Senator Cruz.

Senator Warren?

Senator Warren: Thank you, Mr. Chairman.

And thank you, Secretary Perry, for being here today.

Secretary Mattis told this committee that, quote, the central challenge to U.S. prosperity and security is the reemergence of long-term strategic competition with countries like Russia and China. More specifically, he said that China, quote, continues its economic and military ascendance asserting power through an all-of-nation long-term strategy. And he called on the U.S. to pursue a similar whole-of-government response.

So let me just ask. I will start with just a yes or no question here, Secretary Perry. Do you agree with Secretary Mattis on this?

Secretary Perry: Yes, ma’am. I might expand on that.

Senator Warren: But basic agreement. Good. Because I want to ask you how this plays out in your area of responsibility.

According to the International Energy Agency, renewables accounted for almost two-thirds of new net power capacity around the world in 2016. Last year, according to
Bloomberg, China accounted for 40 percent of all global clean energy investments. And China has vowed to spend at least $360 billion on renewable energy by 2020. But here at home, President Trump’s latest budget would cut the Energy Department’s research office on renewable energy and efficiency by 65 percent.

So very briefly, can you explain to me, Secretary Perry, how cuts to funding for research into energy efficiency and renewable energy improve America’s future energy security?

Secretary Perry: Senator, I will talk about two different arenas here. One is that we are different from China, and we are different from China in the sense that our private sector is where a substantial amount of R&D is done. We have a role in early stage development, which we have, I think, done a very good job of. Once those technologies become more mature and we can commercialize them, then the private sector will take over.

Senator Warren: But why do we cut that by 65 percent, Mr. Secretary? That is what that is.

Secretary Perry: But the point there is that these are technologies that are starting to mature.

Senator Warren: I am sorry, Mr. Secretary, but that is the whole point is that we keep doing the early stage research so the next technology is supported and the next
one and the next one. And what I do not understand is how you can cut research into energy by 65 percent and how that is going to help us be a global competitor.

You know, the Trump administration is rolling back rules designed to limit dependence on dirty fossil fuels, and our competitors at the same time, competitors like China, are making huge investments in solar power and other renewable energy sources. This is a $1 trillion market, and we are cutting ourselves out of it. Instead of leading the energy revolution, the Trump administration’s policies are causing the United States to be left behind.

Secretary Perry: Senator, as I look at our budget, the Office of Technology Transfer had a 23 percent increase in our budget. So I do not think we are arguing apples and oranges here.

Senator Warren: Are you telling me the Trump administration budget did not propose a 65 percent cut?

Secretary Perry: No. What I am telling you is that just because a line item does not have the same amount of money in it that it did in 2017 does not mean that the focus is not there.

Senator Warren: Look, I got to say if you do not spend the money, you cannot support the research.

I want to ask you about the nuclear deal between the United States, the five partner nations, and Iran and the
restrictions this has placed on Iran’s nuclear program under limits and inspections so it cannot develop nuclear weapons.
And I just want to start with a couple of baseline technical questions.

As a result of the nuclear deal, has Iran eliminated 97 percent of its low-enriched uranium stockpile?

Secretary Perry: I think that is correct.

Senator Warren: Yes. And has Iran removed the core of the Arak heavy water reactor and filled it with concrete so that it will not produce significant amounts of weapons-grade plutonium?

Secretary Perry: That is correct.

Senator Warren: And do international weapons inspectors have more access to and more monitoring of Iran’s nuclear sites, their uranium mines, and their mills and centrifuge production facilities?

Secretary Perry: I would say you are correct. There may be some other places that those inspectors would like to take a look at.

Senator Warren: Right. And I know that under the additional protocol, they are allowed to do that. But do you basically agree that that is what they have got now?

Secretary Perry: With my caveat to that.

Senator Warren: I know there are other technical aspects to the agreement, but one last question. And I know
I am out of time here. I am going to ask the indulgence of the chair. We will try to be short.

In his most recent threat assessment, the Director of National Intelligence said the Iran nuclear agreement has, quote, extended the amount of time Iran would need to produce enough fissile material for a nuclear weapon from a few months to about 1 year and, quote, has enhanced the transparency of Iran's nuclear activities.

Secretary Perry, do you agree with the intelligence community’s assessment on that?

Secretary Perry: I cannot tell that I do or I do not.

Senator Warren: Okay. I am a little surprised by that. They are the intelligence community that has brought us this information.

I will just say I understand that Iran supports terrorism, abuses human rights, develops nuclear missiles, in short, is a bad actor. But an Iran without nuclear weapons is at least a lot easier to deal with than an Iran with nuclear weapons. And I think that is something we have to keep in mind as we talk about our agreement to keep Iran from having those nuclear weapons.

Thank you.

Senator Inhofe: Thank you, Senator Warren.

Senator Graham?

Senator Graham: Thank you.
Mr. Secretary, I think you are doing a great job for the President, and I really appreciate your service to our country.

Secretary Perry: Thank you, Senator.

Senator Graham: Just to pick up on the Iran deal, I was not going to talk about it, but I will now. Did the Iranians deny inspectors access to military sites in Iran?

Secretary Perry: It is my understanding that they did.

Senator Graham: Under the agreement, in 15 years from now, can the Iranians enrich and reprocess without limitation?

Secretary Perry: Yes, sir.

Senator Graham: Do you think that is a good deal?

Secretary Perry: No, sir.

Senator Graham: Thanks for coming to SRS. It was a great visit. I know we have some differences on MOX, but you identified some things that we could work on at the site that are very exciting to us and the community.

The President tweeted out a couple of days ago he wants to talk with Putin about stopping an arms race. Do you think that is a good idea?

Secretary Perry: I think stopping an arms race would be a good idea.

Senator Graham: I do too. Actually I think it is okay to talk to the Russians about where we are going with
nuclear weapons.

This nuclear-powered cruise missile that they displayed on a video in Russia -- what did you take that to mean?

What are they trying to tell us?

Secretary Perry: They are back in the game and we better pay attention to them.

Senator Graham: I could not say it any better.

And your effort is to get us back in the game by rebuilding our triad system that has been depleted over time.

Secretary Perry: Correct.

Senator Graham: And that is to modernize our nuclear force. I hope to God we never use it, but make sure it is a deterrent. That is correct.

Secretary Perry: That is correct.

Senator Graham: And the money you think is well spent?

Secretary Perry: I do.

Senator Graham: I do too.

Secretary Perry: And I hope it is even more efficiently spent under the current administration.

Senator Graham: So I think we have to do two things at once: talk to the Russians about where we are headed but rebuild a nuclear deterrent force that is in decline. That is on your watch and I have a lot of confidence that you will get that done.
As to the MOX issue, 34 metric tons of weapons-grade plutonium was agreed to be disposed of by both sides in early 2000. You are aware of that agreement?

Secretary Perry: Yes, sir.

Senator Graham: The Russians had 34 metric tons of weapons-grade plutonium in excess of their defense needs. We had the same amount. And if you took 34 metric tons of weapons-grade plutonium, do you realize you can make over 10,000 warheads out of that material?

Secretary Perry: Yes, sir.

Senator Graham: So the goal is to take that off the table, turn it into a plowshare, no longer a sword.

In 2010, are you aware of the fact that we signed an agreement with Russia where the MOX system would be our disposal method and they would burn their plutonium in a fast reactor?

Secretary Perry: Yes, sir, I am.

Senator Graham: The Obama administration decided to abandoned construction of the MOX program. Do you consider that a withdrawal of that agreement?

Secretary Perry: No, sir. I consider the Russians are who walked away from the agreement.

Senator Graham: What did they do to walk away?

Secretary Perry: They unilaterally suspended the PMDA. And prior to that suspension, the Department had informed
Russia both formally and informally that we would pursue the D&D process.

Senator Graham: Dilute and disposal.

Secretary Perry: Dilute and disposal, yes, sir.

Senator Graham: So your belief is the Russians walked away not us.

Secretary Perry: Yes, sir.

Senator Graham: Why did we go from MOX to dilute and dispose? Is that the new policy of the administration?

Secretary Perry: Yes, sir. And I will try to give you the short version of this. You and I have talked about it at length, but for the purposes of the committee, we think that the cost versus the cost of D&D, the timetable to being able to address the plutonium issue in the MOX versus --

Senator Graham: And you realize that I have a different view of all of this.

Secretary Perry: Yes, sir, I do.

Senator Graham: So let us look at the dilute and dispose option. It would go to New Mexico to the WIPP system -- is that right -- after it is diluted?

Secretary Perry: Yes, sir.

Senator Graham: Have you talked to the New Mexico delegation?

Secretary Perry: I have talked to the delegation. I have talked to the Governor.
Senator Graham: What did they say?

Secretary Perry: They are in the process of having a conversation, a negotiation with their environmental commission.

Senator Graham: Have they agreed to accept the material?

Secretary Perry: We will know the answer to that in May.

Senator Graham: Do you not think we should know the answer to that before we stop the other program?

Secretary Perry: I am comfortable that we are already sending plutonium --

Senator Graham: Let me ask you another question.

Secretary Perry: -- to the WIPP as we speak, 5 metric tons.

Senator Graham: What regulations would be required to be changed to do dilute and dispose? Have you inventoried what regulations would be required to be changed?

Secretary Perry: Can I get back to you on that?

Senator Graham: Sure.

[The information follows:]

[COMMITTEE INSERT]
Senator Graham: What legislation would be required to be changed?
Secretary Perry: Same response.
Senator Graham: Okay.
Have the Russians agreed to dilute and dispose?
Secretary Perry: No. The Russians basically said that their waiver would require --
Senator Graham: They object to it.
Secretary Perry: Yes, in some pretty harsh ways basically saying that we got to -- anyway.
Senator Graham: Thank you.
I think what we have done is ended the biggest nonproliferation program in the history of the world for no good reason, and I am going to try to fix that. Thank you.
Senator Inhofe: Thank you, Senator Graham.
Senator Nelson?
Senator Nelson: Thank you, Mr. Chairman.
Mr. Secretary, it is good to see you.
Secretary Perry: Thank you.
Senator Nelson: You are looking very well.
I want to pick up on this discussion about nuclear proliferation. Do you think that Iran -- do you have any reason to believe that Iran by denying access to some of these military facilities is cheating on the JCPOA?
Secretary Perry: Senator, if history is a teacher, then the Iranians do not have a real good track record of living up to agreements or telling the truth.

Senator Nelson: So what do you recommend that we do?

Secretary Perry: I think anytime that you can renegotiate an agreement that puts you in a better position, you should do it, whether it is the North American Free Trade Agreement or whether it is the Joint Comprehensive Plan of Action. I think this President properly and for the right reasons is renegotiating some agreements that from his perspective is not in America’s best interest.

Senator Nelson: The agreement basically keeps Iran from having a nuclear weapon for a specified number of years. Is there anything that you know of that would indicate that that is not going to be fulfilled?

Secretary Perry: I think the President’s focus here is on being able to push that timeline even further down the road. And I think everyone around your dais agrees that that is a good idea. The idea that we could push Iran back from the standpoint of when they can start processing is a good thing.

Senator Nelson: Beyond the 15 years.

Secretary Perry: Yes, sir.

Senator Nelson: Let me ask you about our concern that Saudi Arabia might be wanting to get into the nuclear bomb
business. So they are wanting to have a whole bunch of nuclear reactors for electricity production. And we worked with the IAEA to produce these protocols called additional protocols to monitor for diversions from technology used for electricity to get it over. Do you think Saudi Arabia should adhere to those protocols?

Secretary Perry: Yes, sir.

Senator Nelson: So do I.

Mr. Secretary, back to an earlier discussion that you had with Senator Blumenthal. It is troubling -- and I am saying this from my standpoint. I have the privilege of, along with Senator Rounds, leading the Cyber Subcommittee of the full committee here. And we are quite concerned with what Russia is able to do to us, in addition to a whole bunch of other countries and parties, in cyber attacks.

And if an electric company -- and I am making this point -- in the private sector, an electric company, a banking company, a water company, whatever in the private sector -- if they were attacked with, say, a bomb, a sabotage, a missile from Russia, that would be a direct attack on our country. Would it not be the same thing if they use cyber to attack and shut down, say, an electrical grid?

Secretary Perry: Senator Nelson, I think you are absolutely correct. I think the world has changed greatly
over the course of the last decade when it comes to using a
digital way to attack a country and that we have to have
this conversation. We have to be not only on the
cybersecurity side of this but also on the rules of
engagement standpoint, that when there is massive amounts of
damage done -- for instance, if a hospital were to be shut
down and their ability to deliver lifesaving procedures
because of an attack on their information technology system,
that is every bit as much a direct effect on people’s lives
as if someone would explode a bomb in an emergency room.

Senator Nelson: Well, I think I can speak for Senator
Rounds. So you know this is in a bipartisan spirit. We are
concerned that the DOD, which is our only capability now as
the commander -- we are concerned -- and he is also, the
head of NSA. We are concerned if he has the authorities in
order to, number one, prevent or, number two, counterattack
in the case of such a thing. And I want to bring this to
you since you are definitely a part of the national security
apparatus to please give counsel to this because it is upon
us, and it is going to happen one way or another. And we
have already seen how an attack undermines our very
democratic institutions.

Secretary Perry: Yes, sir.

Senator Nelson: Thank you, Mr. Chairman.

Senator Inhofe: Thank you, Senator Nelson.
Senator Scott?

Senator Scott: Thank you, Mr. Chairman.

Good morning, Secretary.

Secretary Perry: Senator.

Senator Scott: Good to see you again.

Secretary Perry: Good to be in your presence, sir.

Senator Scott: Thank you, sir.

Thank you for visiting the MOX facility and the entire Savannah River site.

Can we just revisit why the Russians withdrew from the PMDA because from my perspective nonproliferation equals the PMDA in many, many ways? It has been widely reported that the Russians withdrew from the PMDA because of our lack of progress on the MOX facility. Would you agree or disagree?

Secretary Perry: Yes, sir. They are the ones that walked away.

Senator Scott: But would you agree that part of the reason why they walked away, at least the focus that I have read -- part of their rationale for walking away is that we were not upholding our part of disposing of and eliminating the weapons-grade component of the material?

Secretary Perry: Senator Scott, without having any more information, I might agree with that simplistic approach. But here is what I think from my perspective, and I am not going to base this on anything other than some
facts.

The Russians suspended it because I think they were looking for a reason to suspend it. That is my read on this. And I think when they put the requirements for the resumption out on the table, then that even solidified it more for me. When they talk about they require the reduction of military infrastructure and manpower in certain NATO countries before they will come back to the table, when they say they want a repeal of the Magnitsky Act and the Ukraine Freedom Support Act, so I start seeing a real political pushback from the Russians. You and I -- we have done a few negotiations before. I think they were looking for a reason to walk away from this so that they could make some political points.

Senator Scott: Let me suggest that what you are talking about is a part of the aftermath. The fact of the matter, that which opened the door for them to walk away was us not honoring the obligation and our responsibility to develop the technology that eliminates the weapons-grade component. So the reality of it is that we opened the door. Actually we did not open the door. We took the door off the hinges and said please feel free to walk away with your part of the 34 metric tons of weapons-grade plutonium that at least creates 10,000 warheads, perhaps 15,000 warheads. So the reality of it is we opened a door and we still focus on
the importance of nonproliferation. And we opened the door
with a bad actor from my perspective.

A question for you. What if New Mexico says no? What
if the capacity levels that seem to be in question already
becomes an answered question that there is no capacity?
What if the incidents that have occurred at the New Mexico
site become more problematic or we find more reasons and
rationale why it will not work?

What if the Russians actually say that the D&D does not
eliminate the weapons-grade component and we find ourselves
back at the table and back in South Carolina at a site that
according to some -- I am sure that you guys would disagree-
- is between 60 and 65 percent complete? We have invested
billions of dollars. What if the United States Congress is
unwilling to change the laws and the administration cannot
find ways to change regulations in order for us to move
forward on some alternative other than the current
alternative that is about 65 percent finished and is the
only means we have in the United States to eliminate the
weapons-grade component?

Secretary Perry: Senator, I do not get to work on
“what ifs.” I have to work on concrete evidence. And this
committee has put forward a directive from my perspective
that MOX is shut down, and MOX is shut down because it is
horrendously over budget. The timetable for it that we are
looking at now is 2048 before the first plutonium could be processed versus dilute and dispose, which is substantially less so. And in the NDAA, we were clearly given instructions that I think this committee may have passed twice and sent out that says here are the four parameters of which you need to meet. We will have the answers to those in the very near future. But what I am looking at is my own GAO-supported numbers and this committee’s instruction that we look at this alternative. And so I know we have had disagreement about whose numbers are right.

Senator Scott: Yes.

Secretary Perry: But this committee has sent a really powerful message to me that this is what we want you to do. Senator Graham and you and I both talked about at length are there some legacy programs that can go into Savannah River, and there are. And we want to work with you all, with the governor, with the people out there to find those opportunities.

Senator Scott: And we welcome that.

I know I am over time, but Mr. Chairman, I will close with this to our Secretary, whom I have a great respect for and admiration.

Secretary Perry: Thank you.

Senator Scott: We disagree fundamentally on this issue. I will say, however, that looking for concrete
evidence -- let me lay out the concrete evidence from my perspective. What is concrete is that we simply do not know the cost of transferring to WIPP. That is concrete. Number two, what is concrete is we do not understand the timeline. Concrete is we do not understand the process for getting the regulatory environment or Congress to approve. Concrete, we do not have any confirmation that the New Mexico delegation will move forward.

What we do have concrete is billions of dollars concrete in the ground in South Carolina. What we do have concrete is that the only known way for us to dispose and eliminate the weapons-grade component is the MOX facility, and we have very, very strong disagreements on the price, the time of completion.

I think the chairman is telling me to stop. Thank you, sir.

Secretary Perry: Senator Scott, thank you. And the only thing that I would say in response very quickly is the dilute and dispose technology has been proven, and the reason it has been proven is that we have put 5 metric tons of plutonium into the ground at WIPP.

Senator Scott: Mr. Chairman, thank you so much for allowing us to go forward.

Senator Inhofe: Thank you very much, Mr. Scott.

Senator Donnelly?
Senator Donnelly: Thank you, Mr. Chairman.

Mr. Secretary, I appreciate your highlighting the importance of a trusted supply of strategic radiation-hardened advanced microelectronics, including R&D capabilities, in your testimony. NNSA is our nation's source for these critical supplies for our nuclear weapons. But the challenges related to the production of trusted microelectronics and circuit boards exist with all of our weapon systems not just nuclear. The declining U.S. industrial base and the proliferation of threats in our supply chain is creating new and dangerous ways for adversaries to attack our systems.

How are you coordinating with DOD to ensure we are investing properly and not duplicating efforts or leaving gaps in critical areas?

Secretary Perry: Senator, I know you have probably had the opportunity to meet the new Administrator at NNSA, a very capable, bright, and hard charger. I have every confidence in the world not only does her history of where she came from, national security, but also her -- I mean, I would not have asked her to come and serve in that role if I was not very confident that she is going to be able to stand in there and deliver to you exactly what you want.

Senator Donnelly: I just want to emphasize to you that this is not only an important issue to me but to national
Secretary Perry: Absolutely.

Senator Donnelly: Thank you.

As ranking member of the Strategic Forces Subcommittee, I am a strong supporter of modernizing all three legs of the nuclear triad. I am pleased to see we agree on that. The work of the NNSA is integral to our nuclear modernization. We held a hearing just last week in our Strategic Forces Subcommittee with Administrator Gordon-Hagerty, with Admiral Caldwell, Mr. Owendoff, and Mr. Trimble from the GAO. And I want to get your thoughts on some of the issues raised there.

We have a new bomber, a new air-launched cruise missile, the life extension of current ICBMs, a new ICBM, a new SSBN. Now the Nuclear Posture Review adds to this potentially another warhead modification, a new sea-launched cruise missile, any necessary modifications to the vessels carrying that cruise missile, and any warhead modifications necessary to arm it.

Do you have a budget proposal for that warhead, and how much will it cost for fiscal year 2019 and over the 5-year defense plan?

Secretary Perry: This is not a new capability. This a weapon that we have had in the fleet before that we are bringing back up. Let me, with your permission, get back to
you on the exact budgetary requirements for that.

[The information follows:]

[COMMITTEE INSERT]
Senator Donnelly: Okay.

The last thing I want to ask. I think it is important to ensure we are investing in our national labs. I think they are extraordinarily critical and investing in their workforce while also providing oversight of management and operation contractors. It will take a joint effort to build and sustain our nuclear security enterprise into the future.

Can you tell me how you think about this challenge and the importance of the labs? I heard you mention early on today that you said they are a jewel. They really are.

Secretary Perry: They really are, yes, sir. If it is the one thing that I have been the most impressed with with my time as the Secretary, it has been to be able to go visit with these labs, have the lab directors in fairly regular, and share with the rest of the country through a lot of different means, including social media, just how good these labs are. It is one of the reasons that this lab-directed research and development program is so important. It is one of the reasons that we think that the ability for our national labs to have some autonomy, if you will, when it comes to being able to let the labs direct some of this funding to where it needs to go. So I am sure there are some really big cheerleaders for the national labs, but I am going to put myself right up there with the best of us.

Senator Donnelly: Thank you for your hard work.
Secretary Perry: Thank you, sir.

Senator Inhofe: Thank you, Senator Donnelly.

I am going to go ahead and adjourn the meeting here because we are out of time.

[Whereupon, at 11:59 a.m., the hearing was adjourned.]