UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION

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BRIEFING ON FOREIGN OWNERSHIP, CONTROL, AND DOMINATION

(PUBLIC)

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THURSDAY

JANUARY 29, 2015

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The Commission met in the Commissioners' Conference Room, 1st Floor, One White Flint North, 11555 Rockville Pike, Rockville, Maryland, at 9:00 a.m., Stephen G. Burns, Chairman, presiding.

PRESENT

STEPHEN G. BURNS, Chairman

KRISTINE L. SVINICKI, Commissioner

WILLIAM C. OSTENDORFF, Commissioner

JEFF BARAN, Commissioner

ALSO PRESENT

STEWART BAKER

JOHN HAMRE

WILLIAM LYNN III

PAUL MURPHY

SEAN O'KEEFE

STANLEY SIMS

MARGARET M. DOANE, General Counsel

ANNETTE L. VIETTI-COOK, Secretary of the Commission

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

(9:01 a.m.)

CHAIRMAN BURNS: Well, good morning, everyone and welcome to our meeting this morning and on the general topic of foreign ownership control and domination.

I want to welcome our panelists today who will be speaking with us. We have a couple who are running a bit late but will join us as we go.

The focus of today's meeting is on the processes and methods through which issues of foreign ownership, control and domination are addressed in the non-nuclear sectors of U.S. critical infrastructure and the U.S. defense establishment.

As many of you know, the commission has been looking at this issue of foreign ownership and control and domination in connection with its responsibilities under Section 103d of the Atomic Energy Act which applies to production and utilization facilities.

We're hoping our discussions today will aid the commission in its deliberations on this policy issue before us, and the commission will be briefed by a panel of external experts today including John Hamre, President and Chief Executive Officer, The Center for Strategic and International Studies; Mr. Stanley Sims, Director of the Defense Security Service and former

Director for Security with the Department of Defense; Mr. Lynn - William Lynn III, the Chief Executive Officer of Finmeccanica-North America and a former Deputy Secretary of Defense; Paul Murphy, Special Counsel with Milbank Tweed Hadley & McCloy and who has also served as representative to my former organization, the Nuclear Energy Agency's Expert Working Group on the Financing of Nuclear Power Plants; Mr. Stewart Baker, a partner at Steptoe & Johnson and a former Assistant Secretary for Policy in the Department of Homeland Security; and finally, Mr. Sean O'Keefe, former Chief Executive Officer of Airbus Group-North America and a former Secretary of the Navy and former Administrator of NASA.

We look forward to your presentations this morning and the discussion with the members of the Commission. But before we begin, would any of my colleagues like to say something?

COMMISSIONER SVINICKI: Thank you, Chairman Burns. Good morning and a belated Happy New Year to many and I have not had an opportunity, Chairman Burns, to publically congratulate you in your selection as Chairman and look forward - we're diving right in to a very complex topic here.

But welcome and, again, congratulations and really look forward to serving under your

Chairmanship.

And I also want to thank our very distinguished group of panelists for being here today, you know, and Commissioner Ostendorff suggested that we step way back and look at non-nuclear experts who are tackling some of the same issues.

I thought about it and I thought in general we'd try to stick to our meeting here and we look within the four corners of the Atomic Energy Act.

But this is the type of issue that across the economy, across the government many people are having to grapple with it and I came to understand that some people have it presented to them with perhaps even greater complexity than we do.

So I really look forward to today's meeting. Thank you.

CHAIRMAN BURNS: Thank you.

COMMISSIONER OSTENDORFF: Thank you, Chairman Burns. I'd like to add my thanks and best wishes to you, to echo Commissioner Svinicki's comments on your Chairmanship here.

I'd also like to look at the panelists here and those that will be arriving and say thank you for helping us tackle a difficult issue. It's important for us to go outside our narrow lanes at times, look more broadly at issues from a broad national perspective that

you bring to this table.

I'd like to personally thank John Hamre for his help in assembling this distinguished group. Thank you, John.

COMMISSIONER BARAN: I guess I should chime in. Just to echo my colleagues, congratulations on your new position. You've been doing it now what seems like for so long.

It's hard to believe that this is the first time we've had a full meeting. But congratulations again on that and thanks to our panelists for being here. We appreciate it.

CHAIRMAN BURNS: I think it's been a month but it only seems like ten years. So anyway, on that happy note, Mr. Hamre, we'd be pleased to hear from you.

DR. HAMRE: Thank you. I'm really honored to be invited. I must tell you, I've testified many times before the Congress because of previous roles but this is far more intimidating and the reason is because, you know, when you testify to Congress you know a hell of a lot more than everybody sitting on the other side of the dais and, you know, so you enter with a lot of confidence.

Here, you know a hell of a lot more about this than I do and so it's - I'm a little intimidated but I'm going to try to press through, if I may.

Let me just start with a disclosure, that for a period of about six years I served on an advisory committee to people that appeared before you, supplicants before you.

This was a joint venture between Constellation Energy and EDF. They knew that there were going to be issues of FOCD and so they created an advisory commission to serve as kind of a mitigation strategy for that.

So I spent six years working that. I'm no longer associated with them.

The scale of that work came - went down so far they didn't five people on the - on this advisory committee but they retain two very fine people, Bill - Jim Asselstine and Dick Meserve, you know, who were both Commissioners here.

So they still have it in place but they didn't need me. So I have no - I'm not conflicted in any sense with the testimony that I'd like to offer today, and I really am coming today more to speak of my experience at the Defense Department.

For 30 years the Department of Defense has had to deal with this question. We depend on foreign sources. We have foreign supply chains for some of our most sensitive things.

Some of our most sophisticated weapons

systems depend on foreign sourcing and so we have a process. Stan runs this so he's really the expert here. We call it FOCI - Foreign Ownership, Control and Influence, not domination.

But so we had to work on this in many, many, many ways, designing not only for mitigation procedures for very sophisticated hardware but also for operations because we operate around the world and we operate around the world in ways where we have to operate with other countries.

So we have - we have had to work out sophisticated ways to protect our, you know, national security. And when I look at the way which we were just simply looking at ownership of a company I thought this is - this is not good security. It's actually counterproductive that I'll mention in a minute.

But we need to design more sophisticated mitigation techniques and that's really what we were doing on this advisory committee to Constellation Energy.

You know, how we operated with them, our rules with them, how we were able to independently investigate things that came up, we sat in on the safety committee, et cetera.

So we designed more sophisticated techniques because we do have an obligation to protect

crucial things. I don't personally think there's a great national security risk letting a foreign company own a power generating plant in America, personally.

But we can find techniques for it but they need to be focused techniques. The second point I would make is that, you know, America is a declining nuclear power.

We are losing our edge in nuclear power. We now - it's now a global enterprise and we are completely dependent on cooperation with other countries - entities in other countries.

You can't build a nuclear reactor in this country without depending on foreign supplying - foreigners supplying key components. So we have to have - America has to have foreign participation in nuclear energy and in all of the instances I know of that's actually contributing to strengthening our program here.

It's not weakening anything. It's actually strengthening it. So we have to be careful not to take and put a block in the way that's going to make it harder for America to remain a competent and leading nuclear power.

This leads to the third point and I - this goes back to when President Eisenhower gave that very famous Atoms for Peace speech. We knew the great

promise of nuclear power as a commercial energy source. We also knew that it was the primary vector by which you have weapons - nuclear weapons.

The foundation of every weapons program is material that's developed in a - usually in a commercial process. You know, uranium in a natural concentration is at 1000th of a percent.

To get it to 4 to 5 percent for a commercial reactor you are at the 95-yard goal to get a nuclear weapon because you only have to go from 5 percent to 90 percent enrichment.

You're at the 95-yard line. So we have to have strong regulatory procedures around commercial energy and the Nonproliferation Act does that.

It's actually - commercial energy is the source of our ability to know that we are protecting ourselves from proliferation and we are the global standard now, and I would say the NRC is the global standard in terms of regulation - safety and regulation.

It is the global standard. But if you adopt - forgive me for saying it - dumb FOCD rules you're going to alienate the very moral authority that you have around the world.

So I'd ask you, this is a very important thing for us to get right. We have to get - we have to have good security. I'm all for it. I'm not trying to

weaken anything.

It has to be smart security and it has to be security that strengthens us a global leader. Thank you.

CHAIRMAN BURNS: Thank you. Mr. Sims?

MR. SIMS: Thank you, Commission, and I also want to join the - in saying congratulations, Chairman Burns.

CHAIRMAN BURNS: Thank you.

MR. SIMS: And, you know, as Dr. Hamre said, I've not addressed the Commission before and I try to stay off the Hill. At the end of the day, I'm just an operator. But I have testified on the Hill before and, as Dr. Hamre said, this is a little bit different.

But I do thank you for the opportunity to come and at least help you think through this challenge and hopefully what I have to say here today will help you all work your way through it.

It is important. Dr. Hamre said a lot of what I would echo about what - foreign investment and foreign involvement in our national security apparatus. It's very important.

Other foreign countries and companies do have technologies which we so desperately need in our national defense organization. I've been doing this now. This will be my 36th year in the Department of

Defense both in uniform and now as a civilian and so I consider myself, at the end of the day, an operator.

So I'll explain a little bit about how we in the Defense Security Service, DSS, we do this, and I apologize if I repeat some of this stuff in the statement but I think it bears saying.

Again, as Dr. Hamre said, we call this FOCI - influence as opposed to dominance - but the terms are absolutely the same. I would like to take a moment.

I brought two of my key individuals in my organization with me today - Ms. Lynda Mallow, who is actually my Acting Director for Policy and Programs, but in her day job she runs what we call our FOCI analytic division, which is pretty important to this thing, and then Nicoletta Giordani, colleague of hers, and she runs our FOCI operations division.

Now, the two of them work together every day to mitigate this risk, we so call it, from our foreign companies, if you will - an analytical shop that actually does most of the analysis and then our FOCI operations branch which actually put together mitigation agreements, and together they work together every day to make sure that we are doing - taking those more sophisticated ways to look at this - what we call the risk.

At the end of the day, DSS, we consider

ourselves a risk management organization. That's what we do, at the end of the day.

Now, just for a little bit of background, DSS - Defense Security Service - we do this business on behalf of the Department of Defense and 27 other federal - executive federal agencies and soon to be 28.

So while we are a DoD organization, we perform a national mission, and you all know - are probably aware that the National Industrial Security Program, Executive Order 12829, established the program and it assigned the Secretary of Defense as the executive agent to execute the program.

And so DSS - that's where our mission is derived from. We're the organization that actually execute the mission on a day-to-day basis for all of the DoD components in those other 27 federal agencies and we take that very seriously because we know we're managing risk for those companies.

Now, the National Industrial Security Program operating manual, that's the guideline that we use that tells us what it is - how we should look at FOCI, or Foreign Ownership, Control and Influence.

And then what we do is it gives us some what we call factors, if you will, to consider, and if I will, there are seven specific FOCI factors we consider and then there's one general, and what I would like to do

is say that while there are seven or eight total, if you will, we don't take any one single FOCI factor and make it absolute.

We evaluate them in the aggregate because we think that's important. If we look at just one single factor we believe we could fall in the trap of locking out, like Dr. Hamre said, those companies that could be very valuable to our national security.

But we look at them in the aggregate, and then there's one general FOCI factor which I'll talk to in a little bit. But let me just - let me just, for the purpose of the audience here, those factors - each of those factors they talk to the company, the foreign interests and then the government of the foreign interests.

So that's where they're trying to focus on. So what are they? Number one, the record of enforcement and our engagement in unauthorized technology transfer. So we look at that.

Number two - the type and sensitivity of the information that the company will access. Number three - the source, nature and extent of FOCI - how big is it.

Number four - the record of compliance with the pertinent U.S. laws, regulations and contracts. So your past history does matter in this case.

Five - the nature of any relevant bilateral

and multilateral security and information exchange agreements that that foreign interest may have with the U.S. As you all know, we have a lot of companies that we share some of our most sensitive national security information with. So would it be proper for us to lock those type of foreign interests out of our national security apparatus? I would think not.

Number six - ownership in whole or in part by the foreign government, and I think that's one that's particularly interesting to the Commission here.

And number seven, the record of economic and government espionage against the U.S. interests, and then the one general factor is we get to consider any information that is indicative of or that would demonstrate some type of unduly influence - undue influence on that U.S. national interest.

So if one of those other seven don't apply, we get to look at any other factors that we deem be pertinent to the interests of national security. So it's pretty broad. We have broad responsibilities in this case and we take it very seriously.

But the point is we don't take any one single, I guess, factor and then make a determination on whether we should allow them in our national security apparatus.

I will highlight the one - I guess, the

record of economic and government espionage. See, DSS we - each year we produce a document called Targeting U.S. Technologies, a trend analysis of clear industry reporting, and basically this - we take this information that comes from our cleared companies.

They report suspicious stuff to us and then we combine that with the other information source that we have available and a lot of it is from our intelligence databases and we combine that.

And so we think we have a lot of expertise about economic espionage as far as foreign interests. So we take that and we consider that in our factors.

The other thing I will tell you is that we have standard, I guess, templates, if you will, with regard to how do you mitigate depending on how much foreign interests or control or influence there is in there.

We have five types of mitigation plans that we put in place and they range anywhere from a simple board resolution with very minimal ownership and where the company really can't - doesn't have the power to elect board members, if you will, and it goes all the way up to what we call a voting trust where the company, if they want to do business in a national security structure here in the U.S., they actually have to turn over their voting right or their title to that company

to U.S. trustees.

Now, we don't dictate those, but the one just below that, proxies, we do quite a number of those where they actually do turn - they give their voting rights to a proxy holder and then it can't have any real involvement in running the company. The company is really an independent organization.

The foreign interests may take the profits or the losses but they certainly don't get involved in the operation of the company. So there are a number of tools that we have available to us and it's very sophisticated.

And so in the time I have left I will tell you I mentioned that our FOCI operations in our FOCI analytic division we have a very rigorous process by which we analyze the FOCI.

And they're not constant. They change - they change with the changing security environment, and we have databases that we research every day and before a company is given a facility clearance, which is essentially a license to do business in the U.S. national security space we run every one of those companies through that process and then we establish the mitigation agreement, figure out what plan it is and then there's a continuous monitoring effort that goes on behind there.

So we make sure that those companies, if any FOCI changes over time we are aware of. So what I hope I've given you some sense of is that we are changing.

We understand that you need foreign interests here. But there is a process and to mitigate that risk and that's what we do every day.

So I'll end there and say I do appreciate, again, having the opportunity to help you with this and I look forward to any questions you have. Thank you.

CHAIRMAN BURNS: Thank you, Mr. Sims. Mr. Lynn, welcome, and we look forward to your remarks.

MR. LYNN: Thanks. Thanks very much. Appreciate the opportunity to be here with the Commission and particularly the opportunity to testify with some good friends and the distinguished panel that you've put together.

Let me start with a little background. I've spent the last three years as the CEO of a mid-sized U.S. defense company, DRS Technologies, that's owned by a foreign parent, an Italian conglomerate, Finmeccanica.

Before that, like John I was Deputy Secretary of Defense and wrestled with these same issues from the perspective of a government policy maker. I worked there with Stan.

So I see my role today is to use those two

experiences on both sides of the fence, if you will, to give you some perspective on FOCI in the defense technology area.

In the defense arena I think you have to start with the central purpose of FOCI is to prevent the loss of critical military technologies to a potential adversary.

That seems like a simple purpose and it is, and Stan focused on it. You also need to know what the purpose is not. The purpose is not to prevent foreign owned or controlled companies from acquiring U.S. defense companies, it's not to prevent foreign companies from participating in the U.S. defense market and it's not intended to give advantage to U.S.-based defense companies.

Those are not the purposes of FOCI. Now, it's important to start with those purposes because the context in which the FOCI statutes and processes and institutions were initially developed was quite different than it is today.

It was a Cold War context and there - things were different on a number of lines. First, the Cold War itself was bipolar. Our main adversary for almost five decades was the Soviet Union.

It was very much an us versus them. There were two camps, and so in terms of protecting technology

you very much knew who you were trying to prevent from getting the technology.

Second, the U.S. was the clear leader at that time in defense technologies such that in fact that we had - we based our strategies around using our technology advantages to offset the numerical advantages that the former Soviet Union had.

Third, most defense technologies at that time were developed organically - that is, within the defense industrial complex. And then relatedly, not only were defense companies heavily U.S. based but their entire supply chain was heavily U.S.

None of those conditions pertain today. First, the world is now multipolar. It's not bipolar. There is many potential but few actual adversaries.

This means we can no longer rely on this kind of us versus them, this two-camp theory of how do we protect our technology. It's much blurrier who we should be protecting technology from and who we should be sharing with as allies. So it's a much more complex world.

Second, the origins of defense technology have shifted substantially in two ways. First, while the U.S. is still the leader in defense technology, it's no longer as dominant as it was in the '50s and the '60s. There are much more foreign sources of critical

technologies for our military.

And then the second aspect in which that's changed as well is - I indicated that defense technology was largely organically developed. That's no longer the case anymore.

You find much more transfer of commercial technology into the military sphere than you might of two, three, four decades ago. Whereas before defense was really a net exporter of technology - global positioning systems, the Internet itself came out of initial defense research.

There's still some of that but the balance has shifted and now you see much of what we're trying to do in the defense sphere is to import technologies from the commercial - 3D printing, nanotechnology, the broad swath of information technology - and operationalize it for military purposes.

And then finally, the way things have changed, like other industries defense has embraced the concept of a global supply chain. I'm sorry I wasn't here for John's testimony but I read it. I think he made the mention of the F-35 example.

That's a very good one. It's a high profile one. But even if you look at, you know, most of our weapons systems, most of our defense companies you'll find that they, like the rest of industries, have a very

globalized supply chain and they - not only - I guess there's two aspects of that.

One, they outsource much more of the work than they used to and they outsource it in a global fashion. So given these dramatic changes in the conditions of the defense industry, the FOCI system itself had to evolve.

Now, interestingly, I know this is an issue before the Commission, I think, as you think about it. There was not an enormous amount of legislation involved in these changes.

The changes have been mostly process driven, changing the culture of institutions - fewer legislative changes and, indeed, the DSS, led by Stan, has really focused on some of the newer strategies that he discussed within the same legal framework that's existed.

So and, again, the DSS, I think, has looked back to the original purpose of FOCI to - which is to encourage foreign investment in our defense industrial base while at the same time protecting our classified programs and other key technologies and has sought to update the processes to reflect these different purposes.

I think it has done that in several concrete ways. First, there's now a greater recognition that a

foreign parent, like any investor, has an understandable interest in increased financial transparency and more efficient business processes.

So the emphasis is now on addressing and mitigating areas of actual risk while seeking to avoid placing unnecessary burdens on mitigated companies.

For example, DSS has taken a leadership role in trying to streamline the administrative procedures for addressing FOCI company participation in certain restricted programs.

Second, while this is a general consistency across the FOCI program, we've seen a more nuanced approach to tailoring implementation to a company's risk profile. For example, FOCI companies with a strong record of compliance and a sophisticated and active government security committee comprised of clear, trusted and highly reputable members should and seemingly do get greater delegated authority.

Finally, DSS has also leveraged its closer regulatory control over mitigated companies to promote greater adherence to its broadly applicable security controls and procedures.

As a result of its greater emphasis on security, FOCI companies indeed generally perform better than their U.S. counterparts on DSS' annual facility audits.

Similarly, DSS appears to use its close relationship with FOCI companies to launch important new initiatives in not directly related but closely related and increasingly important areas of security such as cyber security and insider threats.

So let me just conclude by going back to the beginning. My concluding point here is the FOCI process is about balance. Its primary purpose is to prevent the loss of defense technologies to potential adversaries because that would harm our national security.

But the loss of foreign investment in our defense industry or the loss of access to foreign technologies of supply chains would also harm our national security.

So the goal of the FOCI system is to balance between those two imperatives and I think Stan and the DSS have done an extremely nice job in adapting an older set of laws and regulations to a newer area while keeping in mind those two competing purposes.

Thank you.

CHAIRMAN BURNS: Thank you, Mr. Lynn. Mr. Murphy?

MR. MURPHY: Mr. Chairman, Commissioners, it's an honor to be here. Thank you for having me.

I was asked to speak today about nuclear

financing and somehow weave in some concepts of climate change, and then I asked well, how many minutes do I have to do that and I was told ten.

We did a course out at Argonne National Lab for the IAEA this year on financing that was a week long. So I'm going to try and distill this into a few minutes and really try and focus on what are the key issues at it really relates to this and not to try and do a user's guide on nuclear financing.

But, you know, when you start - you know, I put in the slides sort of five key points and, you know, you start with a concept that nuclear financing is sort of where the rubber hits the road for NPP development.

You can have the best case for nuclear. You can have a good design. You can have a favorable regulatory environment. You can go through all those hoops. But if you don't have the money to build the plant there is no project.

And so that we've seen in our practice is sort of the ultimate test for whether nuclear plants can go forward or not. From a financier's perspective, financiers want clarity.

They want it to be simple. They're lending money. They want to make money. They don't like risk and they like clear bright line rules.

One of the trends that we've seen in NPP

development internationally has been vendor equity - that they're asking the vendors, the ones who are providing the NSSS design to bring money to the project.

Not just debt but also equity to invest in the project and that has been one of the determining factors as to how winners and losers are being chosen.

And then, of course, within all this we have to acknowledge that specific to the United States right now it's not a favorable environment for developing new nuclear power plants.

You know, we're looking at shutting down perfectly good power plants because the economics aren't working. That needs to be factored in but it can't overwhelm the conversation.

And then finally, you know, as I was asked to talk - when we talk about climate change there is a piece for nuclear in all of this and when we look at some of the studies that have been done, clearly, nuclear has a place in it.

It doesn't mean that that's an anti-renewables position. There's a place for all of this. But if we want nuclear to have that place we have to keep building plants. We can't sit still because the percentages will continue to decline and we get farther and farther away from our goals.

So when you consider the challenges for

nuclear financing, and I put a list in the slides, you know, sort of, again, from a lender or an equity perspective, why is financing so challenging - what are the issues that you look at.

And when you then consider the foreign ownership rules and tie that into financing, it raises two issues - regulatory oversight, of course, and then the challenges generally with financing and how the two might weave together.

The current rules are not clear. There is not a bright line that says if this the answer is X, if that the answer is Y.

Well, again, that doesn't make it right or wrong but from an investor perspective - from a lender perspective you start getting nervous because now you say well, what does that mean - how is it going to work out - am I willing to wade through this process not knowing how this might turn out.

Because you look - you know, it's very fact dependent and, you know, from a safety perspective when you're tasked with a safety responsibility the easiest answer is to say no, right. If you say no you haven't taken any risks.

But if now you're having to look at a set of facts and come up with an answer, moving away from no becomes more difficult, more risky, more uncertain,

and from a lender perspective or investor perspective they realize that.

You know, it's difficult to move away from the simple case, and you know, as has already been mentioned in reference to the defense industry, when you look at the nuclear industry it's an international industry nowadays.

We can't - as was mentioned already, we can't build a plant in the United States on our own. We need foreign participation and we see the cross border activity in other places of the world.

At the same time, it's understandable why we struggle with these issues. All investors and all lenders are not created equal. If the Second People's Bank of North Korea showed up and said we'd like to invest in a nuclear project, you might be a little worried about that.

And, you know, so the facts do matter and that is understandable. But then you say is the financier really going to wait around for all this stuff to get sorted out, figured out, and, again, you sit there and say but we're not really building a lot of nuclear plants in the United States right now so why should we care - you know, is this something we should be doing - is this a problem.

Are we not building plants because foreign

investors want to do this - there's this line at the door that we're saying no and that's why nuclear plants aren't being built?

I would submit the answer is no. That doesn't mean that we don't look at the rule and say is it a problem - could it be better - could it open up new possibilities down the road even if current market conditions may not favor nuclear development.

You know, I put a couple of slides in the presentation. One was on trends in the nuclear sector, and the only point I put it there was that the point of all these trends one of the key trends is vendor equity.

I teach for the IAEA. It's one of those basic training points that say what's going on - what are the trends. Well, vendor equity is one of those trends, looking at bringing money into the deal.

You know, when you go to the next slide about challenges to financing and you say, you know, how do you make this happen - how do you build the economic case. You know, if you could go to the next slide, please.

You know, can the project be financed, and when you look at it again the believability of the financial model is key and then you look at the potential sources. Again, right in that list vendor equity - having that money come into the deal.

And so stepping back and saying what are the overall prevailing themes with the nuclear financing abroad we're seeing the importance of government support, the importance of export credit agency financing, which fortunately we have an institution here in the United States that does want to support nuclear, which is great, but it can only do so overseas, which is U.S. Ex-Im.

But the reputational risk, government to government deals, bilateral relationships - but it involves, you know, countries coming together and working these issues out and then we're seeing emerging in this conversation conversations about climate change, conversations about grid stability and all this stuff is weaving together.

When you look at how projects have been developed overseas, I put a list together and for the most part these projects would not be going forward without foreign equity.

I think the UAE is the exception. They seem to have a lot of money. But the rest of them are - everybody is out there looking for money, both debt and equity, and if - to win bring money into the deal.

So if that's the trend elsewhere on how these projects are happening then we look at ourselves and say well, you know, can we do things to make it easier

to get these projects to market - are we limiting our options by having more restrictive rules.

And I think that's where we have to consider this, and what I would also stress is from a financing perspective everybody likes to focus on the development and construction period. That is, clearly, the most difficult period.

At the same time, you have an asset you're going to - that's going to run for 60, probably 80 years with the new designs. That provides tons of opportunities for financing on the back end to refinance, and refinancing means bringing in new investors.

You lower your cost of capital. You look at the life of the plant and say well, I have a high cost in the beginning, a low cost later - when I level that out it's a much better story.

If we're limiting our options, it's just making it that much harder and so, you know, when you go through all this you say okay, maybe there's not that line at the door but if we're - if we consider nuclear to be a viable option for a lot of different things, you know, climate change being one of - what I'll get to in a second, do we need to have all the tools available to us and if we don't we're restricting our options.

Again, doesn't mean that we make a decision

based on market factors today and saying well, is this that big a deal. You have to look long term. You have to look decades and given the asset class, given how long it takes to develop these and we can't make a policy based on what's happening at this moment and time and say well, you know, we just shut down Vermont Yankee.

If we shut down a perfectly good nuclear plant well, then why are we talking about - worrying about building new ones.

I mean, you know, but we have to look more broadly and when we think about climate change you see that not only have a lot of environmentalists and biologists now turned and thought differently about the value of nuclear but we're seeing the WEN, the IAEA, other groups talking about saying we shouldn't just build only nuclear but it has to be part of the story.

And if that's relevant for the world it's relevant for the United States as well as we try and meet our climate goals.

And as we shut down more and more plants and don't replace them, we're just making those - we're creating an asymptotic relationship to the goal. We're never going to get there.

And so in order for it to be part of the mix we've got to look and say are we doing everything we can to facilitate this in a rational way - you know,

recognizing again there are specific considerations.

So I think we have to always be careful and say let's not be overwhelmed by the current case in the United States.

Let's look at what's happening oversees and see that there are a lot of intelligent people outside of the United States that are making rational judgments and saying we can do this.

You know, after my slides had to be submitted there were some stories about Hinkley Point where the U.K. government is saying we have a golden share in this project so that we can have some rights with regard to national security and we're going to impose some requirements about the nationality of the operators and other things.

So we're seeing that it can be done. You know, the U.K. is more of the extreme to say hey, anybody can come - we're going to put some restrictions on it but we're not going to limit you coming through the door.

And so I think there's a balance in there that we have to consider. We've also seen - you know, we've heard from the defense side, also within the nuclear side when you look at 810 licensing, for example.

All countries are not created equal under 810 licensing. We do draw distinctions. We've gotten

comfortable with drawing distinctions, not always perfectly. But there is precedent for doing that.

You know, we can figure out what are those key issues as we've heard on the defense side about have the criteria, look at them on a case by case basis but, you know, see can we facilitate development as opposed to making it less clear and ambiguous.

And I think that, again, from the lender perspective - the financier perspective - you're stepping back and saying do I want to get involved in this or is it too complicated - is it too hard.

And the more clarity we can have in the process to achieve some of these goals that I've stated, you know, I think that's better for the industry and hopefully for the country as well. Thank you very much.

CHAIRMAN BURNS: Thank you, Mr. Murphy. Mr. Baker?

MR. BAKER: Thank you, Mr. Chairman. I thought the most useful thing that I could do for the Commission would be to talk a little bit about an alternative way of regulating foreign investment, which is CFIUS, the Committee on Foreign Investment in the United States.

That's something I - a process I ran for the Department of Homeland Security when I was there. I've written the only - this shows my bad judgment - the only

attempted popular book that touches on CFIUS and you've got a chapter in your materials.

But I think it shows that it's possible to do - to achieve some of the flexibility that you have heard people talking about today using a slightly different format, and I'll just talk about how CFIUS works.

CFIUS presumes largely control when you get to 10 percent indirect and direct and, obviously, that's quite different from the OCD rules that the Commission uses.

The reason it's different and the reason it can be different is control just brings you into the regulatory process and doesn't guarantee a particular outcome.

It doesn't say you're going to be rejected. In fact, roughly 90 percent of the investments that result in foreign control of a U.S. company that triggers CFIUS interests are approved without any conditions at all.

So but that means a lot of stuff goes in and then the committee goes through a process in which first they - they're centrally looking at three things - what's the threat, what's the vulnerability and what are the consequences if the threat and vulnerability come together in a bad way for us.

To determine the threat, this is a very focused and quite particular to the company and the country it comes from analysis that the intelligence community helps with.

They produce a report saying, often, is this a company that has helped its foreign government engage in espionage or steal secrets or violate export controls and that will then shape the climate of the further review.

The committee has a choice of saying no to the transaction. I said about 10 percent - 90 percent are approved without any action. Probably 1 or 2 percent are rejected.

The remainder go through a process that is also very flexible that allows the negotiation of what's called a mitigation agreement.

This is not completely different from the negation agreements that you all do but the negation agreements, as I understand them, are really focused on are you in the control or out of the control and we can negate your control in these particular ways.

Mitigation agreements are more about ending the threat or the vulnerability or minimizing the consequences. So they are far more flexible and focus not so much on ownership as on what are you worried about - are you worried that these guys are going to steal

secrets - are you worried they're going to sabotage the plant - are you worried they're going to export technology that they shouldn't export, and you can write a set of rules that are designed to prevent the thing that you are most worried about and those mitigation agreements have evolved quite substantially over 20 years as we've become worried about different things.

And, obviously, there's a whole bunch of cyber that is built into some of these agreements that wasn't previously built into agreements 15 years ago.

Greater emphasis - they'll be candid about worries about Chinese espionage that you didn't see as often 15, 20 years ago. But probably the most significant thing, and I've given them the slides, some lists of typical mitigation terms.

They might be described in some respects as a light version of what Stan Sims' DSS does. DSS is about restricting the access of the foreign owner to information about the operations of the subsidiary by building in a layer of American management that cuts off a lot of that communication.

In CFIUS because we can say Stan's got the DSS part, if this is the defense industry it's much lighter, we might say we want to have an American-cleared - American who handles security matters and who has a special reporting relationship to

the government.

And so the terms can be very flexible. I think Paul's right that when you're investing a lot of money you want a lot of certainty and the way CFIUS has handled that is by saying you're going to come in for a process.

We're not telling you in advance how it's going to come out. We're certainly not going to tell you how to get out of this process. But once you're in we will negotiate an agreement with you and that will give you the certainty that you need. You'll know what the obligations are and if you don't want to do it you don't have to invest.

So that's how the process works. I've thought a little bit and only a little bit about how if the NRC wanted to move to a process that was more flexible in that format it would do it and it seems to me that the FOCD rules are - they're sort of inherently binary in the statute. You're either in or you're out.

But the inimicality rules offer a good deal of flexibility and it would not be impossible, it seems to me, subject to your General Counsel's okay, to build a structure that looked very much like CFIUS on the foundation of inimicality.

That is to say, you say yes, you are not foreign - FOCD as FOCD is defined in 103d but you could

be inimical and to prevent inimicality we're going to ask you to give us all sorts of assurances about how your company is going to run, how much information we're going to have about the activities of the foreign investors, et cetera.

That's one possibility. The other possibility, to be candid, is that you could rely more heavily on CFIUS. You could say we're approving this under 103 but you still have to go through the CFIUS process and we will negotiate a mitigation agreement in that context.

The good news is that that's a reasonably clearly established set of rules. The difficulty with that is you will have a lot of other agencies telling you how to do your business - the U.S. trade representative, the Commerce Department, the State Department.

They will all weigh in and usually to tell you that you're being too hard on the foreign investor, and then the Defense Department and DHS will say maybe you're not being hard enough.

So it may be that you'd be better off from a control of your process to build a structure, if you wanted this kind of a structure, straight on top of inimicality.

And I don't want to suggest that CFIUS is

a perfect solution. There are many things that are wrong with CFIUS including the multiplicity of agencies and also the fact that once you've negotiated an agreement it tends to stick as it is and it becomes hard to make changes in it, which means that, you know, you're stuck with things as they look to you ten years ago. Why don't I stop there and answer any questions?

CHAIRMAN BURNS: Thank you. Since Mr. O'Keefe hasn't been able to join us as yet, I think what we are going to do originally we had scheduled a short break. I think we're going to skip the break and just proceed to questions with the panelists that we have here and I believe I'll start off.

COMMISSIONER SVINICKI: Excuse me, Mr. Chairman. When Mr. O'Keefe arrives will we just recognize him in the order of questioning to hear or should we just have him join for the questions? I guess it depends on if he makes it.

CHAIRMAN BURNS: Yeah, it depends. Have we heard - gotten any word as yet?

MS. VIETTI-COOK: No. I mean, we knew he was going to be running late. That's why he was -

CHAIRMAN BURNS: Yeah. Yeah, and I think there's some traffic issues as well going on. So, you know, maybe we'll see what -

COMMISSIONER SVINICKI: I'm fine with

recognizing him when he arrives.

CHAIRMAN BURNS: Yeah, yeah. When he comes, yeah. I'll start. I found it interesting, I think, the comment Mr. Lynn had is that, and this is, I think, certainly the position the Commission finds itself, is essentially we're dealing in terms of the actual statutory or regulatory or, really, statutory framework probably statutes that go back quite a ways when I was about one year old, I would say, when the Atomic Energy Act of 1954 was enacted.

I take it that's essentially what we have - the circumstance you have in the defense industry and elsewhere, I take it, correct? Yeah.

How has - has that provided or has that created any challenges in dealing with these older statutory frameworks in terms of adapting to modernity, if you will - adapting to those circumstances we faced in the 1990s or the 2000s or the teens, and anyone can address that.

MR. SIMS: I'd like to and then - I'll start with that because that's kind of my daily life and dealing with those changes.

If you recall, part of my statement I talked about the changing security environment and how that has forced us, really, to change how we look at this situation. Do we have old laws? You know, the

Executive Order 12829 was signed in 1992, I think, or 1993.

So it's more than two decades old and, interestingly enough, right now today we are - at the National Security Council level we have convened an interagency group to look at that because the structure has changed.

The rules of two decades ago are not the same. There are too many gray areas in the executive order now. The National Industrial Security Program operating manual that we operate on is based on a two-decade-old executive order in which the things that we're dealing with today don't exist.

For example, cyber - I think you all mentioned cyber. The word cyber does not even appear - cyber threat does not appear in the executive order nor does it appear in today's NISPOM, the operating manual.

We know that. We've been doing patchwork - you know, doing conforming changes to that, and now we're looking at a wholesale relook to try to alleviate some of those gray areas.

So we have recognized in the Defense Department, in the national security business is that the landscape have changed. A colleague of mine in which I know you all know, Mr. Brett Lambert, about three

years ago as we were working together when he was on the AT&L there - Acquisition Technology & Logistics staff at DoD - he said something to me that made me relook how we do business, and this was about - I was about a year into the job and he said Stan, you know, the world we're in now there's three things that are challenges.

He says, first of all, our defense business is increasingly more globalized. It is increasingly more commercialized, and what Secretary Lynn said that we don't purpose build things for the Defense Department anymore - we're kind of off the shelf - that's the commercialization of it.

And then the third one is we are increasingly - this business is increasingly more financially complex. Now, when he said those three things to me my eyes rolled back and I said oh, my goodness, and I thought - I internalized it and said, every one of those three things have risk in it and which I now have to evolve - our agency have to evolve to manage the risk in those three things - the globalization of it, the commercialization of our supply chains and then the financial complexity of that.

And so ever since he said that - we were doing it but I kind of reinvigorated our energy and our processes that these two ladies deal with every day. They have to take a look at that.

And then - and then Mr. Baker mentioned my greatest one, risk, and he - we have a risk equation. I've been doing - managing risk forever and he talked about it's a function of threat vulnerability, consequence and value, and in essence that's what we do every day.

All of my operational directors they manage that risk in those - in those three areas. So what I will tell you is that we've got to change our regulations and in some cases, I would suggest, this country we're going to have to change some laws because the laws we wrote back in 1954 just do not apply in some cases in today's environment.

CHAIRMAN BURNS: Okay. Thank you. I want to welcome Mr. O'Keefe to the panel. If you're prepared I'll let you go ahead and make your remarks and then we'll proceed back to our questioning. Thank you.

MR. O'KEEFE: Thank you very much, Mr. Chairman. I can't imagine what I could possibly add to the proceedings and the distinguished panel you've already assembled and heard from.

And so, you know, batting sweep up here - you know, it isn't clean up, it's sweep up and it's the last in the order - there's virtually no way I'm going to be able to provide any other insight that I'm sure you've already heard.

And just having heard Director Sims' comment here as it pertains to the currency of the existing statute that is a very profound comment, particularly coming from a gentleman who is charged with the responsibility of trying to then figure out how to enforce that range of challenges in a different environment.

So I guess I would just quickly add to, you know, what I've seen as prepared testimony as well as the commentary that I have heard that the challenges are twofold of trying to establish anything that resembles a foreign ownership control influence domination - any terminology you want to use that would suggest that there is a different approach there is, first of all, that there is.

You have to come to the first conclusion that there is a regulatory requirement that from the get-go that that be controlled just by the mere existence of the fact that it is not considered to be an organic or U.S. or domestic or heritage or any of the other terms that are used to define U.S. companies and that that is definitionally bad. That's the first major determination.

It also implies very implicitly that there is an absence of trust unless it is under a certain set of conditions. So if those two, you know, are met in

the first instance you then determine there must be some unique regulatory requirement that goes with this.

Then the second major hurdle is to determine how enforceable could any compliance regimen be in working through this. In my judgment, in the time I've spent in industry on the receiving end of the government's regulatory environment this is about as good as it gets right now with the Defense Department.

It has never been as good. It has never been more open, never been more transparent, never been more understandable in terms of what the requirements are, the expectations, how they're going to operate. It's been just as good as it gets.

But it starts with the first proposition again, which is is it really necessary and that determination is made by others than those who have to administer the regulatory environment which industry must operate to do business with the Defense Department if you are not a chartered company in the United States.

But to the extent that there is a real imperative for it it assumes that there is a way that you can control the technology, you can control the transfer of it and that there's a necessity to do so, and that's always a questionable proposition in this world of globalization that exists today.

The number of pure organic U.S. only do

business here in the United States and therefore we can completely control every element of this is such a minimum number and, more importantly, that environment almost assures technological obsolescence, which we have a perfect control over but it is obsolete.

And so therefore, you know, the opportunities for real innovation, technology sharing, all that is so limited as to be more difficult to enforce than any other factor.

So beyond that, again, I would associate directly with the prepared statements I have seen and the commentary I think that has been already offered to suggest that, you know, great care must be established in order to - or determined to answer those two questions first.

Is it really a regulatory environment that it's imperative to do so? Is there some overriding reason why something needs to be done to make that work, and number two, what is an enforceable mechanism in which the consequences will be determined to be acceptable relative to the outcome of what you're trying to achieve.

I thank you, Mr. Chairman, members of the commission, for the opportunity to be here.

CHAIRMAN BURNS: Thanks very much. I'll go back - I think I have about half my question time left.

But a couple others - one other question that I think Mr. Baker mentioned, for example, in the CFIUS reviews that there's a threshold at least - let's say a 5 percent or about 5 percent threshold.

One of the issues I think that the Commission is looking at or one of the issues that's been raised is are there absolute thresholds, or not absolute thresholds but absolute percentages or targets at which one reaches a decision that - for in our terms or the FOCD can't be met, and I'd appreciate commentary from any of you with respect to that or how it works and elsewhere, looking at, as I say, an absolute, I guess, ceiling is the right word - right word for it.

MR. BAKER: I will say I think in the CFIUS world when we were asked for - can you give us more certainty, can you tell us for sure that 9 percent that we never have to worry about, and I was always very resistant to that because of my fear of about the creativity and just astonishing smarts that people like Paul brought to the table and the ability to restructure the arrangement so that you had control but you still met some arbitrary number, and that was always the worry.

Suppose it was a 9 - you had a 9 percent ownership interest but a separate contractual ability to name members of the board or name the CEO.

At that point you start to say well, yeah, they met the 10 percent rule but we still actually want to be able to review this transaction.

DR. HAMRE: Could I speak to this?

CHAIRMAN BURNS: Yes, absolutely.

DR. HAMRE: I think the problem of a single criteria is that, you know, the threats we face aren't uniform. So if the Sovereign Wealth Fund of Norway wants to invest in nuclear power that isn't a big risk.

You know, but if a - you know, a rather new financial intermediary in a country that isn't well regulated wants to become an investor I would want more control about structuring the mitigation for that.

So I would - I know it's easier to say 80 percent or 2 percent or 50 percent or something. But it's - but the risk isn't granular. I mean, it's very lumpy. It's very uneven, and we just would do ourselves a disservice to just make it a rule.

Because we're going to block out good people and we're not really going to solve the security problem. So I think you have to look at this in a more nuanced way.

MR. SIMS: If I could.

CHAIRMAN BURNS: Certainly.

MR. SIMS: We don't - in DSS we don't deal in absolutes, if you will. We just look at the

situation and I echo what Dr. Hamre says. You know, we manage risk and we try to deal mostly with the unacceptable risk.

That's the - that's the - what we try to define what is unacceptable to the defense industrial base or the national industrial base and then try to deal with that.

We've got our standard type templates of agreements and they are focused, as I said, based on the percent of ownership or control and so we tailor each of the agreements, as Secretary Lynn said, to the situation.

Now, we do treat foreign government control of a company differently than we do of the ownership - or I'm sorry, foreign government owned - if we have a company that is foreign government owned we look at it a little bit tougher and there are some strict legal requirements that we must meet if we're going to allow them access to classified national security information.

And so that regiment is pretty steep, but it still doesn't absolutely shut them out. We can actually put them in there because we can put mitigation agreements around if there is a challenge.

But there are some things that we say the risk is too great to accept that, and I can think of some

of the issues on the CFIUS where we've said no, you can't do it.

I'll give you a good example. The State Department - they produced our foreign - our passports. I don't think we would let another foreign country that doesn't have a good relationship with us get into the business of producing our passports. That's one - an example.

That may be an absolute no. That risk is just not - and it doesn't matter what country it is. Doesn't matter if it was, you know, the U.K. or the Canadians.

We just don't do that. So if you're looking for an absolute case - that maybe that's a simple example but there are very few of those real absolute cases.

If you hone in on what's the risk and what are you really concerned about, as Secretary O'Keefe said, and then hone in on that and then build a mitigation agreement around that.

DR. HAMRE: Could I just point out? Secretary O'Keefe and Secretary Lynn both ran companies that had foreign government ownership and they had to find strategies - we're working with Stan - where we could manage that.

So it is very possible to do that.

CHAIRMAN BURNS: Thank you. Thank you. Commissioner Svinicki?

COMMISSIONER SVINICKI: Well, thank you all. Gosh, I knew that we had, based on your experience base, a really wonderful distinguished panel here but you've thrown out so many thoughts that I want to react to.

What I'm going to do is just talk for a bit and then I'm going to open it for reaction to what I've talked about. I just have some very broad themes here.

I want to begin by saying some of you do have some knowledge of our Atomic Energy Act structure. Chairman Burns was very precise in his opening statement that we have under the Atomic Energy Act what I consider to be a really wonderful for the American people double safety net because we have FOCD and then we have, under rules of statutory construction, really a separate finding that we make on inimicality.

But I think that the strength of that structure - it is antiquated but the strength of it is that I think it gives us a double backstop because working in wanting to safeguard American national security, of course, I think we have a tremendous amount of flexibility.

Now, broad authorities for government agencies are beneficial. The one thing, though, that

they tend not to create is great clarity for applicants and seekers of licenses and permits.

One of the proposals that our Commission concretely has in front to it - us right now is our staff has recommended that we consider looking at the guidance that we have.

We use what we call a standard review plan for our experts if they receive an FOCD issue that they need to review. One of our staff's recommendations to our Commission is that perhaps we inject more clarity and we modernize and update that guidance.

But a number of you have offered a caution that really these things need to be looked at case by case. As a matter of fact, some of you were just responding in that vein to Chairman Burns.

So I would be interested to hear if any of you have thoughts on that kind of sweet spot of providing clarify for those who are in the business of saying are projects likely to get permission to go forward but at the same time having something that is flexible enough to look at different structures.

Again, under the Atomic Energy Act the one thing that we interpret to be prohibited is direct foreign ownership and, of course, 100 percent direct and, of course, we have historically, going back to the Atomic Energy Commission, interpreted indirect. The

statute doesn't say direct or indirect.

It's my understanding that in the defense - in the mitigation plans there have been successful mitigations against 100 percent direct foreign ownership, which is something I'd be interested in hearing a little bit more about even though, again, our interpretation that the Atomic Energy Act doesn't permit that.

How does one, you know, look at enforcement and implementation of these extremely intrusive mitigation plans? That's another area that I don't think, and perhaps DSS has some things to offer on that topic.

I think the final thing is kind of a soft point if any of you - and I think many of you would have experience with this. I don't rival Mr. Sims' 36 years but I'm coming up on 25 years of working in the system of being around these national security issues where, you know, the saying no is kind of the easiest reflex.

People who work in national security tend to be deeply patriotic. It is a cultural view that we want to be extremely protective of U.S. national interests.

Some of you have commented though that the just say no mentality is not without consequences of its own, particularly in the modern age.

But I would be interested if any of you have had to kind of not just move regulations or guidance but move kind of organizational culture and forgetting, you know, people who work in this field do so for a personal commitment and purpose.

And what are cautions you would offer if we opened the door of saying let's take our standard review plans - let's put more clarity and specificity in there?

How does one navigate the issue of a culture that is kind of prophylactically just closing the door and putting its arms around it to say no?

So those are a lot of thoughts some of you have been jotting down so I just open it now if any of you would like to react to that. And Mr. Sims, I think a number of them were in your wheelhouse so if you'd like to start.

MR. SIMS: I don't think anything you said is outside of our wheelhouse because we deal in that every day. A couple points about the clarity.

Clarity is important, and I'll look at it from a standpoint of a lot of what we've had to do in DSS to encourage foreign investment where we know we need that technology in the U.S. is that - and I have personally had to talk to foreign owners of the companies because they don't have the same clarity about what am I getting into if I buy this -

COMMISSIONER SVINICKI: Sometimes you prohibit them from visiting their own facilities. Isn't that correct?

MR. SIMS: We do. There are some that - when you say prohibit we have visitation rules. We have a lot of rules about if you want to get into the national industrial security business we do have a lot of rules.

And so we do. We prohibit some of the accesses that they have and in some cases we prohibit all of the access they have. But our visitation rules kind of control a little bit of that.

But back to my point about clarity, I spend time - my agency and my workforce spend time in training the foreign owner in what are you getting into - do you really want to invest in this because there are rules.

Flexibility - as I told you before, we have a lot of flexibility on how we - how we put in place these mitigation agreements. We have our standard templates, if you will, but then we get to inject - remember that number eight?

Anything in there that we feel that may impact that influence? Because see, controlling ownership is pretty easy to determine by your documentation. That influence thing you really got to understand. And then the culture - I got to talk about that and I would say that for the last four years I've

been in this position the one thing that I started on day one was changing the culture of my workforce in how we do our oversight business.

We have a program that we call Partnership with Industry - Partnership with Industry. It's as simple as that. We need the industrial base.

It's the engine for our economy. It is the engine, and we also need the technology that our industrial base provides to us and the government doesn't produce national security. Industry does. And so if you take that mind set, we've got to treat them as part of our national security team and then we've got to hold them accountable for safeguarding those things that have been trusted to them.

These are American companies that just happen to be bought by foreign interests and there are some - there are a lot of 100 percent owned companies in the National Industrial Security program.

There are a lot of them. We just put mitigation agreements in place to make sure we manage the risk that we're worried about.

And then what I'll tell you is when you talk about risk - you say the caution - I would submit to you that the level of risk that a country or any group is comfortable with is throttled by understanding - the understanding of what you're dealing with and that's

where we come in.

We deal with this every day. We do take the threat assessments that are provided to us by the National Intel Council. We do look at the risk assessments that are done by the Defense Intelligence Agency.

We are part of the CFIUS committee. We look at every CFIUS case to see if that merger acquisition involves national security interests. We look at every one of them.

About 50 percent of them are the Department of Defense and about 25 percent of them actually involves - or maybe it's 15 percent of them actually involves cleared contractors. Those are already in the National Industrial Security program.

So I guess we're a little bit more comfortable with managing risk because we deal with it every day. We look at it. We have some expertise in it, and then we collaborate with the interagency and our intelligence partners.

And by the way, my background in the Army I was an operational intelligence officer. So I've been managing risk within the foreign space all of my life and so this is just a different nuance when you look at it from a security standpoint on the national basis. So I don't know if that helped you but -

COMMISSIONER SVINICKI: No, that is very helpful. Dr. Hamre, did you also want to comment?

DR. HAMRE: Yes, Commissioner Svinicki. I'd like to address the last question raised, which was this culture of no in bureaucracies. That's what bureaucracies do, you know, I mean, and -

COMMISSIONER SVINICKI: Well, and I sometimes relate it to my - you know, again, I began as an entry level engineer in the government and, you know, the career upside of saying yes, you know, there's not a lot for you when you sign off on something and the career potential down sides of saying it at the end of the day.

So it's a fundamental tension that exists in permitting and licensing activities is that - but at the end of the day it can't always be no and so it's something, I think, everybody struggles with.

DR. HAMRE: Well, that's right, and honestly we train bureaucrats to keep inside the lines of legality. I mean, you don't want a bureaucracy that's, you know - and we're a democracy.

So you don't want a bureaucracy that says I don't agree with that law - I think that law is probably not right - I think we're going to do it this way.

So we want bureaucrats to stay firmly inside - firmly inside legal boundaries. The problem

is the world is changing all the time and the laws don't change dynamically.

I personally think every one of our - you know, CFIUS, the NISPOM stuff, I think it's all in some ways obsolete but I wouldn't want to go to the Congress right now because we've got parties that want to kill the other party by being more paranoid and frightened about threats than the other guy.

So it will get worse if we were to try to get cleaner legislation. So the only way you solve it, and these guys - Bill was the example. Secretary Lynn was the example. He had a broken DSS. It was - it was the organization that said no.

They didn't even say no. They just didn't say anything. You know, they just sat like a lump and refused to even to respond. So it's what it is. It's a -

COMMISSIONER SVINICKI: To be clear, Mr. Sims was not there at the time.

DR. HAMRE: No, he was trying to come in at that and Bill put him in the job to reform it. It's - what it is it's leadership. It's people who are politically accountable to the citizens. You, Secretaries you're accountable to the citizens.

You have to lead your bureaucracy to think in new ways, to think about what is the balance, and it's

not going to come organically out of a bureaucracy. It didn't in DoD. It's coming from people that say we've got - the world is different than this and we're going to lead it to a new path of understanding.

I hate most of the frameworks we have right now because I don't think they give good security. We need better security because the world is more complicated. These simplistic rules that we're applying are not adequate security.

Like on security clearances - good grief, we have a process whereas the spy fills out his own form - his application form and then we - and then we go to the lowest -

COMMISSIONER SVINICKI: That's a problem, thankfully, we don't - my colleagues and I on this side of the table don't have to solve and I'm over my time.

But I really appreciate - I know the culture piece is a soft piece but without getting the culture aligned then things don't happen.

So I appreciate your acknowledgment of that. Thank you. Thank you, Mr. Chairman.

MR. LYNN: Can I just add one point to your - I agree with John and Stan on the culture. Just on your clarity point I think there's also an addition you ought to think about.

You do need clarity and that's very

important. You also need perceived fairness, particularly when you're dealing with foreign entities. One of the challenges in the FOCI regime is from Europe or Asia or whatever this looks like a rigged game and that's very, very damaging.

And so I think as you think about clarity think as well about fairness and to make sure that that perception of fairness is well understood - that there are rules, they're followed, we have processes but they're not designed to keep out investment, keep out foreign ownership. They're designed to keep - protect things, keep certain things in.

Because if you don't - if you're not able to do that the system itself becomes very damaging even if it's clear.

COMMISSIONER SVINICKI: Thank you. Thank you again.

CHAIRMAN BURNS: Commissioner Ostendorff.

COMMISSIONER OSTENDORFF: Thank you, Chairman. Thank you all for being here. I really think your participation and dialogue is helping to - sort of as a catalyst for our thinking before we make a significant decision here going forward. So thank you for your engagement.

I'm going to make just a couple of very brief comments and I'm just going to set up a question

that I want to give everybody a chance to respond to.

I know that Dr. Hamre talked about how international participation is strengthening the enterprise in the United States. Dr. Hamre has been engaged in talking about the synergies and part of the speeches I've heard him give, synergies between the naval reactors program, DOE's nuclear weapons program, commercial nuclear technology in the United States, et cetera, and he's been a key thought leader in that area.

I've heard discussions from Secretary Lynn associated with what are we trying to protect? Is it critical defense technologies that might be of use to an adversary and how does that tee up post-Cold War?

I'm reminded 38 years ago when I reported as a Rickover ensign to my first submarine to go on ballistic missile patrol the very first hour we were in international waters being harassed by Soviet AGIs off the coast of Spain and then I served on five submarines after that all attack submarines.

But a lot of the Cold War era defense messages you're talking about are different today. I mean, we're certainly not in a bipolar world and as Stan mentioned the cyber security threat is a key thing.

Mr. Baker mentioned comments along the lines of what is the threat - what is the vulnerability. Chairman Burns, in his initial question, referred to the

1954 Atomic Energy Act Section 103d that deals with Foreign Ownership Control and Domination and the prohibitions on inimicality of common defense and security that recognizes that that was a 60-year-old statute. So here's the question I ask.

If we were writing the statute - a statute today or perhaps trying to develop the legislative history in the Congressional Record, for what problem are we trying to solve?

What are we trying to fix? What is the threat? And I'll get to that in just a second with a question to you. When I got here in 2010 I was struck by the Vogtle and Summer projects for the AP 1000 relying upon heavy steel forgings coming from Korea and Japan - Doosan Heavy Industries of Doosan, Korea, and Japan Steel Works in Sapporo to provide these major vessels for commercial nuclear power plants.

I was stunned by that - the fact that we don't do that in the United States today. Yet, in the 1970s on USS George Bancroft I walked back in the engine room in the submarine and saw all the GE and Westinghouse technology.

So with that kind of background, I wanted to ask this group what - you know, today we're looking at - what are we concerned about is probably not sharing the critical technologies because everybody has the

commercial nuclear technology that wants it, basically, at one level as far as built programs in India, China, Russia, Korea and other countries.

Are we concerned about espionage, sabotage, somebody not properly taking care of a plant if they're the foreign owner of a U.S. nuclear plant?

I'm trying to help frame what is the high-level principle that should help inform us as to how we look at the FOCD issue and inimicality.

What are we concerned about protecting and what is the threat? So I'll start with Dr. Hamre.

DR. HAMRE: I can only give examples. I can't reduce it to a principle. But we - because of the capacity of cyber hacking one of the great worries I have is opening up the control systems of nuclear power plants to internet technologies.

Right now they're all - first of all, they're 30 years old and they're analog and, you know, they're not wired and they're not connected.

But, you know, the next generation we're going to have increasing, you know, connection for efficiency purposes to open cyber systems and the vulnerability.

So that would be a place I'd want to really focus on and make sure that we design procedures that don't let a foreign owner introduce a control system

that becomes a back door way where you can get access to the actual operation of a plant.

I'm not worried if - about putting payroll records, you know, into the cloud. But I certainly don't want to have the controls to the reactor in the cloud, as an example.

You guys are looking at small modular reactors. I'm a big, big proponent. I think we should do this. I would want to see fire walls because some of the guys that make - that are proposing SMRs also make them for the Navy.

There are some design issue that I'd just - we just have to ensure there's no permeability between a commercial SMR and what we do for the Navy.

So, I mean, I can think of examples for you. I do not think there is any risk to have a foreign owner own part of a power generating plant.

You know, I mean, I've spent six years on an advisory committee only one time and it was really a misunderstanding.

I mean, this is a business transaction. You know, having a foreign entity run an enrichment facility - I mean, you guys wrestled with that.

You said yes. There's much more risk with that because you're dealing with enriched material.

So you want to know that there are controls

around the record keeping - you know, that there can't be diversion of material, that there can't be enrichment beyond certain levels. So there - I think you have to be very focused on those threats, Commissioner.

It's not a single rule but there are definitely things that we have to design rules to mitigate and I put them in the nature of cyber. I put them in the nature of design, especially where it has military application, and then certainly compliance procedures that are central to our nonproliferation regime.

COMMISSIONER OSTENDORFF: Mr. Murphy?

MR. MURPHY: Yeah. I think the facts matter and maybe that can create clarity. It also can cut the other way. But, you know, if you state the things that you're concerned about and then say well, who you are now starts to matter you can get the clarity.

For example, if we take the case of Calvert Cliffs 3, EDF was going to build an EPR. We can't say that the concern about foreign ownership was technology leaking out of the United States. That would be ridiculous.

They're already building an EPR in France. They're EDF. They're the biggest nuclear operator out there. So, you know, then you start to say, well, what can I do with that.

There has to be a different reason why I don't want them to own the whole thing because when we look at the rules now there's a presumption that foreign is bad because we say a foreign cannot control, right.

It's not just - so there's always a presumption well, if you own 100 percent and you're a foreigner that's no. Should we look at that? Should we say well, why.

I mean, if you have a domestic operator, if you have an accounts program so the money flows through then it doesn't get to the equity before the operators properly, you know, fund it for all its needs and you have controls on how the funds flow why couldn't you have a wholly owned foreign plant?

But there's a presumption right now that that's an absolute no so somebody made a judgment. So then you say well, how do we now move off of that continuum and that's where it gets very murky.

But then you have to really look at well, what are we trying to protect against. If it's a foreign nuclear technology provider we can't say well, I'm worried about the technology leaving the country.

That doesn't make sense. If we're saying well, I'm worried about, you know, them not having operators - that, you know, they may go home, you know,

we represented U.S. Ex-Im and KEXIM for the UAE deal, right.

A key aspect of that is well, it's a Korean plant - Koreans are coming here - do we really think that over time the Koreans are going to run this plant forever. No. You would be foolish to think that.

So what did we look at? Well, what's your succession plan over time? How are you going to transition that over time. You know, so there might be a concern - there might be an answer to that that can occur maybe not today but over time and you monitor it.

But I think that by articulating what your concerns are and saying these are the things we look at, and depending on how you line up institutionally against this concern that will start giving us more clarity on the answers.

MR. BAKER: Can I express a little bit of skepticism about the oh, it's 1954 - how can you expect it to work? Maybe because I was seven.

The Federal Communications Commission has a 1934 Communications Act which restricts licensing to foreign carriers - requires licenses for foreign carriers, which they have managed to make work, and the way they do it is similar to CFIUS.

They defer to the national security agencies of the executive branch on what the risks are

and what the mitigation terms ought to be and they draft a whole set of license conditions and they just drop them into the license and I approve the licenses with those conditions if they think that that's a plausible outcome.

And so they have managed to make this work and I wouldn't be surprised if you could, with a combination of regulatory and inimicality analysis make your existing statute work for you.

MR. SIMS: Mr. Commissioner, if I could - I don't want to give a bunch of examples but I think what we have done in DSS is that - you asked the question what is the threat.

We used to ask that too. But I would submit to you that's really not the optimal question. The question really is what's the risk - what's the risk.

Not the threat because, as I've said before, risk is a function of four distinct elements and that's threat, vulnerability, value and consequence.

And so - and we're so wedded to that construct of what we do because at the end of the day we can't prevent risk. We can only manage risk.

And so we have designed our entire operation and our agency around that risk equation and I've told - like I've said before, every one of my directors if you can't tell me that define what you do

you're either trying to identify what the threat is, you're either trying to identify and look at the vulnerabilities, you are analyzing the value of our technology to our adversaries and then - and the consequences if they succeed in what they're trying to do, and if you're not doing one of those four things you're probably not doing anything to help us.

So whatever you come up with I think you've got to really look at the risk because in some cases there's limited and no risk.

Now, quite frankly, if there's no threat obviously there is no risk. Okay. So everybody focuses on the threat.

But if you don't put it in some type of risk equation and then manage those elements of the risk it helps us prioritize what we're going to look at. You know, I'm from Arkansas. We say all pigs aren't equal. So we don't treat all the pigs the same.

And so if we know what the threat is, we understand the vulnerabilities around it, we've absolutely got to understand the value and the consequences of it and that kind of drives everything else - the heavier the consequences, you know, the more prioritized it is, et cetera, then we get at it.

So I would submit to you whatever you deal with if you manage it - profile it around some type of

risk equation in which that risk equation has been around for a long time and works, it will probably get you closer to probably where you think you ought to go for the future.

COMMISSIONER OSTENDORFF: Chairman, I think - I'm sorry - I think Mr. O'Keefe in the next time, please.

MR. O'KEEFE: No, I was just going to suggest that the focus of your question and as modified I think appropriately by what Director Sims has concentrated on is central to the entire effort.

What are you trying to accomplish? What behavior are you trying to influence? And is it a positive behavior? Are you trying to deter some approach? Whatever it is, however you define that ultimately - the threat, then the risk relative to it - gives you the answer you're looking for.

But the challenge we're dealing with today and I think one of the closest analogies I can think of here in terms of what the scope of the Commission's review is, of the NRC overall is far more in the lane of a large scale systems engineering projects orientation.

Sharp contrast to what Director Sims is dealing with, which is a wide range of diverse how you define the threat, how you define the risk. This is a

little more definable. There's a lane here.

Now, there's a lot of challenges that come with it, a lot of consequences for getting it wrong, and there are any number of different issues that have to be inventoried to make a determination.

But you've got a definable lane and the closest analogy I can think of was one - at one point I started on a federal advisory panel that was chaired by Norm Augustine in which he posed exactly that point.

It was the precursor of what ultimately led to the administration's export control rules and how they wanted to modify that and amend it, and it was at least or two prior to that unveiling of what the administration's initiative was.

And he posed it exactly the right way - how do you define what it is we're trying to accomplish here and the final determination was the thing - the best categorization is you're trying to mitigate, control or at least influence the pace of technology transfer of information, of intellectual property, all that.

And so the group was entitled the Deemed Export Group by virtue of this nature of the intellectual property technology transfer, et cetera, focus which Norm Augustine, at the end of the conversation, determined that we ought to change the name of the panel to the Doomed Experts Group, okay.

He says, there's no way to accomplish the task short of what, I think, John Hamre laid out in his comments in the beginning of this - you know, to answer this question, which was you build higher fences and walls around fewer and fewer things, once you've determined that that is the point of greatest sensitivity.

And, again, you've got a definable lane. Large-scale systems engineering projects, great - that's what you're trying to motivate behavior in a different direction as well as distribution of energy, et cetera.

There are ways to define what is probably going to be a long list of things that you would consider to be extremely sensitive, and then building the highest walls around those fewest objects as defined as priorities.

That you really do want to preclude or you really want to motivate behavior differently is going to be the most enforceable, as opposed to the incredibly broad challenge that Director Sims has, which is to cover the full range - a real challenge. Thank you.

CHAIRMAN BURNS: Thanks. Commissioner Baran.

COMMISSIONER BARAN: Thank you, Mr. Chairman. Well, thank you all for being here. This

has, I think, been a really great conversation and for us, I think, the back drop of the conversation is the Atomic Energy Act our guiding statute and the provisions of that act, which include a prohibition - foreign ownership control or domination of nuclear reactor licensees.

And one of the values, I think, of having you all here is that you know how these issues are dealt with in other sectors that we're not as familiar, whether it's defense or aerospace or communications.

And so I'd like to get a better sense of whether there are comparable constraints, prohibitions in these other sectors to what we have in the Atomic Energy Act or whether we are more constrained under our statute than you all are or have been under the statutes you've operated under. Can folks talk about that?

MR. BAKER: Why don't I start. I think the straight out you may not have a foreign company in this industry is relatively rare and has largely disappeared in part because of WTO negotiations and the like.

Frankly, given where you've taken 103 already - the OCD rules - saying - well, what it really regulates is direct foreign ownership of the plant and if it's indirect ownership - you know, the company sets up a U.S. subsidiary and the U.S. subsidiary then does it, it's a different rule - you've already set the stage

if you decided to - you know, it's silly to have a straight bar - to say okay, if you set up a U.S. subsidiary we're going to go straight to inimicality.

Doesn't mean you're going to get approved but you now are not foreign owned because it's a U.S. company that we can reach and is subject to our jurisdiction. That would be, obviously, a big change. But it seems to me you could justify that under the law, given your existing precedence.

DR. HAMRE: Could I just speak to the broader problem I think that you face, which is the Defense Department and the Treasury and others that have been wrestling with CFIUS, NISPOM reform and all that, they live in a political environment where they are constantly engaging with Congress on an annual basis over these tough questions.

So the test for them is ostensible - you know, can they convince members of Congress that this is sensible what they're trying to do. So they're not trying to re-legislate to redefine the underlying statute but they're constantly engaging in a way to say look, we're wrestling with a problem - how would you do this - how do you feel.

I think you've had a difficulty because, first of all, we haven't built so many power plants here recently and during that void, you know, the industry

went global.

And you are at the pinnacle of leadership but you operate in an environment where it's hard for you to get the confidence you've got political backing - not partisan backing, not Republican and Democrat - but political backing that elected officials think you're doing the right thing.

You haven't had enough banging back and forth against them. Again, so this is a problem we're wrestling with. So I think you do have a challenge. I mean, it's not just the statute.

I think it's partly the way, you know, an independent regulatory organization functions in our constitutional democracy. So part of it, I think, has to be well, like what you're doing here is, you know, seeking the counsel of how other people have been wrestling with it, use that as the basis for conversations with Congress to say we're wrestling with this - here's how these guys were doing it - here's what we're struggling with.

Because I think it's really developing a political consensus that you're mindful of the challenges, that you're working within the constraints of the law and you're using - you're doing your leadership responsibility to interpret to our national best interest at this point. So I really think - don't

solve this once and for all through - in an administrative process with your staff.

I think this is much more of an interactive process that you as leaders of a regulatory agency have to have with political authorities and that's the Congress and the Executive Branch.

You say we're wrestling with this problem - here's how we think about it - we're taking leads from other people that have been wrestling with it.

We're going to interpret it in this way now because we think that's consistent with what you gave us as a mandate when you wrote the Atomic Energy Act. Again, I think it's more of a process of what I think you have to do rather than - because if you were to go up right now to Congress and say we think we better revise this legislation because, you know, God and the angels couldn't help you, you know. I mean, what would happen in this town.

So lead with - you know, you have the capacity, I think, to do this.

COMMISSIONER BARAN: Thanks,

MR. MURPHY: You know, when you look at countries that are start-up nuclear power programs, we're completely the opposite extreme, obviously.

But when you look at what they're tasked to do, one of the things is to bring all the stakeholders

together and have a conversation at the same time - a lot of what's just been said - and that - so that everybody's on the same page, that everybody understands what the goals are.

Personally, I don't think that compromises regulatory independence. But one of the things they do they're writing laws. They're writing a national nuclear law. They're writing their regulatory structure for the first time, their nuclear liability - all these things.

And so it's being put together with a blank sheet of paper. They have to make judgments as to, you know, how they want to interact with foreigners and there's an inherent acknowledgment because they're starting with nothing that they're going to need foreign participation to achieve their goals.

We're in a very different place. But I think you can still draw examples from that because one of the things that has to be factored in that conversation is engagement with the public and, you know, as the safety organization - as the regulatory organization this, I believe, is not something you do by yourselves because part of this is if you go into a room, write the perfect regulation that's handed down from Heaven before you and here it is the next day and oh, my god, it's perfect -

COMMISSIONER BARAN: That's exactly how we do it, too.

MR. MURPHY: I've heard that. But, you know, if at the same time on the government side - you know, DOE, Commerce - you know, that there's also some sort of a push to say this is okay, I think the two have to go together.

When you look at what the U.K. has done, which is similar to where we find ourselves, then the first country, I'm not sitting here saying they've got it perfect either.

But there was a lot of work done by the government to talk about the value of nuclear, the need for, you know, these projects to go forward. I mean, they've gone to battle with the EU over this. But there was definitely an engagement in terms of we need nuclear - oh, by the way, the U.K. nuclear industry has fallen in on itself - we need foreign participation.

We think it's okay that foreign - it was an open discussion as opposed to just saying - you know, the regulator going into a room and just crossing out a few lines in a regulation, saying nothing to see here - let's move on.

It was a much broader discussion and I think that it's great that this discussion is happening here. But I think it needs to be happening together with other

institutions in our government because if you guys write or handed the perfect regulation but there isn't the dialogue on the other side, you then run the backlash of somebody coming in and developing the project and being a hue and cry from whomever because there hasn't been thought given to all the other things that need to be done to make it all work - to reach the end goal that you're trying to achieve.

MR. LYNN: If I could just add one point, maybe connect your question to Commissioner Ostendorff's question of principle and kind of the absoluteness of the statute.

I think when the statute was written you were worried - and Stan's terminology about three risks - you were worried about technology leakage, you were worried about potential accidents and you were worried about malicious acts, some sort of -

I think you're still worried about those same three risks but I think the order is reversed. I think that, you know, as John said you're only really worried about technology leakage in very specified, you know, maybe naval nuclear reactors. But the commercial technology is so much more proliferated than it was in the '50s.

You know, accidents are always going to be, you know, a central function but I think the primary risk

now has become more malicious acts either through cyber or other.

And so as I think about how you interpret this statute you ought to think about, you know, that the order of risks has changed. They're all there but the emphasis and the order has almost reversed.

COMMISSIONER BARAN: I'm going to push my luck and ask - probably go over my time - just ask Mr. Sims a few questions. So when you're doing a FOCI or FOCI, whatever you call it, determination, am I right in understanding that you're doing a single analysis that takes into account all the relevant foreign ownership and security issues at one time?

MR. SIMS: How do I answer it? First of all, nothing is single in our world. We do an upfront assessment as an entry into the program. Before we even grant a facility clearance we run them through the numbers, do our analysis, consult with the intelligence agencies and all that, and so that gives us a snapshot of time.

And that then tells us how much risk that we are maybe assuming here. Then, based on that, then we develop a mitigation plan that focuses on that risk - for example, how do we want to have this wall.

But maybe there's some technology we recommend to our companies - hey, look, you don't even

want this to ever touch the Internet. It needs to be on a separate system and it's simple as that.

And then once we figure that out then we put in the implementation plan and then here's the key. We exercise oversight and then we continuously monitor it.

We continuously monitor through our routine audits, and those that have the greatest risk we continually monitor them more routinely. So it's that - it's that balance so it's not singular and that's our cycle. I even got a slide here that shows you.

You know, I grew up in the world of the intel cycle, how it keeps going. Well, we have an oversight FOCI security cycle that we run through. We even call it the FOCI life cycle, if you will, and they manage it and they run it for us.

So it's not singular. It's constant. If things change we change our procedures to meet whatever risk that we're concerned about. That's the simplest way I can - I can say.

COMMISSIONER BARAN: And at the same time, thinking through what the appropriate mitigation measures are. Is that - because this gets at this question of regulatory clarity, I guess - is that fundamentally a judgment call that you all have to make?

There's no - there's no formula where you put in the criteria and it spits out the right

mitigation.

MR. SIMS: It is a judgment call. But I would submit to you as I said before, a very educated judgment call based on what we've seen, what we deal with.

We deal with all the - there's over 10,000 companies in the National Industrial Security Program with over 13,000 facilities building some of the most sensitive national security technology that we have in this country.

Okay. That's a lot, and so that's why we really do have to have a construct about how we - how we prioritize things.

Let me say another thing about the law and what we - what I find here. The Atomic Energy Act it is the act and I agree, it may not be - might not be absolutely obsolete. But the lack of agility in any law or regulation it has a huge operational impact.

What I say is the world is changing, the environment we're in, and we have to do things. But if our regulations and our laws are not willing to be agile enough to change with that operational necessity I think we are going to find ourselves in, you know, in a pickle, if you will.

COMMISSIONER BARAN: Thank you.

CHAIRMAN BURNS: Thank you all. Perhaps

before I ask my Commissioners for any closing comment are there any closing thoughts any of you would like to share?

DR. HAMRE: Could I just say one thing, and that is I do appreciate how hard it is to - you know, you're at the very pinnacle of leadership on a very inflexible law and I appreciate the complexity of that for you.

I do think you need to reinterpret what national security and what foreign control and dominance means because it isn't - it is not about ownership. It's much more complicated.

I think you - you're going to have to take the lead on it and there's nobody that's going to do it for you and I think you have to do it with the spirit that you're trying to strengthen our security, not weaken it.

I think if you let people define that, you know, you're going to change the rules on percentage of ownership and that's seen as you're weakening something, that's - you're very vulnerable politically.

But if you're strengthening it, if you're creating a process where you're going to strengthen national security by your regulatory process in a predictable way, the country would welcome that and politically you will survive that process because the

people on the Hill that's what they want you to do.

They want you to ensure that the - that the NRC today is providing security that was intended back in 1954. But it's a new world and you're the only people who could possibly do that.

So I would encourage you to think about this as a process. It does probably require some new expertise that you have in - on the Commission staff. I think you should draw on expertise that's in the government that's already there.

But I think the way you have to do this - because the law is too inflexible and you're just going to have to lean forward.

Stewart indicated if you look at the inimicality rules I think you've got an opening for it. But politically you're going to have to show Americans that you're actually strengthening our security and I think if you do that I don't have any doubt that people will support you.

MR. BAKER: I would add one thought to that. Many of the rules that we're relying on now we're relying on because we got rid of tougher, more U.S.-focused rules like buy America or some of the communications licensing in international negotiations.

And, you know, if I know anything about the

European Union they are giving us nothing for free. You have to say to them we're thinking about this liberalization - what are you thinking about for our industry, and you need to ask industry what are your opportunities and what rules would you like to see relaxed abroad.

So you're now talking about something that is truly reciprocal. It might not be WTO, given the membership there, but there could be a number of relatively like-minded countries where you could agree to relax the formal restrictions while maintaining clear security rules and that would also help build a climate for making changes like this.

MR. O'KEEFE: Listening to the conversation this morning too sparked a thought that I had not considered prior to coming over.

One of the more interesting case studies that you may find on the challenge that you're confronting is one that pertains to the actual production construction and then ultimate operational delivery of what is now known as the International Space Station.

This is 16 nation states - the Russians, the Canadians, the Japanese, the United States, the European Space Agency representing all these EU folks who always want to know what's in it for them - you know,

the whole combination - every element of this you can imagine.

And you had to build what turned to be out a $100 billion project that's the size of three football fields. It's a laboratory in space that operates continuously - you know, 365 days a year 24/7, and on board is always a half a dozen humans who are representing U.S. astronauts, Russian cosmonauts, Japanese, European, et cetera.

And all the information, as you might imagine, that went into designing something that was a standard production because we can't during the assembly, you have components, modules, sections that had to be installed while the platform is moving at 17,500 miles an hour by two people who are up there to tack it on correctly.

So if you had anything - any engineering specifications off by even a fraction the project was lost, you can assume, a lot. So all of this required a level of coordination, a level of technology transfer because it was built in lots of places around the globe, as you might imagine, and all of these individual partners all insisted that individual pieces be built where that may be - my component or my module, whatever - be fabricated here, there or somewhere else. But it all had to match an exacting specifications to do it and

then it had to be operational.

This thing is probably - this capability is probability one invention away from being designated one of the world's, you know, wonders and it - hopefully it may end up turning that way.

But as it stands right now they've got to be able to operate this with a multitude of different folks who all, as you might imagine, represent nation states that have a very strong interest in some of the intelligence collection capabilities, the technical capabilities that can be drawn from that, the unique kind of performance characteristics of what comes from something that's operating 250 miles straight up in that kind of condition.

There was an awful lot that had to be overcome to achieve that. That story is what may lead to this because there was an awful lot of changes to the restrictions that were in place - the regulatory framework, the legal limitations, all of it - in order to actually gain that level of cooperation, and some folks, I think, in Congress, certainly, sit back and wonder why they ever agreed to it in the first place given a couple of the different partners who are now engaged and given our challenges with them.

That's a different time. But it's one nonetheless that had to be overcome in order to even make

this feasible to discuss something of that magnitude - of that, you know, incredible engineering as well as scientific expanse, and the currency of the information that was to be relayed on a regular daily basis between different nationalities and interests made it an incredibly difficult challenge.

They were all overcome and ultimately it's operating today because of that. That's an interesting case study all by itself.

MR. BAKER: So you can do this as long as you can sign Sandra Bullock and -

MR. O'KEEFE: Or maybe a little recruiting mechanism, too.

DR. HAMRE: Start from that and then work your way through it.

MR. BAKER: And we can start thinking of which actors will play us, right?

MR. SIMS: Mr. Chairman and Commissioners, as a final and a comment, and beyond what we've said here today and what I've said, and in DSS certainly our processes are not absolutely and they're not perfect.

But I do know that we as a country - we're stronger if we operate as a national security team and in that vein what I would say to you that DSS and the Department of Defense we are - we are prepared.

We can offer you that we will offer you

whatever procedures we have and work with your staff and give you and let you look at whatever we got to help you wrestle with this, and that's the only thing, I guess, I can leave you with.

We're open. Your staff can link with us. We'll open our doors and let you see what we do and pick and choose whatever you need to deal with this - as Dr. Hamre said, to have that conversation and build confidence that what you're trying to do is strengthening our national security. So thank you again.

CHAIRMAN BURNS: Well, thank you, Mr. Sims. I appreciate that offer. I think we work as a government better when we learn from each other and share.

I think, Commissioner Svinicki, you wanted to make a last statement?

COMMISSIONER SVINICKI: I did, and I appreciate that, Mr. Chairman. And again, my thanks to all of you. In reflecting on this discussion, which has been extremely beneficial and our questions and answers back and forth, we do have members of the public in the audience and we are webcasting. Maybe this is my own paranoia but I didn't want to leave an impression to anyone tuning in that as an agency we are toiling entirely in isolation on the issues of the threat -

technology leakage, malicious acts and, I would add, diversion of materials.

Our threat analysts and experts inside the Nuclear Regulatory Commission, even though we are not a Title 50, we're not part of the intelligence community, they're engaging both drawing information from that community and, I would say, feeding information we have into that system on a daily basis and our Commission, reinvigorated after the attacks of 9/11, revived a bit under our most recent former chairman, Chairman MacFarlane, and continuing under Chairman Burns in meetings we'll have soon.

As the leadership we meet directly with counterparts from the intelligence community in closed session.

So when we ask about the threat, I didn't want to create an impression that for all enemies foreign and domestic that we aren't on the job on security. We are absolutely on the job of that issue every day. Thank you, Mr. Chairman.

CHAIRMAN BURNS: Well, thank you all. It's been a rich dialogue I think will help us as we deliberate on the question of how we best implement our responsibilities under the Atomic Energy Act.

And, again, I thank you all for being here and contributing to this dialogue. Thank you and we are

adjourned.

(Whereupon, the above-entitled matter concluded at 11:00 a.m.)