

Stenographic Transcript
Before the

COMMITTEE ON
ARMED SERVICES

UNITED STATES SENATE

TO RECEIVE TESTIMONY ON THE DEPARTMENT OF ENERGY
AND NATIONAL NUCLEAR SECURITY ADMINISTRATION
ATOMIC ENERGY DEFENSE ACTIVITIES IN REVIEW OF THE
DEFENSE AUTHORIZATION REQUEST FOR FISCAL YEAR 2025
AND THE FUTURE YEARS DEFENSE PROGRAM

Wednesday, April 17, 2024

Washington, D.C.

ALDERSON COURT REPORTING
1029 VERMONT AVE, NW
10TH FLOOR
WASHINGTON, DC 20005
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6
7 Wednesday, April 17, 2024

8
9 U.S. Senate

10 Committee on Armed Services,

11 Washington, D.C.

12
13 The committee met, pursuant to notice, at 8:59 a.m.,
14 in Room G50, Dirksen Senate Office Building, Hon. Jack
15 Reed, chairman of the committee, presiding.

16 Committee Members Present: Senators Reed [presiding],
17 Gillibrand, Blumenthal, Kaine, King, Peters, Manchin,
18 Rosen, Kelly, Wicker, Fischer, Cotton, Rounds, Ernst,
19 Scott, Tuberville, and Schmitt.

1 OPENING STATEMENT OF HON. JACK REED, U.S. SENATOR
2 FROM RHODE ISLAND

3 Chairman Reed: Let me call the hearing to order.
4 Just for my colleague's awareness, so we intend to conclude
5 today's hearing, as we did yesterday, by 12:00 noon due to
6 Senate floor business.

7 And this will require us ending the open session by
8 11:00 a.m. and then moving immediately to the closed
9 session in SVC-217. As such, I would ask that members
10 adhere to the five minute rule. I will enforce it.

11 And then, I will waive my opening statement. And I
12 -- Senator Wicker also has graciously agreed to waive his
13 opening statement. So, with that, let me recognize
14 Secretary Granholm for her statement, and then
15 Administrator Hruby. Madam Secretary.

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1 STATEMENT OF HON. JENNIFER M. GRANHOLM, SECRETARY OF
2 ENERGY

3 Secretary Granholm: Thank you so much, Mr. Chairman.
4 And I will be quick about my opening statement to try to be
5 in the spirit of moving with alacrity.

6 Chairman Reed, Ranking Member Wicker, of course,
7 esteemed members of the committee, honored to be here
8 representing the Department of Energy before you today. I
9 thank this committee for the strong, consistent, bipartisan
10 support the committee has shown the Department of Energy,
11 the NNSA on our collective mission.

12 For the past three years, Congress has entrusted DOE
13 with significant resources to build up America's
14 manufacturing capacity, to create jobs, to lead global
15 clean energy markets, and those endeavors are critical to
16 energy security and economic competitiveness in the 21st
17 century. And at the same time, the American people have
18 long counted on the Department to meet essential National
19 Security missions.

20 The geopolitical shifts around us have made clear that
21 those missions are urgent as ever. The growing cooperation
22 between Russia, China, Iran, North Korea has created a more
23 unstable and less predictable international environment,
24 increased saber rattling aggression against our allies, and
25 cyber-attack threats reinforce the imperative to maintain a

1 safe, secure, and effective nuclear deterrent.

2 Meanwhile, more and more countries around the world
3 are embracing the potential of civil nuclear power for
4 sustainable development, for zero carbon energy, and for
5 climate security.

6 In fact, in December, 22 nations pledged to triple
7 civil nuclear generation capacity by 2050, and interest is
8 only set to grow as these small modular reactors and
9 advanced reactors continue to progress.

10 All of this underscores a need for deeper investment
11 and innovation in nonproliferation and counterterrorism
12 measures. And as nuclear technology continues to develop,
13 we must uphold our pledges to the communities that have
14 lived alongside those programs for decades.

15 So, the Department has worked urgently to deliver on
16 each of these priorities over the past year, and the
17 President's budget request for 2025 will empower us to make
18 even greater progress. I just want to detail quickly some
19 of the key elements, starting with the NNSA. The Fiscal
20 Year 2025 budget calls for \$25 billion, which is a 3.6
21 percent increase over the '24 enacted level.

22 That includes a roughly 4 percent increase for weapons
23 activities, which will allow us to move more swiftly toward
24 modernizing the nuclear stockpile and restoring production
25 capacity. This request would also empower the NNSA to

1 respond to new threats and opportunities under nuclear
2 nonproliferation and counterterrorism.

3 It will allow us to continue providing the Navy with
4 nuclear propulsion systems, while developing the next
5 generation of nuclear powered warships. Both are vital to
6 our technological advantage over our adversaries and
7 preserving free global oceans.

8 And importantly, the budget will also allow the NNSA
9 to build the Federal workforce that is needed to meet our
10 increasing mission requirements. Further, the President
11 has requested \$8.2 billion for our Office of Environmental
12 Management, which oversees the largest environmental
13 cleanup operation in the world.

14 Last year, our teams across the country made great
15 progress on key demolitions and treating and relocating
16 millions of gallons of tank waste, addressing contamination
17 issues across our sites.

18 The Fiscal Year 2025 request will allow us to build on
19 those results and deepen our engagement with tribes and
20 communities as they plan for the future of those sites, and
21 it will help us recruit and train a new cohort of legacy
22 management workers and leaders.

23 Over the past three years, we have made important
24 progress on each of these crucial missions, yet challenges
25 do remain. This budget request prepares us for the depth

1 of the work that is still ahead.

2 I am proud to lead such a gifted and dedicated teams,
3 starting with the great leader to my left, Dr. Jill Hruby,
4 who heads the NNSA and who is here to answer questions
5 about the weapons program.

6 We are both grateful to have your partnership and
7 support on these indispensable matters, and I look forward
8 to answering your questions.

9 [The prepared statement of Secretary Granholm
10 follows:]

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1 Chairman Reed: Thank you very much, Madam Secretary.
2 Administrator Hruby, please.

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1 STATEMENT OF HON. JILL M. HRUBY, ADMINISTRATOR OF THE
2 NATIONAL NUCLEAR SECURITY ADMINISTRATION

3 Ms. Hruby: Thank you. Chairman Reed, Ranking Member
4 Wicker --

5 Chairman Reed: Can you bring that microphone as close
6 as possible?

7 Ms. Hruby: Thank you. And members of the committee
8 for the opportunity to appear before you with Secretary
9 Granholm to discuss the Department of Energy's enduring
10 National Security missions.

11 NNSA appreciates the consistent, strong support for
12 our work and our work force from the Secretary and from the
13 committee. In today's complex and dynamic security
14 environment, NNSA is delivering.

15 Last year, we provided the Department of Defense over
16 200 modernized weapons on schedule. The life of ship
17 nuclear reactor for the Columbia Class submarine is on
18 track for lead ship delivery.

19 Our nuclear nonproliferation and counterterrorism
20 programs are advancing technologies and partnerships that
21 are responsive to the evolving global environment. In all
22 our programs, we are preparing for the future by
23 revitalizing our infrastructure and staying at the cutting
24 edge in select science and technology areas.

25 NNSA's Fiscal Year 2025 budget request of \$25 billion

1 reflects these priorities. The nuclear weapons program of
2 record grew from five to seven systems this past year. The
3 B61 and the W88 Alt 370 programs are in production.

4 The W80-4 remains aligned with the Air Force schedule
5 for the long range standoff missile, and we expect a first
6 production unit in September 2027. The W87-1 is currently
7 scheduled to begin production in Fiscal Year 2031 or 2032,
8 and the W93 remains on track for production starting in the
9 mid 2030s.

10 With the Fiscal Year 2024 budget enactment, NNSA began
11 working on the B61-13 program, with the first production
12 unit expected in Fiscal Year 2026. Although the nuclear se
13 launched cruise missile, or SLCM-N, is not in the budget
14 request for Fiscal Year 2025 due to the timing of the
15 Fiscal Year 2024 NDAA, NNSA is committed to fulfilling this
16 requirement.

17 These seven systems represent modernized weapons for
18 all three legs of the triad and new capabilities responsive
19 to today's security environment. NNSA is also modernizing
20 our infrastructure alongside our programs.

21 We have prioritized investments to deliver the most
22 urgently needed capabilities, while pursuing a longer term
23 strategy of responsive, flexible, and resilient enterprise.
24 Tangible progress on both large and smaller scale projects
25 is being made.

1 A milestone anticipated this year is the first diamond
2 stamped war reserve W87-1 plutonium pit from the Los Alamos
3 pit production facility. In short, NNSA is delivering on
4 programs that holistically support nuclear deterrence and
5 strengthen relationships with our allies and partners.

6 There is much work ahead. We are fully committed, and
7 we appreciate your support. Thank you. I look forward to
8 your questions.

9 [The prepared statement of Ms. Hruby follows:]

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1 Chairman Reed: Thank you very much, Administrator
2 Hruby. As I indicated before, my statement and Senator
3 Wicker's statement will be put in the record, without
4 objection.

5 Secretary Granholm, the construction programs at the
6 National Nuclear Security Administration and the clean-up
7 programs at the former defense sites have been faced with
8 large increases in cost due to shortage of skilled workers
9 and especially materials. You, like everybody else, have
10 been caught up in the post pandemic supply disruption.

11 What we are seeing now, however, is the effects of the
12 last several years seem to be spreading to the workforce
13 where there is indications that people are leaving faster
14 than normal retirements suggest.

15 And now, last year, as you know, we provided special
16 authorities for the Department to hire engineers and
17 scientists. Can you fill us in on how serious this problem
18 is, and if you need additional help?

19 Secretary Granholm: Yes. Thank you for the question.
20 And thank you for the ability to use that flexibility. 400
21 additional accepted service hiring positions allowed us to
22 be much more flexible.

23 We have been focusing on bringing aboard the
24 additional 500 Federal employees over the last two years
25 that we have been able to hire, but unfortunately, double

1 digit attrition has eaten up those gains.

2 And that is largely due, as I am sure you can imagine,
3 to incredible competition from the private sector and
4 salaries from the private sector, remote work that the
5 private sector is able to offer that we are not able to,
6 but also because the employees feel -- many employees have
7 reported that they feel overworked because of the loss of
8 fellow employees.

9 So, to answer your question, yes, support for what we
10 have requested in our budget, which is the full Federal
11 salaries and expenses appropriation request of \$564 million
12 in Fiscal Year 2025 would be most welcomed. Because the
13 appropriations for NNSA, as measured by enacted
14 appropriations have really -- the National Security program
15 has really doubled in size, we have not been able to keep
16 up in terms of hiring.

17 And the STEM workers are obviously very special and
18 very, well-educated. We have got to do everything we can
19 to keep the greatest minds in the Federal government. And
20 so, the ability to hire and through -- as evidenced through
21 support for that appropriation would be much appreciated.

22 Chairman Reed: Do you need additional support in that
23 exemption from government rules?

24 Secretary Granholm: You are good right now, right?

25 Ms. Hruby: Yes. We appreciate what you have done to

1 date. And when we -- if we get a budget appropriated -- we
2 also have made changes to our hiring practices to lean
3 forward more, so we are hopeful we can help solve this
4 shortage.

5 Chairman Reed: And Director Hruby, many of your
6 production facilities date from 1940s and 1950s, and you
7 are still relying on, for example, for the production of
8 depleted uranium, World War II era rolling mill. What, and
9 more importantly, when will you bring modern production
10 capabilities and methods into your complex to save time and
11 money?

12 Ms. Hruby: Yes. Thank you, Senator Reed. Our
13 production facilities are, in fact, very old, and we are
14 making great strides in replacing them, but we have a lot
15 of work to do.

16 And I want to talk about, in particular, modernizing
17 our capabilities and not just our infrastructure. I am
18 sure we will get lots of questions on infrastructure, but
19 this issue of what our production capabilities are is
20 really important, because any change we make in the
21 manufacturing process changes the microstructure of
22 materials and we need to make sure that that is okay
23 through our science programs.

24 But we have some great examples. In fact, we have a
25 special polymer part that we produce using additive

1 manufacturing for the W80-4 that is making a huge
2 difference in that program. We have a current pilot
3 project for new manufacturing technologies for radiation
4 cases, which is a collaboration between our design and
5 production agencies.

6 We have asked our advisory committee to look at -- it
7 is called the Advisory Committee for Nuclear Security, to
8 study materials and manufacturing and look for other places
9 that we can make changes in our processes and our
10 materials.

11 And of course, as we build new facilities, we are
12 looking to put modern new equipment in those facilities.
13 We have a lot of work to do. It is, in fact, true that we
14 have very old equipment and very old facilities, but we are
15 very focused on changing that.

16 Chairman Reed: I can't resist. If you watched the
17 movie Oppenheimer, did you recognize facilities that are
18 still working?

19 [Laughter.]

20 Ms. Hruby: Yes.

21 Chairman Reed: Thank you. Senator Wicker, please.

22 Senator Wicker: Madam Administrator, how many times
23 did you see Oppenheimer?

24 Ms. Hruby: Three so far.

25 Senator Wicker: Okay.

1 [Laughter.]

2 Senator Wicker: On the SLCMs, the NDAA was passed in
3 December. It signed into law immediately. That didn't
4 give you time to put the SLCMs in the budget?

5 Ms. Hruby: Yes. We -- that is exactly right. We
6 intend to resolve this problem with Congress. It is in our
7 unfunded requirements letter. But we didn't get the -- we
8 submitted the Fiscal Year 2025 budget before the NDAA and
9 before the enactment of the '24 budget.

10 Senator Wicker: So, you don't mean to slow this down
11 another year?

12 Ms. Hruby: Absolutely not.

13 Senator Wicker: Okay.

14 Ms. Hruby: We have established a program office. We
15 are working with the Navy --

16 Senator Wicker: Good. Well, that is very positive
17 news. Now, I bet you read this Congressional Strategic
18 Posture Commission Report more than three times. Studied
19 it thoroughly. Is that right?

20 Ms. Hruby: That is correct.

21 Senator Wicker: Indicates to some of us that our
22 nuclear forces are undersized, under prioritized, and
23 incapable of adapting to modern times. What do you say to
24 that? Undersized is right.

25 Ms. Hruby: Well, I believe that the Strategic Posture

1 Commission Report is right on the fact that we have to
2 prepare for two near peer adversaries or two peer
3 adversaries, and we need to do it with a sense of urgency.
4 And we have taken steps already. In fact --

5 Senator Wicker: Undersized right now, seriously.

6 Ms. Hruby: What the report said, and I think this is
7 important, is we need more and, or different kinds. And I
8 agree with that. I don't think just more is going to solve
9 the problem. So, I think it is the combination of those
10 two things.

11 Senator Wicker: What about incapable of adapting to
12 modern threats?

13 Ms. Hruby: We -- there is lots of evidence that we
14 are slow to adapt to modern threats. But I think we are
15 proving we are capable, and we are making some changes now
16 to do that.

17 I think the insertion of the two programs within the
18 program of record in the last eight months shows that we
19 are able to do some adaptation, but we do need a stronger
20 industrial base, and we need a stronger government base in
21 the NNSA to enable us to do more as we go forward.

22 Senator Wicker: Well, amen to that. Do you worry
23 that tardiness on our part might encourage our allies to
24 move forward independently of us and that would have a
25 negative effect?

1 Ms. Hruby: Yes, I would say I do think about that,
2 and I worry about that. So far we -- I mean, we are
3 actually modernizing. The first program, you know, off the
4 block since we started re -- doing life extension programs
5 is the B61-12, a forward deployed weapon, which is being
6 placed in Europe now.

7 But we need to keep up with -- we need to take to
8 address our allies' concerns. I think we have, and we will
9 continue to. But yes, we ought to be watching it closely.

10 Senator Wicker: Thank you. Madam Secretary, you
11 agree that making nuclear power part of the solution is a
12 priority, do you not?

13 Secretary Granholm: I do.

14 Senator Wicker: And to make this work, we need to
15 rebuild the domestic nuclear fuel cycle. What steps can we
16 take to accelerate our efforts to restart a uranium
17 enrichment capability that can meet our civilian energy and
18 military requirements?

19 Secretary Granholm: Thank you for the question. And
20 I am so grateful to Congress for supplying \$2.7 billion
21 that has been repurposed from the civil nuclear credit part
22 of the bipartisan infrastructure law for the buildup and
23 the creation of a uranium cycle in the United States, a
24 fuel cycle.

25 But we can't access that funding unless there is a ban

1 on import of Russian uranium into the United States. And
2 so, to the extent that Congress can adopt a ban, I think,
3 one has been passed in the House and hopefully the Senate
4 can take that up as well. That will enable us to access
5 that funding to create a domestic supply.

6 Senator Wicker: Thank you. Thank you, Mr. Chairman.

7 Chairman Reed: Thank you very much, Senator Wicker.
8 Senator Kaine, please.

9 Senator Kaine: Thank you, Mr. Chair. And it is good
10 to see both of you. Secretary Granholm, I always enjoy our
11 opportunities to do events in Virginia together. We have
12 had some good ones.

13 I want to ask about a topic that you raised in your
14 joint written testimony, and that is trying to develop
15 strategies to counter uncrewed aerial systems. We have had
16 testimony in this hearing, public testimony from General
17 Guillot of NORTHCOM about the drone swarms around Langley,
18 which are troubling.

19 Those have been publicly reported and discussed in
20 open session. But I noticed in your joint written
21 testimony that you talked about NNSA trying to kind of up
22 its game in developing counter UAS strategies. Can you
23 talk to the committee a little bit about that?

24 Ms. Hruby: Absolutely. Thank you for that question.
25 This has been an issue at some of our sites. We have

1 identified the UASs near areas where -- that are sensitive.
2 Here is what we -- we have UAS detection systems deployed
3 at all of our sites. They have some limited capability to
4 counter those systems.

5 We are updating the current systems, and we are
6 evaluating a new system that has much more counter
7 capability. We are testing that. We are establishing a
8 test site at Idaho so that we can keep up with the threat.

9 My intention, and I have been very clear about this,
10 with the complex is as soon as a UAS crosses the line that
11 we have declared as this is dangerous, we need to counter
12 it. We can't just say we see it. We have to counter it.

13 And we are positioning ourselves in this budget
14 request and in the work that we are doing to make sure we
15 can do that.

16 Senator Kaine: Can I ask you, as we are trying to
17 grapple with this threat, I have sometimes not been
18 satisfied as I have asked questions about sort of who is in
19 charge of this. I mean, on domestic soil, the FBI is
20 involved, and DHS is involved, but then DOD is involved.

21 You have to work with, you know, the cities and towns
22 and counties where facilities are located. Is the NNSA
23 sort of at a table of stakeholders with others trying to
24 figure this out from a whole of government standpoint?

25 Ms. Hruby: Yes, we do work closely, especially with

1 the FBI. I will say that we benefit from having large
2 remote sites. So, again, we have clearly delineated where
3 the lines are in terms of our sensitivities.

4 And so, we are working towards policies that allow us
5 to take action without needing to get -- we need that
6 policy approved by everybody, but once we have the policy
7 approved, we can take action without getting additional
8 approvals. That is the end goal that we are looking for.

9 Senator Kaine: Thank you. Switching gears, this
10 committee and the Foreign Relations committee have been
11 pretty involved in putting into law the AUKUS framework,
12 both pillar one and pillar two.

13 Talk to me about NNSA's involvement in working with
14 the Australians on the pillar one, equipping them with the
15 capacity to operate and maintain and eventually construct
16 nuclear subs.

17 Ms. Hruby: Well, we have two activities in NNSA on
18 pillar one. There is the activities that we do in naval
19 reactors, and there is the activities we do in
20 nonproliferation. In the Naval Reactors Program, they
21 -- we have Australian sailors now taking nuclear reactor
22 training.

23 That is the -- for us, for our role, that is the most
24 important thing is to make sure that the Australian navy
25 has the capability and the complete thorough training that

1 we enjoy in the U.S. to operate these boats effectively.

2 On the nonproliferation side, our goal is to have this
3 be a model program for nonproliferation. We have lots of
4 work with the Australians to help them understand what that
5 is and to work with the IAEA to create systems to make sure
6 that there could be absolutely no diversion.

7 We are going to -- we are going to deliver sealed
8 nuclear reactors that power these boats, but still we will
9 need to make sure there is no material diversion, no
10 potential for any material being stolen in any way.

11 And the -- we feel very confident that the Australians
12 are taking those seriously and are working very closely
13 with us.

14 Senator Kaine: Excellent. Well, I don't want to
15 exceed my time after having been warned by the chair that
16 we are going to try to move quickly. But Secretary
17 Granholm, I am going to ask you a question for the record.

18 Last year you talked about some initiatives the
19 Department of Energy is doing to find talent at HBCUs and
20 minority serving institutions, and partnership you are
21 creating. I will ask for the record, and we will look
22 forward to seeing what is the progress on that front.
23 Thank you. I yield back.

24 Chairman Reed: Thank you, Senator Kaine. Senator
25 Fischer, please.

1 Senator Fischer: Thank you, Chairman Reed, and thank
2 you, Ranking Member Wicker. Nuclear deterrence is the
3 backbone of our National Security. It underpins every
4 operational plan that we have, and every Administration
5 since 1960s has validated the need for our nuclear triad.

6 While the Air Force and the Navy are responsible for
7 the bombers, ICBMs, missiles, and submarines, it is the
8 NNSA and the Department of Energy who are responsible for
9 the designing, manufacturing, and certifying of the nuclear
10 weapons themselves.

11 Transitioning back towards a production mindset has
12 its challenges, but I understand NNSA delivered over 200
13 modernized nuclear weapons last year, and I am glad to see
14 that progress is being made, Administrator, and that NNSA
15 is reprioritizing the production and delivery of nuclear
16 weapons.

17 Administrator, how would this budget request help NNSA
18 to meet their requirement to increase the number of
19 modernized nuclear weapons produced and delivered in Fiscal
20 Year 2025 and beyond?

21 Ms. Hruby: Thank you, Senator Fischer. We appreciate
22 your recognizing that we have made significant
23 accomplishments. I would -- this budget request for Fiscal
24 Year 2025 has about -- has actually more money for
25 production modernization than it has for stockpile

1 modernization in it.

2 That is not because we are not doing stockpile
3 modernization. We are very focused on that. But we
4 recognize to meet the demands over the next decade and
5 beyond, we really have to get after our production
6 enterprise.

7 And in particular, a lot of the emphasis is on making
8 sure we can bring up pit production at both Los Alamos and
9 Savannah River, complete the uranium processing facility,
10 and other high priorities in the system.

11 So, I think that the most important thing that NNSA
12 can do to secure the future for the nuclear enterprise is
13 to develop success like we are in modernizing weapons and
14 then modernize our infrastructure.

15 Senator Fischer: When we visited before this hearing,
16 we talked about balancing those seven modernization
17 programs and how we really can't afford any further delays
18 on any of those.

19 To avoid similar boom and bust cycles in the future,
20 we have to have that groundwork laid now, the foundation
21 laid now. Can you tell me how NNSA is working with
22 STRATCOM to assess future threats in the late 2030s and
23 beyond, to be able to identify the likely requirements for
24 future nuclear weapons programs?

25 Ms. Hruby: Yes, Senator. Thank you. This is one of

1 the things I am very proud to say that we have made a
2 significant -- working with General Cotton, we have agreed
3 that we really need to define those needs beyond the mid
4 2030s, which is where the program of record today. We have
5 got seven things going on between now and the mid 2030s,
6 but we have -- we know we have needs beyond that.

7 And we have reestablished a process that had gone
8 -- that used to exist, it had gone quiet, to have STRATCOM
9 staff who understand and think about deterrence needs on a
10 daily basis to work with our staff, who think about and
11 understand capabilities on a daily basis, to work together
12 more closely on -- to meet regularly, to define, hey, what
13 is the gap and what is the best way to fill it that will
14 exist in the late 2030s and 2040s.

15 Senator Fischer: You know, I really appreciated our
16 discussions on how we can accelerate the delivery of SLCM,
17 and I have appreciated that you have that request in the
18 unfunded priority list for \$70 million for SLCM.

19 I think that does demonstrate a really clear
20 commitment to meeting the requirements that are now set in
21 law. Administrator, can you provide us with an update on
22 how the NNSA is moving forward with the development of the
23 warhead?

24 Ms. Hruby: Yes. We are looking, working very closely
25 with the Navy as they define their delivery platform, to

1 define the warhead that will match well to that.

2 Our objective, because we are trying to do this in the
3 program of record, we are trying to, you know, squeeze it
4 between some programs that we are already working on, is to
5 find the most effective and simplest way that won't disrupt
6 the rest of the program of record to meet the requirements
7 for SLCM-N.

8 So, we are looking at the W80-4, as was in the
9 authorizing language. We are also looking at other options
10 that might, we don't know yet, be simpler to do in terms of
11 disrupting our current production flow.

12 Senator Fischer: Thank you. Thank you, Mr. Chairman.

13 Chairman Reed: Thank you very much, Senator Fischer.
14 Senator Manchin, please.

15 Senator Manchin: Thank you, Mr. Chairman. And thank
16 you both for your service and for being here. I appreciate
17 it very much. And Senator Granholm blessed us yesterday
18 with her presence and we had a good meeting, except for a
19 little interruption. But other than that, it was good.
20 But I want to thank you all.

21 I have been a long supporter and a fan of nuclear
22 -- and basically with nuclear propulsion has been used in
23 nuclear -- in weapons, but mostly in propulsion for our
24 military fleet, Department of Defense, and how we have done
25 in such a safety record for many, many, many, many years.

1 But yet we haven't been able to get it right in the
2 private sector, or we haven't been able to employ it with
3 the same -- I think, the same veracity and also the
4 assurance from the public that we can do it in a very safe
5 manner. And I think that has been a mistake on our part.
6 I am concerned really, and to both of you, how you might
7 feel about this, the production of highly enriched uranium.

8 And its primary fuel source for the Navy submarines,
9 aircraft carriers, as we know. According to the NNSA,
10 enriched uranium stockpile run out in 2040. Is that
11 accurate? Is those timelines accurate and are you
12 concerned? And what do you plan to do to, make sure that
13 we don't have a deficiency there?

14 Ms. Hruby: Thank you, Senator Manchin. Let's see, we
15 have two needs in NNSA for enriched uranium. We have the
16 need for low enriched uranium to make tritium. That is a
17 focus for the 2040s.

18 And we that have a need for highly enriched uranium
19 for naval reactors and weapons, which is out beyond the
20 2040s time frame. We do not have the capability to enrich
21 uranium for defense purposes in the U.S. today.

22 Senator Manchin: Can I -- for a little bit of
23 history, it might help us out a little bit of history here.
24 Why did we allow ourselves to get in a situation that we
25 were dependent upon Russia, or we went to that? That was

1 after the Cold War.

2 I have heard different scenarios. In the Cold War
3 they were trying to all just kind of work together, but why
4 did we believe -- was it basically from an environmental
5 standpoint, or do we have a lot of advocates who were
6 opposed to nuclear, and we thought, well, out of sight, out
7 of mind, we will go somewhere else and get it.

8 They didn't want to produce it here and enrich it.
9 What was the purpose? What was the problem?

10 Ms. Hruby: Well, I think there are a couple of
11 issues. So, with respect to defense needs, we have a lot,
12 and we had a lot -- you know, we had a stockpile of 30,000
13 weapons. In the nuclear weapons stockpile, highly enriched
14 uranium doesn't get used.

15 So, it stays highly enriched. It has very long
16 lifetime. So, we felt there was plenty of highly enriched
17 uranium that could be used, and in fact, even down blended
18 to low enriched uranium to use for other purposes. And
19 that is what we have been doing now for many decades. In
20 the civil sector, of course, it is a different issue, which
21 is cost competition and environmental issues. It was hard
22 to create a steady base for civil nuclear LEU.

23 But on the defense side, we have been using our
24 stockpile of HEY for weapons, and it is just now as we plan
25 out that we feel like we cannot continue to do that forever

1 and that we need to think about reestablishing these
2 capabilities.

3 Senator Manchin: Senator Granholm, if I may ask you
4 on this, from this Administration standpoint and where you
5 all stand, DOE, are you all concerned about our ability to
6 get back into production or be able to do it in a
7 sufficient way that the public will support it, but also
8 know the needs that we have for defense of our country?

9 Secretary Granholm: I think we can definitely do it.
10 And we are grateful for Congress's support on creating a
11 uranium strategy inside the United States by repurposing
12 some of the civil nuclear credit to get \$2.7 billion to
13 create our own fuel cycle here. However, as I was
14 mentioning to Senator Wicker earlier, the only way that we
15 can access that funds is if Congress passes a ban on the
16 import of Russian uranium, and we are hoping --

17 Senator Manchin: We are trying very hard.

18 Secretary Granholm: Very good. That is great. I
19 will say one other thing, on the civil side, the high
20 assay, low enriched uranium, of course, is necessary for
21 the small modular reactors and the advanced reactors, and
22 that is a very important part of our cycle and our strategy
23 to be able to have more nuclear power, in addition to --

24 Senator Manchin: My final question would be along
25 those lines. With the onslaught, basically, and we have

1 the development of SMRs and micros, to be coming into the
2 workforce, if you will, into the production of the private
3 sector. Is that taking into consideration, by 2040 we are
4 running in a depletion or basically in the need, or it
5 would be accelerated like 2030 maybe, or 2035 --

6 Secretary Granholm: We need to accelerate. We need
7 -- there is no doubt that the development of these --

8 Senator Manchin: There is a concern -- the number we
9 are using, 2040, does that take in consideration what we
10 are talking about here?

11 Secretary Granholm: I think that is mostly on the
12 defense side.

13 Ms. Hruby: It is.

14 Secretary Granholm: Yes. On the civilian side, I
15 mean, these reactors are being developed right now.

16 Senator Manchin: Very, very quickly. Rapidly.

17 Secretary Granholm: And they are -- they will -- they
18 have access to Russian HELU, and we need that capability
19 here, which is why we have to act with urgency.

20 Senator Manchin: Okay. Thank you, Mr. Chairman.

21 Chairman Reed: Thank you so much, Senator Manchin.
22 Senator Ernst, please.

23 Senator Ernst: Thank you very much, Mr. Chair. And
24 thank you both for being here today to testify in front of
25 the committee. And, Secretary Granholm, we will start with

1 you. Secretary Granholm, should taxpayer dollars be
2 granted to U.S sanctioned countries or institutions, yes or
3 no?

4 Secretary Granholm: You mean through the buy
5 -- through the DOE?

6 Senator Ernst: Through DOE.

7 Secretary Granholm: No.

8 Senator Ernst: Okay. Thank you. Because, as you
9 know, the Department of Energy distributes billions of
10 dollars in grants and awards. And in February, a magazine
11 published a research article acknowledging support from a
12 taxpayer funded DOE award.

13 The same article credits an Iranian researcher
14 employed by Iran's state linked Sharif University of
15 Technology. U.S. authorities have sanctioned multiple
16 Sharif University entities due to their ties to Iran's
17 nuclear program.

18 Britain and EU have also sanctioned the university due
19 to similar concerns. So, Secretary Granholm did taxpayer
20 dollars in this grant to support the Iranian researcher?

21 Secretary Granholm: I am not familiar with this
22 grant, but perhaps you can share that article and I can
23 follow up.

24 Senator Ernst: We will definitely do that. And thank
25 you for that response. We will share that because this is

1 of great concern to us.

2 The reports are cause for concern, no matter how those
3 grants are distributed, because Iran builds up their
4 nuclear -- as they are building up their nuclear arsenal,
5 we must be absolutely certain that taxpayer dollars are not
6 funding a researcher working for a university linked to
7 Iran's nuclear program.

8 We just witnessed, of course, Iran attack our ally
9 Israel and their proxies have taken American service
10 members' lives. At tower 22, here within the last several
11 months, we lost three American service members, members of
12 the 718th engineer company of Georgia. They were U.S. Army
13 reserves.

14 They were -- their lives were lost at the hands of
15 Iranian proxies. So, the capabilities cannot even remotely
16 be strengthened by American taxpayer dollars. And so,
17 those answers will matter. So, Secretary Granholm, we will
18 provide you with that information and will expect a
19 response back. Thank you, Secretary.

20 And kind of on that same theme then, do you know what
21 safeguards the Department has in place to ensure that our
22 Department of Energy funded American researchers do not
23 share sensitive information about technology with academics
24 working for sanctioned university located from adversaries?

25 Secretary Granholm: We have a very robust

1 counterintelligence strategy inside of the Department,
2 which is, looking both at lab research, partnerships,
3 etcetera, to ensure that we are securing American IP.

4 That we are not endangering, obviously, by releasing
5 certainly any sensitive information from our -- from the
6 defense side of our operation. We have also set up a whole
7 strategy inside the Department for vetting requests coming
8 in from those whom -- from companies who might want to
9 access DOE grants or loans.

10 It is research, technology, and economic security
11 effort that is similar to CFIUS inside the Department. We
12 have beefed up our efforts on that to ensure that we are
13 being extra cautious on both, making sure that we are not
14 -- that we are not partnering with entities that will
15 create a problem for the United States, but also that we
16 are viewing those who with whom we are working to ensure
17 that sensitive information is not going in the wrong
18 direction.

19 Senator Ernst: Thank you. I appreciate that. We
20 have seen other Departments that have, through contracts
21 and subcontracts, sent dollars overseas to other entities.

22 So, all we have to do is look at the COVID-19 issue
23 that we had and how American taxpayer dollars were funneled
24 to China for research. So, as you know, talking through
25 this, is it your view then that taxpayer dollars are not

1 going to those areas that might be benefiting our
2 adversaries?

3 Secretary Granholm: Well, you know, you have to sort
4 of carve this with a scalpel and not with an ax when you
5 are talking about the civilian side, because supply chains
6 in the manufacturing base have been so intertwined, for
7 example, with China that it -- that to say that a supply
8 chain in an EV company that has a component that may have
9 been re-shored from China, that may have actually started
10 with the United States, but we get it back, but there may
11 be some kind of connection.

12 What we want to do is to mitigate the potential damage
13 to the U.S.. We do want to re-shore, obviously, IP and
14 companies that were sucked overseas with intentional
15 industrial strategy by other countries to be able to get
16 that.

17 So, we try to really balance what is going to be in
18 the interests of America and security, to ensure that both
19 taxpayer dollars are spent for -- in a way that will serve
20 American interests. That is very important.

21 Senator Ernst: Thank you, Secretary. And thank you
22 so much for the time, Mr. Chair. I do think it is
23 important that we acknowledge that we need to bring that
24 supply chain back to the United States of America, but
25 especially sensitive research. We need to ensure that no

1 taxpayer dollars are going to entities that we would
2 consider adversaries. Thank you, Secretary.

3 Chairman Reed: Thank you, Senator Ernst. Senator
4 Rosen, please.

5 Senator Rosen: Well, thank you, Chairman Reed. I
6 really appreciate the hearing. I want to thank Secretary
7 Granholm and Administrator Hruby, of course, for your
8 service, for your hard work, and your knowledge.

9 And of course, I am going to talk a little bit about
10 Nevada, because Nevada has, of course, played a critical
11 role in nuclear weapons development, but often at a very
12 high cost. From 1951 to 1992, 928 nuclear weapons were
13 actually detonated in Nevada.

14 It is causing people and land to be exposed to toxic
15 levels of radiation, and it is why I firmly oppose any
16 policies that would put Nevadans at risk again, from
17 returning to the days of explosive testing, nuclear
18 testing, out to the shipping of nuclear waste to be stored
19 at Yucca mountain, and a dangerous -- Yucca mountain is a
20 dangerous and misguided proposal that some of our
21 colleagues in the House, well they just raised it again
22 last week.

23 That is one of the reasons why, of course, I strongly
24 support the mission of the Nevada National Security Site,
25 which verifies the reliability and the effectiveness of our

1 nuclear stockpile through advanced scientific experiments
2 and modeling so that nuclear weapons will never have to be
3 tested again.

4 So, to both of you, as you know, mining and
5 construction continue at the principal underground
6 laboratory for subcritical experimentation, or PULSE,
7 formerly known as the U1A complex. And this expansion is
8 going to allow the lab to house two machines that will
9 improve our ability to assess performance, safety, and
10 reliability of our nuclear stockpile.

11 So, Secretary, can you provide us an update, and then
12 Administrator, on the project and speak to some of the
13 other key projects currently underway at the site, please.

14 Secretary Granholm: Great. Thanks. I think I am
15 going to defer the question to the Administrator since she
16 has got her finger on the pulse of all this.

17 Senator Rosen: Okay. Perfect. All Righty, thank
18 you.

19 Ms. Hruby: Thanks, Senator Rosen. We enjoy a great
20 relationship with you and the State of Nevada, and we are
21 grateful for the work that is being done there. Let's see,
22 you referred to the PULSE facility, formerly known as the
23 U1A, and the things we are doing there, which is extremely
24 important to our stockpile.

25 So, this concerns subcritical testing that are

1 consistent with the Comprehensive Test Ban Treaty but
2 retain our knowledge of how to work underground and how to
3 work at NNSS. These experiments are -- will allow us to
4 look at aging of plutonium materials and plutonium pits,
5 both aged ones and then new ones to verify that they
6 perform as we would expect them to perform from our
7 previous test, so that we will never have to test again.

8 That is our goal. Other important things we are doing
9 at NNSS are these tests, the chemical explosive tests, that
10 simulate very low yield nuclear explosive tests that might
11 be done by others that we want to detect the seismic
12 signatures so we can be sure that all countries around the
13 world are -- that say they are Comprehensive Test Ban
14 Treaty compliant are in fact complying with the Test Ban
15 Treaty.

16 And so, we are doing some very important work at
17 Nevada, and that has become a very key facility for us.

18 Senator Rosen: Thank you. Well, we are very proud of
19 what we do, and we are proud of the remote sensing lab that
20 helps with that as well. But of course, we need the
21 workforce to work out there.

22 So, there has been a steady rise in the workforce
23 requirements in the Department of Energy and more
24 specifically at the NNSA. And the recurring challenge has
25 always been the development of that skilled workforce,

1 particularly in critical feels like physics, mathematics,
2 computer programing, and chemistry.

3 So, I am excited about the proposed Nevada National
4 Security Site Fast Start Program and its potential for
5 recruiting, educating, and training these entry level
6 technicians to begin careers in nuclear security related
7 jobs right at home in Nevada.

8 So, the Fast Start Program is going to support the
9 NNSS, which has identified, of course you know this, the
10 growing need to have skilled technicians, really skilled
11 employees from diverse background to work on our National
12 Security programs, even in construction, maintenance,
13 business operations, as well as the science and technology.

14 So, Administrator, given these dynamics, how is the
15 Department of Energy, and of course, Secretary, you can
16 answer too, and the NNSA actively engaging with our
17 academic institutions to grow the future workforce?

18 And can you talk about the Fast Start Program and how
19 our local students might begin careers working at the
20 Nevada National Security Site -- or we still call it the
21 test site in Nevada.

22 Ms. Hruby: Yes, we try to call experiments now. It
23 is an important distinction, so. But here is what we do.
24 We work intensely on our pipeline. We have university
25 programs that are for recruiting.

1 We have university programs that are for research.
2 Both are great pipeline programs for us. And we have
3 extended those two programs for our technologist and for
4 craft workers, and others that we need desperately in our
5 complex as well, to be very highly skilled workers.

6 And what we do is we identify skills that are needed
7 across the complex, and we have national programs for that.
8 And we have -- we identify skills that are needed locally,
9 and we have local programs for that, that we support.

10 And the program, the Fast Program in Nevada is one
11 where it is aimed to support the needs of that site
12 locally, where people tend to -- we tend to recruit people
13 from the region. We would like to keep them in the region.
14 And that program is aimed to do just that. So, thank you
15 for your nice words about it.

16 Senator Rosen: Thank you.

17 Ms. Hruby: Can I just jump on that?

18 Senator Rosen: Yes, yes.

19 Secretary Granholm: Because of course, once we
20 recruit -- once we recruit and train, we don't want to lose
21 them.

22 Senator Rosen: Right.

23 Secretary Granholm: And so, we were just discussing a
24 little bit earlier, and I just want to foot stomp the need
25 for NNSA and the whole scientific enterprise of the United

1 States, so much of which is embedded in the Department of
2 Energy, to have the ability to compete with the private
3 sector by ensuring that we have got decent work conditions,
4 not overloaded folks, the ability to pay what they are
5 worth, etcetera.

6 So, the support that this committee can offer to our
7 appropriations request to hire additional people so that we
8 don't have burnout and attrition before retirement would be
9 greatly appreciated.

10 Senator Rosen: Thank you. Thank you so much.

11 Chairman Reed: Thank you, Senator Rosen. Senator
12 Scott, please.

13 Senator Scott: Thank you, Chair. Thank you all for
14 being here. Secretary Granholm, the Biden Administration
15 announced that they were going to pause pending LNG export
16 projects, which seems like the stupidest decision I could
17 imagine. So, in my State, we export LNG. We have through
18 our ports.

19 We put a lot of money when I was Governor into our
20 ports. We export it. And so, if you look around the
21 world, they want our LNG. We have got a war going on in
22 Europe. We don't want people dependent on Russia.

23 So, we are exporting to Europe. We are exporting to
24 Asia, right. The people, the bad guys are the ones that
25 produce the oil, a lot of them, Russia, Iran, right. So,

1 if we don't do the exports, right, so where do our allies
2 buy it?

3 They have to buy more from Russia. They have to buy
4 more from Iran, okay. So, Iran has invaded Ukraine. Iran
5 is trying to destroy Israel. So, this makes it, one,
6 economically, it hurts my State. But number two, from the
7 standpoint of what is going on in the world, this is the
8 stupidest decision ever. So, can you explain it to me?

9 Secretary Granholm: Yes. Just to clarify a point,
10 this is a pause, it is not a halt.

11 Senator Scott: Why did we pause?

12 Secretary Granholm: So that we can evaluate as we do,
13 and are required to do, what is in the public interest. We
14 do a study every few years, and right now is when we are
15 doing the study, to determine whether the enormous increase
16 in --

17 Senator Scott: Did Russia pause in Ukraine?

18 Secretary Granholm: -- authorizations --

19 Senator Scott: Did Russia pause going into Ukraine?
20 Has Iran paused?

21 Secretary Granholm: All of the current exports are
22 still happening. All of the current authorizations, which
23 goes up to 48 billion cubic feet, are all proceeding --

24 Senator Scott: Did you pause the new pending exports
25 project?

1 Secretary Granholm: We did. But everything that is
2 -- we are currently the largest exporter of liquefied
3 natural gas, and we will remain the largest exporter of
4 liquefied natural gas. It is a temporary pause --

5 Senator Scott: Do you understand what you are doing
6 to our allies?

7 Secretary Granholm: -- solely to understand the
8 impacts.

9 Senator Scott: Secretary, what are you doing to our
10 allies?

11 Secretary Granholm: We have talked with our allies
12 about this. They very well understand that this is a
13 temporary pause while we do an analysis of what the impacts
14 are in the United States --

15 Senator Scott: What would the analysis be? I mean,
16 what do you have to --

17 Secretary Granholm: I am happy to tell you.

18 Senator Scott: I mean what is -- just stop and think
19 about it for just a second.

20 Secretary Granholm: Let me --

21 Senator Scott: The world is at war. They need our
22 energy.

23 Secretary Granholm: And they will continue to get it,
24 sir.

25 Senator Scott: And you are telling them, no, we are

1 going to slow it down.

2 Secretary Granholm: No, that is not what we are
3 telling them.

4 Senator Scott: That is what a pause means.

5 Secretary Granholm: No, a pause means on future
6 approvals. We have so much approved that we are well
7 saturating the globe if those authorizations are built out.
8 We have 14 billion cubic feet of capacity right now. That
9 makes us the largest in the world right now. Another 12
10 billion cubic feet that are under construction.

11 Senator Scott: What do you have to study?

12 Secretary Granholm: None of that is stopping.

13 Senator Scott: What do you have to study?

14 Secretary Granholm: It is only a pause for a study.

15 Senator Scott: Okay. What do you have to study?

16 Secretary Granholm: That will be completed in months.

17 Senator Scott: Okay. What do you have to study?

18 What is there to study? We want to do -- we want to sell
19 LNG --

20 Secretary Granholm: There are four things we are
21 studying. To be able to answer your question, there are
22 four things we are studying. One is what is the impact
23 domestically on our manufacturers if we export almost half
24 of our capacity for producing natural gas. What is the
25 impact in terms of cost, number one.

1 Number two, what is the impact the life cycle analysis
2 on the export of LNG. Number three what is the impact on
3 our allies overseas? What is the demand we are going to be
4 seeing to make sure that they are well supplied and that
5 they have the energy that they need. And --

6 Senator Scott: Have you heard any manufacturer call
7 you and say, gosh, I am worried because we are selling LNG
8 overseas?

9 Secretary Granholm: There are a lot of domestic
10 concerns. In fact, we have gotten letters on both sides of
11 the aisle here about what does it mean for costs at home if
12 you export almost half of what you currently produce. What
13 is the impact from a supply and demand point? It is a
14 question. And that is -- we are only --

15 Senator Scott: We should export nothing?

16 Secretary Granholm: We are going to -- no, I am
17 saying --

18 Senator Scott: Should we do that we all -- everything
19 we export?

20 Secretary Granholm: As we authorize massive amounts
21 of exports, we need to know what is the impact on America,
22 on our American manufacturers, on our homeowners. What is
23 the cost --

24 Senator Scott: Secretary, with that analysis, do you
25 think we ought to put pauses on exporting anything else we

1 manufacture in this country?

2 Secretary Granholm: The reason why we are doing this
3 is because there has been such an extraordinary increase in
4 authorizations. When we did our last study, we were only
5 exporting 4 billion cubic feet. Now we have authorized 48
6 billion.

7 Not all of that will be built, but the point is, we
8 need to go eyes open to see what is the impact on us at
9 home, as well as on our allies, and to have our labs do a
10 modeling to make sure that we follow the science and
11 understand what the impacts are before we start to approve
12 a whole bunch more.

13 Senator Scott: So, if you were head of Commerce, then
14 you would start -- you would start pausing exports of
15 manufacturing goods because you think, man, that is going
16 to cause the cost of manufacturing goods for Americans to
17 go up. That makes -- it makes zero sense, and it is having
18 a dramatic impact on my State. So, I think you made a
19 horrible decision and I hope you will change.

20 Chairman Reed: Thank you, Senator Scott. Senator
21 Peters, please.

22 Senator Peters: Thank you, Mr. Chairman. Secretary
23 Granholm, good to see you again.

24 Secretary Granholm: Good to see you, Senator.

25 Senator Peters: Administrator Hruby, welcome to the

1 committee. My first question is to both of you. As you
2 both are well aware, the availability of low cost drones
3 has dramatically increased the risk of weaponizing unmanned
4 aerial systems being used against our critical
5 infrastructure.

6 This threat is unfortunately particularly acute at our
7 national laboratories, plants and installations responsible
8 for both maintaining as well as sustaining our nuclear
9 stockpile. So, my question for both of you, I understand
10 you have been working to mitigate threats by drones and UAS
11 to our nuclear infrastructure.

12 And as these risks continue to evolve, what enhanced
13 authorities do you need to protect that critical
14 infrastructure? Administrator Hruby, we will start with
15 you.

16 Ms. Hruby: Okay. Thank you, Senator. We do already
17 deploy UAS detection and counter UAS systems, but they are
18 not good enough for the future threats that we are already
19 beginning to see.

20 So, we are upgrading those, and we are upgrading also
21 -- so we are going to upgrade our systems, especially to
22 help us counter threats that are evolving. In addition, we
23 are looking at our policies and we are creating a new test
24 range.

25 So, the test range will be in Idaho, where we can make

1 sure that we fully understand the systems, the counter UAS
2 system, and we can train people to do that. And then we
3 are updating our policies that will be -- we will we will
4 get a look across the interagency in the U.S., and there
5 are a lot of people who have impact on policy, but that we
6 will change -- we are trying to change our policy so that
7 our protective forces, as they detect a UASs that cross a
8 line to the things that we are really trying to guard, our
9 crown jewels, if you will, that they can counter those
10 systems without additional approvals.

11 Senator Peters: Right. Secretary Granholm.

12 [Technical problems.]

13 Senator Peters: Very good. Since the beginning of
14 the unprovoked invasion by Russia, Russia has targeted
15 Ukrainians' energy infrastructure, including its nuclear
16 power plants.

17 And in the process, they have deprived millions of
18 Ukrainians of heat, as well as electricity. In response,
19 DOE and NNSA have assisted our Ukrainian partners in
20 stabilizing their energy markets and safeguarding their
21 nuclear infrastructure.

22 So, my question for the both of you is, how has DOE
23 and NNSA support allowed the Ukrainians to continue their
24 resistance against Russia? And do your organizations have
25 the resources that you need to continue these efforts,

1 specifically in support of Ukraine's nuclear power plants?

2 Secretary Granholm: Thank you for this question and
3 for recognizing that we are partners with Ukraine in trying
4 to preserve and rebuild their energy infrastructure.

5 NNSA, and I am sure Dr. Hruby can say a word about
6 this, has been an incredible partner in providing, for
7 example, radiation detection technology training on that.

8 The Department of Energy has also identified where the
9 gaps are in their electricity system, for example,
10 transformers, etcetera, what do you need, and we have
11 delivered, scores, hundreds of components that we have
12 actually gotten donated from either around the United
13 States or our allies so that their grid can be rebuilt.

14 We are also focused on war proofing the existing grid
15 and the future grid as well. So, what are the ways to
16 harden the existing grid? We have worked with them on
17 connecting their grid to the EU.

18 And so, it is now connected to the EU and not reliant
19 upon Russia. But clearly we also have to pursue President
20 Zelensky's goal of being much -- having a much more
21 distributed and clean energy system, which is less
22 vulnerable to attacks. And so, planning for that future is
23 part of what we are engaged in now.

24 Hopefully, you know, this conflict gets resolved in
25 Ukraine's favor soon, but we want to be partners with them

1 in building the grid of the future there as well.

2 Senator Peters: Great. Thank you.

3 Ms. Hruby: And just let me say a few words about the
4 nuclear side.

5 So, we have installed, since the start of this
6 conflict, many radiological and nuclear detectors in
7 Ukraine and the surrounding areas to make sure that we can
8 detect as soon as possible independently any radiological
9 or nuclear release from an incident at a nuclear power
10 plant or any other kind of incident.

11 And we have spent a lot of time training our Ukrainian
12 colleagues so that in the event of an incident, they would
13 have a proper -- an effective response, a public health
14 response to that incident.

15 Senator Peters: Right. Thank you. Thank you to both
16 of you. Thank you, Mr. Chairman.

17 Chairman Reed: Thank you, Senator Peters. Senator
18 Tuberville, please.

19 Senator Tuberville: Thank you, Mr. Chairman. Thanks,
20 both, for being here.

21 In Alabama, we are the fifth largest producer of
22 nuclear with two nuclear plants and five nuclear reactors.
23 I know a lot of people in our neck of the woods are very
24 concerned about our power grid in the future.

25 Just a quick question about building new nuclear

1 plants. The Endangered Species Act and the National
2 Environmental Policy Act, you know, if we are looking to
3 build a nuclear plant, just a review has lasted four to
4 seven years.

5 We should probably take about one to two years. And
6 if we are going to combat China, if we are going to build a
7 new power grid, Secretary, do you see the average timeline
8 to complete these environmental studies as normal? And how
9 can we go around this?

10 Secretary Granholm: Well, I am not sure about normal,
11 but I do agree with you. At least what I assume you are
12 getting at, which is that we need to speed up times for
13 permitting, both nuclear as well as transmission, as well
14 as other energy generation, including clean energy.

15 Senator Tuberville: How do we get bogged down in
16 this? I mean, it just doesn't make any sense to me because
17 we are getting overrun, you know, by other countries.

18 Secretary Granholm: I know our office would be eager
19 to work with you or anyone on the committee, and I know a
20 number of people have been working on permitting reform to
21 accelerate, because we believe that that is important for
22 the reliability of our grid.

23 Senator Tuberville: Thank you. Over 40 percent of
24 our U.S. Navy's combat capable warships are nuclear
25 powered.

1 The Office of Naval Reactors has a cradle to grave
2 responsibility for designing, maintaining, and disposing
3 the spent fuel from vital nuclear reactors.

4 But much of these facilities and infrastructures the
5 Navy is using is aging. I know for a fact we are spending
6 tens of millions of dollars with ships that are at dry dock
7 that we are having to pay just to have them dry docked
8 instead of taking the fuel off, having it replenished, or
9 disposed of.

10 So, we are having delays in the spent fuel handling
11 recapitalization project, and it is affecting all of our
12 nuclear plants. And it is my understanding from the Navy
13 -- what do you see as a problem, and how do we fix that,
14 Secretary? Either one of you, if you want to answer that.

15 Ms. Hruby: Yes. Senator, thank you for that
16 question. We are building a new spent fuel handling
17 capability in Idaho.

18 And it is sized so that it can handle all nuclear
19 reactors on all of our Navy ships, which today's facilities
20 can't, and it is very old. And we had a lot of, honestly,
21 we had a lot of trouble post-COVID with this construction
22 project, just like we did with many of our other
23 construction projects, but it has really turned around.

24 I was there not too long ago. All the concrete is in,
25 rebar is going up. It is really coming along, and I think

1 we are on a path now that will get this facility built and
2 operational, just as we -- you know, we intend to.

3 We are working this problem hard. And our naval
4 reactors folks, I think, have done a really good job of
5 taking a project behind schedule and trying to catch up as
6 much time as possible.

7 Senator Tuberville: Am I correct, it is costing us
8 millions of dollars just to drydock these to store?

9 Ms. Hruby: Senator, I don't know the cost of the dry
10 docking, but I can talk to my colleagues in naval reactors
11 --

12 Senator Tuberville: I would love to get some kind of
13 report on that, because my understanding is, it is costing
14 tens of millions just to have them parked and not anything
15 done to them.

16 And we don't have the capabilities of dispensing or
17 doing whatever we do with this fuel on, whether it is a
18 flattop, whether it is a submarine. And we need to figure
19 this out if it is costing us that much money.

20 Ms. Hruby: Right. Understood. We will get back with
21 you on the cost, but you can -- you have my word that we
22 are working as hard as possible to get this new facility up
23 and operating so that --

24 Senator Tuberville: We only have one that we are
25 working on?

1 Ms. Hruby: Yes, sir. Yes,

2 Senator Tuberville: Yes. I know we have a shipyard
3 in Mobile that is looking to do the enterprise in the very
4 near future. Hopefully that happens, but you can imagine
5 how old the enterprise is, how long it has been setting dry
6 docking, and the money that it costs the country and the
7 taxpayers for -- you know, to be just sitting there.
8 Nothing done with it. So, thank you very much. Thank you,
9 Mr. Chairman.

10 Chairman Reed: Thank you, Senator Tuberville.
11 Senator Rounds, please.

12 Senator Rounds: Thank you, Mr. Chairman. Thank you
13 to both of you today, Secretary Granholm, Administrator
14 Hruby. It actually feels more comfortable to say Governor
15 Granholm, but, those are the good old days, but thanks for
16 both for being here.

17 Secretary Granholm, before we move on to the matters
18 pertaining to nuclear deterrence, I would like to briefly
19 discuss the Sanford Underground Research Facility in Lead,
20 South Dakota, its relationship with Fermi Laboratory.

21 This facility has been an important partner for the
22 Department of Energy in conducting critical research in the
23 fields of particle physics and dark matter. Sometimes I
24 think people wonder what in the world we are doing in the
25 Department of Energy in working on these particular areas

1 of expertise, but this is a pretty important deal for our
2 nation.

3 Can you talk a little bit about the importance of the
4 funding for this type of a facility in terms of our long
5 term strategies?

6 Secretary Granholm: Yes. Thank you so much for that.
7 We are very proud of this, too. It is the deepest lab in
8 the United States. And in the experiment with Fermi --

9 Senator Rounds: 4,850 ft. Underground.

10 Secretary Granholm: Amazing. And of course, trying
11 to understand the secrets of the universe, the secrets of
12 matter, the secrets of neutrinos in this case, is super
13 important to basic fundamental science.

14 And the thing we say about basic research is that you
15 may not know where it leads, but when you look back, you
16 realize that so much, whether it is in materials science
17 or, you know, medicine, etcetera, has -- stems from the
18 research that is being done in these massive user
19 facilities, like at SURF.

20 I am pleased to say that, and you probably know this,
21 but that in July of this year, that the excavation sub
22 project is going to be completed. The outfitted portion
23 will be done by September of 2026.

24 The cosmic rays in the first sight detector at SURF
25 will be in 2029, and first neutrinos in 2031. So, we are

1 going to continue to support this. Hopefully, Congress
2 will continue to support it with your leadership as well.

3 Senator Rounds: I totally agree. And I just think
4 the message that we need to be sending is, is neutrinos are
5 very important.

6 Secretary Granholm: Neutrinos are very important.

7 Senator Rounds: Great. Thank you. Administrator
8 Hruby, can you update us on the current issue, and this may
9 be getting into the weeds a little bit, but I think it is
10 important to bring it to our attention, the current issue
11 with the availability of high explosive binders and how
12 this could affect our current modernization plan.

13 Specifically, it is a chemical that binds these high
14 explosives together, and apparently it is associated, those
15 that are available to us, have a PFAS component to them.
16 And since we are trying to eliminate PFAS, we really have a
17 problem when it comes to this type of a product which needs
18 that particular component in it. Can you talk a little bit
19 about that and what our plans are?

20 Ms. Hruby: Yes. Thanks, Senator Rounds. Let's see.
21 It is true that we buy a PFAS binder from the commercial
22 sector. And this product is no longer going to be made by
23 the primary manufacturer.

24 And it does then mean that we need to develop another
25 binder or another source for this binder, and we are

1 working hard on that. So, we have several lines of effort.
2 The first and most important, I think, is that we are going
3 to recycle as much as we can the current binder that we
4 have in this system to stay on schedule for our weapon
5 delivery programs.

6 We are looking at also potentially -- well, we are
7 going to buy as much binder as we can from the supplier
8 before they stop making it.

9 Senator Rounds: And the reason why they are stopping
10 making it is because we have all identified that PFAS is
11 really dangerous to the environment, but most of that is
12 from firefighting, not necessarily from a plastic component
13 that we would be using in this type of a binder. Correct?

14 Ms. Hruby: That is right. This is a complicated
15 environmental issue. The particular PFAS material involved
16 in the binder that we care about has not been shown to have
17 an adverse effect on human health. However, it does last a
18 long time. And as a result, the EPA is, you know, lumping
19 these together into a system that they don't want in the
20 environment.

21 So, we have to find an alternative and we have to use
22 all the things that we currently have to get through our
23 current program. And we have a very active group of people
24 who are working this intensely, so that we can stay on
25 schedule. But obviously we can't have nuclear weapons

1 without effective explosive.

2 Senator Rounds: Or perhaps, as an alternative,
3 getting an exception for this type of a use for a PFAS that
4 is not hurting the environment.

5 Ms. Hruby: Yes -- that --

6 Senator Rounds: I know it gets into policy areas, but
7 it is a real problem for you --

8 Ms. Hruby: It is in the policy area, correct.

9 Senator Rounds: Thank you. Thank you, Mr. Chairman.

10 Chairman Reed: Thank you, Senator Rounds. Senator
11 King, please.

12 Senator King: Thank you, Mr. Chairman. Nice to see
13 both of you this morning. Administrator Hruby, some
14 questions.

15 I am worried about pit production and the capacity to
16 meet increasing demand for weapon grade material given the
17 fact that we are refurbishing the entire triad, plus AUKUS.
18 Tell me where we are in terms of pit production at the two
19 facilities.

20 Ms. Hruby: Yes. Thank you, Senator King. Let's see,
21 just to level set, we are reestablishing pet production,
22 which was stopped in the United States with the closure of
23 Rocky Flats.

24 We are doing that at two locations, Los Alamos
25 National Laboratories, and the Savannah River site. Los

1 Alamos already had an existing facility to work with
2 plutonium, but it is limited in size, and it was that
3 making pits.

4 That is moving along nicely. We expect that our first
5 fully certified, war reserve pit will be produced at Los
6 Alamos in this year. And then we are working towards a
7 goal of 30 pits per year at Los Alamos.

8 Those pits will be in the W87-1 warhead, which is for
9 the Sentinel. We expect to be getting 30 pits per year by
10 2028, with do reliability by 2030.

11 Senator King: Is the pit production schedule running
12 in parallel with the renewal of the triad? In other words,
13 you don't see a gap in terms of having the capacity for
14 Sentinel, for example, and not having the warheads?

15 Ms. Hruby: Yes, we have a plan that is fully
16 consistent with the schedule with the Department of Defense
17 to put new pits in our warheads. Now, in some cases, the
18 Savannah River is -- we are targeting completion of
19 construction of the Savannah River plutonium processing
20 facility in 2032.

21 And then we have to introduce plutonium. We have to
22 introduce the processes and the rate production. That will
23 take a few more years. But our plan is to be able to
24 produce pits for the new W93 warhead, and we are targeting
25 at least half of that population.

1 We don't think we can get that facility up in time to
2 do all of the W93 builds, but it is important that we have
3 a fair number of those new pits, because our option is to
4 reuse pits, which introduces some uncertainty, but more
5 importantly, we just -- it limits what else we can do in
6 our stockpile when we reuse those pits.

7 Senator King: So, do you feel we are on a reasonable,
8 predictable schedule at Savannah River? Are you confident
9 that we have -- you know, the contractor and the plans are
10 moving forward adequately?

11 Ms. Hruby: I am increasingly confident. You know, we
12 have a lot of work in front of us. But we -- I feel much
13 better about where we are. I think we have turned the
14 corner in terms of what we are doing at Savannah River, and
15 we have a good team in place.

16 Senator King: Let me change the subject for a moment.
17 One of my nightmares is a terrorist organization getting a
18 hold of a nuclear weapon, and we have got North Korea,
19 Iran. North Korea would probably sell anything if they can
20 get cash for it. Talk to me about the technology of
21 detection.

22 Deterrence doesn't work with 15 people who don't care
23 about dying and don't have a capital city. In other words,
24 the whole theory of deterrence doesn't work with
25 terrorists. So, the first line of defense has to be

1 detection and understanding what is going on.

2 Do we -- are we working in that direction? How do we
3 know that there might be a nuclear device in a container
4 that is on its way to Miami?

5 Ms. Hruby: Yes. Well, a lot of the responsibility
6 for detection is also with the Department of Homeland
7 Security. But we develop technologies, and we place those
8 technologies around the world.

9 And we have a lot of those in place. They are
10 operating and we are increasing the countries that we are
11 working with because of their neighborhood, and because we
12 want to make sure that the U.S. is their go to partner for
13 that. So, we have increased the number of countries we are
14 working with in terms of detection.

15 Senator King: Well, this should be a very, very high
16 priority because there are people -- if those people on
17 September 11th could have killed 3 million people instead
18 of 3,000, they would have. And so, I just -- as sure as we
19 are sitting here, there are people that are adversaries
20 that are thinking about how to acquire a nuclear weapon.

21 Ms. Hruby: I agree, Senator. It is a very high
22 priority for us.

23 Senator King: Thank you. Thank you, Mr. Chair.

24 Chairman Reed: Thank you, Senator King. Senator
25 Cotton, please.

1 Senator Cotton: Secretary Granholm, last September,
2 President Biden said, "the only existential threat humanity
3 faces, even things more frightening than a nuclear war, is
4 global warming." Do you agree?

5 Secretary Granholm: I strongly believe that climate
6 change is an existential threat to the planet.

7 Senator Cotton: Okay, so that is not exactly my
8 question. President Biden said the only existential threat
9 humanity faces, even things more frightening than a nuclear
10 war, is global warming. Do you believe that nuclear war is
11 an existential threat?

12 Secretary Granholm: Of course.

13 Senator Cotton: Okay, so that is not what the
14 President said. What is more frightening about global
15 warming than nuclear war?

16 Secretary Granholm: Well, I am not in a position to
17 compare the two, but I can say that climate change is
18 having a dastardly impact across the globe, particularly in
19 areas that are subject to heat. We have had record heat
20 years now, consecutive year after year, which has
21 devastated that --

22 Senator Cotton: Do you agree -- sounds like you don't
23 agree with the President that global warming is more
24 frightening than nuclear war?

25 Secretary Granholm: I am not in a position to

1 characterize what the President was saying. I am just
2 saying that it is an existential threat.

3 Senator Cotton: Okay. So, as the Secretary of
4 Energy, your most important job is our nation's stockpile
5 of nuclear weapons, which is the backbone of our entire
6 national defense. Every military operations by the
7 Department of Defense is underwritten by that strategic
8 deterrent.

9 But last year, you testified that ensuring we have
10 enough lithium for electric vehicle batteries is more
11 urgent than ensuring the nation's stockpile for nuclear
12 weapons -- that nuclear weapons are adequate.

13 Do you still believe that our lithium supply, as
14 important as that is and I grant you, is more important
15 than the nation's nuclear weapons stockpile?

16 Secretary Granholm: I don't recall saying that.

17 Senator Cotton: Okay. Do you believe that?

18 Secretary Granholm: I believe that the lithium supply
19 is important, but the nation's nuclear stockpile is very
20 important as well.

21 Senator Cotton: Is it the most important thing you do
22 in your job?

23 Secretary Granholm: I don't rank things in my job.

24 Senator Cotton: Not at all? So, making sure that the
25 annual picnic comes off well is as important as the

1 nation's nuclear stockpile?

2 Secretary Granholm: That I would rank lower, yes.

3 Senator Cotton: All right. Ms. Hruby, can you
4 discuss what you are doing to recruit agents to the Office
5 of Secure Transportation? Do you have enough agents to
6 accomplish your current nuclear weapons transportation
7 requirements?

8 Ms. Hruby: Yes, thank you for this question, Senator.

9 We are -- this is a very important function that we
10 have that a lot of people don't understand that we do
11 transport nuclear weapons that are still in the custody of
12 the Department of Energy or when they are coming back to
13 the custody of the Department of Energy. And these agents
14 are amazing.

15 They have a hard job, and they do it very well, and
16 they do it -- they have done it safely and securely for a
17 long period of time. And of course, we have a great
18 training facility at Fort Chaffee. We are always trying to
19 recruit people.

20 This is -- we have enough. We do our job. But we
21 have to work hard to recruit, and as importantly, train the
22 agents as we get them. So, it is a constant concern for
23 us, but we are paying attention to it.

24 Senator Cotton: These are highly specialized roles
25 and equipment, right? You can't just throw a nuclear

1 warhead in the back of your F-150 and drive it between
2 military bases.

3 Ms. Hruby: Not in the United States of America. We
4 have very specialized trucks, vehicles, convoys that
5 transport materials that these agents are responsible for.
6 They go through rigorous testing, both physically and
7 mentally, to be capable of doing these jobs. They are a
8 hugely important part of our workforce.

9 Senator Cotton: Okay. I believe you have 370
10 positions authorized. You know how many currently you have
11 filled?

12 Ms. Hruby: I don't off the top of my head. I can get
13 back to you --

14 Senator Cotton: My understanding, it is only about
15 280. And with the upcoming modernization plans, I have
16 concerns about the office's ability to fulfill its mission
17 and the strain it is going to put on those agents.

18 So, I would encourage you and the Department to look
19 at what you can do to recruit more folks into that office.
20 I see that the clock has disappeared, so I guess I have an
21 indefinite amount of time to ask as many questions as I
22 want, but I will yield back to the chairman.

23 Chairman Reed: Thank you very much, Senator Cotton.
24 And let me recognize for five minutes, Senator Blumenthal.

25 Senator Blumenthal: Thank you, Mr. Chairman. Thank

1 you both for being here today and for your very extensive
2 public service.

3 I would like to ask Secretary Granholm, the standards
4 for PFAS that you have adopted, the Department of Energy,
5 and that you now implement, are they different from the
6 standards that the EPA just announced as applicable to
7 municipalities and the major initiative that President
8 Biden has started to rid our nation's water serving
9 citizens around the nation of this really dreaded threat?

10 Secretary Granholm: I would have to get back to you
11 on that. Obviously, we don't want to see different
12 standards being applied across Departments differently.
13 And I am sure there will be an effort to realign, if it is,
14 in fact, different.

15 Senator Blumenthal: Yea, I think it is important that
16 the standards be uniform, because -- and I frankly don't
17 know the answer to that question myself.

18 Secretary Granholm: EPA sets this, so we would follow
19 their lead.

20 Senator Blumenthal: Great. Administrator Hruby, I am
21 concerned about -- I know you have been asked about, I
22 think, by Senator Kaine about AUKUS and the nuclear reactor
23 program there.

24 But I am concerned about whether from your
25 perspective, the naval reactors are on track to support the

1 AUKUS commitments that we have made to production delivery
2 of the Virginia Class boats over the next 10 to 15 years
3 relating to Australia. Do you think that program is on
4 track?

5 Ms. Hruby: Yes. The Naval Reactors Organization has
6 worked very hard to evaluate the options that we provided
7 to the Australians to support, and I am confident with the
8 proposed plan that our Naval Reactors Organization can
9 support that. That is separate, naval reactors are
10 separate from shipbuilding, so really just speaking to,
11 will we be able to provide the naval reactors needed for
12 the AUKUS deal, and I am confident that we can.

13 Senator Blumenthal: I want to ask you and maybe
14 Secretary Granholm on the issue of security for the reactor
15 facilities in Ukraine and the danger that is posed by the
16 Russian aggression there. Have you -- do you know whether
17 there is money in the supplemental that is specifically
18 allocated to nuclear safety in Ukraine?

19 Ms. Hruby: Yes. Our requests in the supplemental for
20 an NNSA, Department of Energy is \$149 million, and we very
21 much hope that we get that --

22 Senator Blumenthal: I apologize if you have already
23 answered this question, but in terms of that supplemental
24 request, do you view it as important to the safety of those
25 reactors and of the region from possible disruption?

1 Ms. Hruby: I do. I think it is important for the
2 consequences and for the safety. So, we watch for
3 radiological release, so it is important to recognize it
4 immediately. We have trained with the Ukrainians, and we
5 meet with them on a regular basis to make sure that they
6 would know how to respond in the event of a radiological
7 release.

8 We have ways to help protect, if the Ukrainians adopt
9 them, the important electrical nodes, grid nodes around the
10 reactors. But we can't prevent. We have no role in
11 preventing a drone strike or an attack on the plant.

12 So, I just -- but what -- we are trying to lower the
13 consequence in the event that anything would happen or that
14 -- and hopefully that wouldn't happen.

15 Senator Blumenthal: In in my trips to Ukraine, I have
16 been there five times over the last couple of years, I have
17 talked to President Zelensky and his energy and his
18 military team about this issue, and you are absolutely
19 right. You can't guarantee the air defense. That is a
20 military function.

21 And obviously self-defense from missile and drone
22 attacks is part of this supplemental, so I think it is
23 important to energy security as well as other forms of
24 security in the country. I noticed the clock is back on,
25 Mr. Chairman, and my time has expired, so I am going to

1 yield.

2 Chairman Reed: Thank you very much, Senator
3 Blumenthal. Senator Schmitt, please.

4 Senator Schmitt: Thank you, Mr. Chairman. Secretary
5 Granholm, when was the last time you spoke to a
6 representative from the Chinese Communist Party?

7 Secretary Granholm: I spoke with a member of the
8 Chinese delegation at the APEC conference last summer.

9 Senator Schmitt: Okay. A report released in August
10 of 2023 mentions that you would consult with your
11 counterpart at the Chinese Communist Party about potential
12 Strategic Petroleum Reserve sales. Is that true?

13 Secretary Granholm: Oh, yes, I did.

14 Senator Schmitt: Okay. Was your -- what was the
15 nature of that conversation?

16 Secretary Granholm: I tried to, but we couldn't
17 connect. But I was intending to speak with him.

18 Senator Schmitt: Okay. Have you had conversations
19 outside of what -- the instance I just mentioned?

20 Secretary Granholm: When we go to an APEC summit,
21 which is the Asian Pacific Conference where we talk with
22 countries, and of course, China is a member, we often meet
23 with our counterparts. And last, I think, last summer, the
24 APEC conference. I can't remember the exact date. I know
25 that I had a conversation with my counterpart from China on

1 energy.

2 Senator Schmitt: Was your decision making process on
3 decisions related to the Strategic Petroleum Reserve
4 influenced by the conversations you had with the Chinese
5 Communist Party --?

6 Secretary Granholm: That is at a different time.

7 Senator Schmitt: Yes, I want to get back to 2021.

8 Secretary Granholm: Okay. So, the International
9 Energy Agency had a global stockpile release in response to
10 the war in Ukraine, and we were all encouraging other
11 countries to release from their stockpiles so that we could
12 replace the barrels that were pulled off the market as a
13 result of Russia's invasion of Ukraine.

14 Senator Schmitt: Well, two things have happened since
15 then. We have not replenished our Strategic Petroleum
16 Reserve, and China has an enormous stockpile now. They
17 have their own strategic petroleum reserve. Do they call
18 you to talk to you about decisions related to their
19 strategic petroleum reserve?

20 Secretary Granholm: Again, this was just a decision
21 to get a number of countries to release --

22 Senator Schmitt: But I am really just curious, why --

23 Secretary Granholm: -- globally --

24 Senator Schmitt: -- why would you be reaching out to
25 a representative from the Chinese Communist Party about our

1 decision to release oil from the --

2 Secretary Granholm: It was not about our decision.
3 It was asking them to release, as we were asking other
4 countries to release as well.

5 Senator Schmitt: Okay. It was our decision to
6 release. We still are governed by -- you know, we are not
7 governed by a world government yet. Like we make that
8 -- the Biden Administration made that decision. So, it was
9 your call to inform them of our decision to persuade them
10 to release their own strategic --?

11 Secretary Granholm: It was not about our decision.
12 It was about their decision, asking them to release, along
13 with all of these other countries, from their strategic
14 stockpiles. And in fact, a very large release did happen.

15 Senator Schmitt: And they bought a lot of that oil,
16 didn't they?

17 Secretary Granholm: I have no idea what --

18 Senator Schmitt: You don't know if China bought a lot
19 of our oil from that Strategic Petroleum Reserve release in
20 2021?

21 Secretary Granholm: I don't --

22 Senator Schmitt: You are the Energy Secretary.

23 Secretary Granholm: Our release. Obviously releases
24 happen on a global market --

25 Senator Schmitt: No, I am talking about our release.

1 They bought from our release.

2 Secretary Granholm: It is my understanding that China
3 has purchased a tiny amount, like under 3 percent, from our
4 Strategic Petroleum Reserve. That was before the ban.
5 They are no longer purchasing. Again, this is all pursuant
6 to what Congress requires us to do as an agency.

7 Senator Schmitt: There was no directive from Congress
8 for you to release that oil.

9 Secretary Granholm: No, I am talking about who we
10 sell to.

11 Senator Schmitt: Right. But you don't need to talk
12 to a representative from the Chinese Communist Party about
13 our decision to release oil.

14 Secretary Granholm: Perhaps I am not making myself
15 clear. I did not talk to a member of the Chinese Communist
16 Party --

17 Senator Schmitt: You tried, though. You tried.

18 Secretary Granholm: -- about our decision to release.
19 It was about encouraging them to release, along with all of
20 these other countries, so that --

21 Senator Schmitt: Did they do that? Did they do that?

22 Secretary Granholm: -- we could make up for the
23 Russians barrels that were pulled off the market.

24 Senator Schmitt: Did they do that?

25 Secretary Granholm: They said that they did. I don't

1 have evidence that they did.

2 Senator Schmitt: Yes, because they have an enormous
3 stockpile now, and ours is at historically low levels.

4 And I want to point out that around 900,000 barrels of
5 oil were sold to Unipecc America, subsidiary of the Chinese
6 government owned gas company Sinopec, which in turn had
7 received billions of dollars from BHR Partners.

8 Who is BHR Partners? BHR Partners is a private equity
9 firm co-founded by Hunter Biden, who held a 10 percent
10 stake. Were you aware that Hunter Biden benefited from the
11 sale of our Strategic Petroleum Reserve by an affiliated
12 Chinese company?

13 Secretary Granholm: No.

14 Senator Schmitt: Okay. You have not replenished the
15 Strategic Petroleum Reserve since, right?

16 Secretary Granholm: We are in the process of doing
17 that. Part of that is to repurchase barrels. Part of that
18 -- at taxpayer --

19 Senator Schmitt: It is too expensive now, wasn't that
20 your statement?

21 Secretary Granholm: -- at rates favorable to
22 taxpayers. At the moment, it is above what we want it to.
23 We sold barrels at \$95 a barrel. Right now, the price for
24 purchase is around \$90, or maybe a little bit less, if you
25 look at WTI.

1 Senator Schmitt: As the Secretary of Energy for the
2 United States of America, do you regret depleting our
3 Strategic Petroleum Reserves to historically low levels,
4 which they currently stand at?

5 Secretary Granholm: I would like to just set the --

6 Senator Schmitt: I would like for you to answer the
7 question because I am out of time. Do you regret that
8 decision?

9 Secretary Granholm: I am going to set -- no, I don't
10 regret doing what is right to be able to help replenish the
11 global supplies.

12 Senator Schmitt: What about for the United States of
13 America? I am talking about our country.

14 Chairman Reed: Thank you, Senator. You are out of
15 time.

16 Senator Schmitt: Thank you, Mr. Chairman. Can she
17 answer the question?

18 Chairman Reed: Senator Gillibrand, please.

19 Senator Gillibrand: Secretary Granholm, thank you for
20 your testimony today. Despite the FBI's takedown of a Volt
21 Typhoon botnet late last year, says the director, Jen
22 Easterly -- said there have been no big changes to the
23 group's activity.

24 As the sector risk management agency for the energy
25 sector, how is the Department of Energy working to help

1 critical infrastructure providers identify and mitigate
2 threats on their networks?

3 Secretary Granholm: Yes, thank you for that question.
4 It is such an important one as we perceive cyber threats to
5 be really increasing.

6 And the Volt Typhoon example is one that we are
7 particularly concerned because Chinese cyber actors are
8 pre-positioning themselves on the networks in order to be
9 ready to strike in case of a conflict.

10 So, we have, ETEC, which we have set up to be able to
11 work with our partners in the private sector, in the
12 utility space. To be on high alert for these kind of cyber
13 activities. We have set out -- we have convened, we send
14 out learnings.

15 We are in very close contact to make sure that we are
16 providing the best information we have about where one
17 might find some of these pre-position efforts. So, we are
18 -- we have set up a whole new infrastructure associated
19 with cyber through our CESER office.

20 And we are really pleased with the coordination that
21 we are seeing as a public, private partnership manner with
22 the private sector and with utilities.

23 Senator Gillibrand: Do you believe you need more
24 authorities or resources to do this outreach successfully?

25 Secretary Granholm: Well, we could certainly always

1 use more resources to be able to do that, but we believe
2 that Congress has sufficiently, at this moment, supplied us
3 with what we need through our CESER budget and our
4 partnership with CISA as well.

5 Senator Gillibrand: Do you believe that there should
6 be a mandatory participation for the private sector with
7 regard to critical infrastructure? Because from your
8 answer and from previous hearings, my understanding is CISA
9 can only provide best practices and encouragement and
10 guidance, but certainly can't mandate anything.

11 And I imagine you are under the same lack of
12 authority. Are you concerned at all that you can't
13 guarantee safety, security, or even best effort by any
14 provider in the energy sector, and that would leave us
15 vulnerable to a cyber-attack, because there is no way for
16 you to make sure that they have the best defenses or have
17 invested the right amount of cybersecurity in our critical
18 infrastructure.

19 Secretary Granholm: Yes, we have a very good
20 relationship with all of the major utilities, but there are
21 a lot of smaller utilities, munis, etcetera, and we have
22 relationship with their associations. And we send out
23 -- we disseminate information and hope that that gets, you
24 know, pressed down through is the system.

25 Senator Gillibrand: So, the word you just use is you

1 hope that they get pressed down. That is a very --

2 Secretary Granholm: Yes.

3 Senator Gillibrand: That is a very inadequate frame,
4 and I am very concerned about it. And so, I am concerned
5 that you don't have the authorities that you need and that
6 you don't have the resources you need to properly safeguard
7 the electric grid in the event of a cyber-attack by China
8 or other adversaries.

9 Secretary Granholm: Well, mandating would certainly
10 strengthen that.

11 Senator Gillibrand: Correct. Can you tell us in this
12 setting about the cyberattack on the electric grid in Guam?
13 And can you tell us about what you would have done
14 differently or what authorities, if you had, could have
15 been implemented because this is the Armed Services
16 committee.

17 We want to make sure our warfighters have the capacity
18 to defend this nation in the event of attack and to project
19 our power. And without an electric grid at a base of
20 operations that is owned by the private sector, we can't do
21 our job. So, I would like any thoughts or comments you
22 have on that.

23 Secretary Granholm: Yes. And I would respectfully
24 request that I get back to you on that so that I can have a
25 fulsome response for you.

1 Senator Gillibrand: That would be helpful. Last, do
2 you have any recommendations about what kind of
3 authorities, or can you, for the record, create some
4 recommendations about what kind of authorities would be
5 useful for you if you were given the task of making sure
6 our electric grid does not go down in a cyberattack by
7 China or any other adversary?

8 Secretary Granholm: And here, too, I would love to
9 get back to you on this, on some specifics.

10 Senator Gillibrand: Recommendations --

11 Secretary Granholm: -- authority wise, that I could
12 consult with CESER to see how we might additionally
13 strengthen, and the resources that it might take to do
14 that.

15 Senator Gillibrand: Thank you very much, Madam
16 Secretary.

17 Chairman Reed: Thank you, Senator Gillibrand.
18 Senator Kelly, please.

19 Senator Kelly: Thank you, Mr. Chairman. And
20 Secretary Granholm and Director Hruby, thank you for being
21 here today. Director Hruby, I would like to ask you two
22 related questions regarding the development of new nuclear
23 warheads. I think this is something that has already been
24 addressed in the committee today.

25 But so, the National Nuclear Security Administration

1 is developing the W80-4 warhead for the long range standoff
2 munition, LRSO. You have also been tasked to develop the
3 variant, the W80-4 alternate, for the submarine launched
4 cruise missile. And I understand the Administration has
5 been reluctant to start the development of a nuclear armed
6 cruise missile for Navy submarines.

7 I was aboard the USS Indiana under the ice just about
8 six weeks ago or so, and we discussed some of the
9 challenges, both from an engineering and operational
10 standpoint for them. The Secretary of the Navy has been
11 rather vocal in his opposition to this.

12 However, the Under Secretary of Defense for
13 Acquisition and Sustainment has issued an acquisition
14 decision memorandum directing the Navy to establish the
15 program and requesting NNSA support for the warhead
16 development. Director Hruby, your Administration has a lot
17 on its plate right now.

18 You currently have five warhead modernization programs
19 underway and now a potential six with the SLCM-N. And in
20 an open hearing, which we are in today, can you comment on
21 how much extra burden the development of a W80-4 alternate
22 warhead puts on your workforce and budget?

23 Ms. Hruby: Yes. Thank you, Senator Kelly. We did.
24 Obviously there was NDAA language on SLCM, and there was an
25 appropriation in '24. So, we are working hard on SLCM-N,

1 in concert with the Navy.

2 And we are looking at W80-4 and potentially other
3 warheads that will be at least disruptive to the program of
4 record and do the job that we need to do, consistent with
5 the Navy's selected platform when that is done.

6 So, we have established a program office where we are
7 going to work on how to do this so that it will fit in and
8 not disrupt the program of record as best as we can,
9 looking at all options, again, in close coordination with
10 the Navy.

11 Senator Kelly: Do you, prioritize these programs like
12 --

13 Ms. Hruby: Absolutely.

14 Senator Kelly: -- for infrastructure and workforce?

15 Ms. Hruby: Well, infrastructure -- we have to -- we
16 prioritize a lot of things simultaneously. The situation
17 we are in is where modernizing warheads while we modernize
18 our infrastructure side by side, in some cases in the same
19 building.

20 And we worry about it every day. We concentrate on it
21 every day. We are making progress. But it is not an ideal
22 situation, but we are certainly committed to doing it, and
23 it is -- and showing progress.

24 Senator Kelly: Do you have a pits going in new
25 warheads today?

1 Ms. Hruby: No. We -- the first new pit that will go
2 into warheads is the W87-1, which is for the Sentinel ICBM.
3 It is the system after the long range standoff system. But
4 we are on schedule to make pits for that. And then the
5 following weapon, the W93, also needs new pits. And so --

6 Senator Kelly: When do you when do you believe -- if
7 it is not -- if we can say it here in an open hearing, when
8 a pit goes into a Sentinel missile?

9 Ms. Hruby: Where are scheduled -- well, it depends on
10 the schedule of the -- right now, for the W87-1, we will be
11 -- yes, 2031 or '32 is the first production unit for that
12 system. Those should have new pits in them.

13 Senator Kelly: And when will that -- and where will
14 that be? Where does that work take place?

15 Ms. Hruby: The pits will be produced at Los Alamos.
16 The assembly will be done at Pantex in Texas.

17 Senator Kelly: Okay. Well, thank you. Thank you,
18 Mr. Chairman.

19 Chairman Reed: Thank you very much, Senator Kelly.
20 For the second amendment, I will yield for a question to
21 Senator King.

22 Senator King: Thank you, Mr. Chairman. Secretary
23 Granholm, I want to give you a chance to answer the
24 question from the Senator from Missouri, why was the -- why
25 were we working on a worldwide effort to release oil from

1 Strategic Petroleum Reserves after the invasion of Ukraine?

2 Secretary Granholm: Because after the invasion, and
3 rightfully so, so many countries put sanctions on Russian
4 oil. Their Russian oil was taken off the market, which
5 caused a huge supply crunch.

6 Senator King: Which in turn would cause a huge price
7 spike, is that correct?

8 Secretary Granholm: Which in turn causes a huge price
9 spike, which explains in last -- or the June before, in
10 June of 2022, why the prices were close to \$5 a gallon, is
11 because, purely because of Russia's invasion of Ukraine.
12 It was happening across the world, and everyone, at least
13 at the International Energy Agency, wanted to see if people
14 who had -- countries that had stockpiles could release.

15 Senator King: So, this was what the Strategic
16 Petroleum Reserve was for, was to release at a time when
17 there was a worldwide crisis in energy supply in some way
18 in order to stabilize the market. Is that correct?

19 Secretary Granholm: Precisely.

20 Senator King: Thank you. To get back to nuclear
21 power and the NNSA. I am concerned about uranium, and we
22 are still buying uranium from Russia. And we don't have
23 much, if any, enrichment capacity for future needs for the
24 submarine fleet, for small modular reactors.

25 Where are we, Administrator, on developing capacity

1 for uranium supply? If there is anything we have learned
2 in the last 10 years is that we shouldn't be depending on
3 Russia for essential -- an essential commodity like
4 uranium.

5 Ms. Hruby: Yes. Thanks, Senator. Well, the -- we
6 have -- we are trying to coordinate across that Department.
7 We have a coordinated plan across the Department for
8 uranium, both for defense needs and for civil needs.

9 The civil needs are for LEU for our current operating
10 reactors and also for our high assay LEU for the advanced
11 reactor program. And Secretary Granholm has mentioned in
12 the hearing that the money that has been allocated to the
13 appropriated to the Department to use to help spur domestic
14 uranium enrichment is dependent on a ban on Russian
15 uranium. And so, as a Department, we are anxious to see
16 that happen.

17 From a defense needs perspective, if we can start
18 enriching uranium and specifically high assay, low enriched
19 uranium in the U.S. using all domestic supplies, that will
20 become a very important feed material to us for naval
21 reactors to produce highly enriched uranium.

22 Senator King: I am going to have to -- I am going to
23 move on to another question. But the point is, we need to
24 develop the domestic capacity for the production of uranium
25 and enrichment, not be dependent upon Russia, is that

1 correct?

2 Ms. Hruby: Absolutely. Madam Secretary, waste
3 disposal. Not Yucca mountain, just so Catherine Cortez
4 Masto doesn't come down on me.

5 But on the other hand, we now have what amount to 100
6 high level nuclear waste sites scattered around the
7 country, one of which is in Maine, where there is stranded
8 nuclear waste from a commercial plant that is there.

9 This is all over the country. Where are we in the
10 search for a more permanent, secure solution to that
11 problem?

12 Secretary Granholm: Yes. Thank you for that
13 question. We have begun a consent based siting process
14 across the country.

15 We have, to that end, funded 12 different consortia
16 who are having conversations with communities that might be
17 willing to raise their hand. Of course, depending on the
18 -- how the community is compensated for the service of
19 disposing safely of nuclear waste. So, there is three
20 phases to it.

21 We are in the first phase. The second phase will be
22 identifying actually and talking to the volunteers. The
23 first phase is sort of laying the groundwork, and the third
24 phase is actually beginning the storage process.

25 Senator King: This process is actively underway?

1 Secretary Granholm: Actively underway right now.

2 Senator King: Thank you.

3 Chairman Reed: Thank you, Senator King. Senator
4 Gillibrand, I will yield for one question.

5 Senator Gillibrand: Thank you, Mr. Chairman.

6 Secretary Granholm, I want to thank you for visiting the
7 Brookhaven National Lab on Long Island, where our new
8 electron ion collider is being constructed.

9 I think these national labs are playing such an
10 important role for our National Security, and I want to
11 invite you to perhaps come see at the University of
12 Rochester's Laboratory for Laser Energy, the work they are
13 doing there for the National Nuclear Security
14 Administration's inertial confinement fusion program. It
15 has already helped achieve major fusion ignition
16 breakthroughs, December 2022.

17 As DOE builds off of that historic milestone and
18 continues to work towards a future powered in part by
19 fusion energy, what role do you see labs like Rochester's
20 Laboratory for Laser and Energetics, as well as the
21 Brookhaven National Lab, are playing in your vision for our
22 Department of Energy, but also for our nation's security?

23 Secretary Granholm: Yes. Thank you for that. And we
24 have, obviously, a bold decadal vision to achieve
25 commercial fusion within 10 years. The fusion strategy

1 that is being deployed at Rochester is with lasers.

2 Obviously there is others, magnets.

3 The Los Alamos National -- Los Alamos, Lawrence
4 Livermore National Lab is the lab. Obviously that did
5 achieve ignition in December '22 and has achieved ignition
6 multiple times after that, by the way. Thanks for the
7 partnership.

8 These partnerships are critical. The tools are
9 critical. These user facilities are absolutely
10 fundamental. The electron ion collider is so exciting.

11 It is the first collider that will be built in the
12 next 10 to 20 years globally to be able to determine what
13 is inside of a proton, and how we can collide, and spin,
14 and create, perhaps, and understand the, you know, the
15 strongest force in physics.

16 And so, it is very exciting what is happening in New
17 York. And thanks to New York State for actually having
18 contributed \$100 million to that electron ion collider as
19 well.

20 Chairman Reed: Thank you, Senator Gillibrand. Madam
21 Secretary, thank you. Madam Administrator, thank you for
22 your testimony. We will adjourn the open hearing and
23 reconvene as close to 11:00 a.m. as we can in SVC-217.

24 Thank you very much.

25 [Whereupon, at 10:47 a.m., the hearing was adjourned.]

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