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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

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33RD REGULATORY INFORMATION CONFERENCE (RIC)

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TECHNICAL SESSION - TH24

INTERAGENCY DISCUSSION: FOREIGN POLICY IMPACTS ON

NUCLEAR EXPORT LICENSING

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THURSDAY,

MARCH 11, 2021

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The RIC session convened via Video
Teleconference, at 10:30 a.m. EST, Jennifer
Holzman, Senior-Level Foreign Policy Advisor,
presiding.

PRESENT:

JENNIFER HOLZMAN, Senior-Level Foreign Policy
Advisor, OIP/NRC

JAMES WARDEN, Director, Office of Nuclear Energy,
Safety and Security, U.S. Department of State

KATIE STRANGIS, Acting Deputy Director of
Nonproliferation and Arms Control Policy,

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T-A-B-L-E O-F C-O-N-T-E-N-T-S

Opening Remarks by the Chairperson

Jennifer Holzman.....4

Opening Remarks by the Panelists

James Warden.....7

Katie Strangis.....15

Jonathan Chesebro.....20

Lauren Mayros.....25

Question and Answer.....31

Adjournment.....58

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

10:30 a.m.

MS. HOLZMAN: Good morning and good afternoon or evening to those of you joining us from overseas. Welcome to today's session on the impacts on foreign policy on nuclear export licensing.

My name is Jennifer Holzman and I'm the NRC's senior foreign policy advisor. I'm excited to be joined by such a talented panel of colleagues and friends and I'm going to keep my opening remarks very brief to maximize your time with them today.

Although the NRC is an independent regulator, we're not independent from foreign policy considerations. Our statutorily mandated export licensing responsibilities are informed and influenced by U.S. Government foreign policy priorities, opportunities and restrictions. As we all know, foreign policy is constantly evolving in response to a number of factors: administration priorities, geopolitical developments, national security considerations and the like. And while policy deliberations must be executed thoughtfully, a process that often takes time, our agency's export

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licensing programs require consistency in their timeliness, communication and commitment to uphold U.S. nonproliferation obligations.

When we first attempted to convene this panel last year before the RIC was canceled, we were in the midst of implementing a policy restricting certain exports to China as a result of the indictment against the China General Nuclear Power Company, or CGN. We continue to address that and a variety of other matters affecting economic competitiveness and national security.

In the past year we've had a global pandemic, a change in administration and a variety of new geopolitical developments, and a host of other issues to consider while also maintaining requirements to keep the export licensing process predictable and timely across our government. In our discussion this morning we'll explore these challenges from the perspectives of policymakers and implementers from the Departments of State, Energy and Commerce, as well as the NRC.

A few quick housekeeping items: Your input is critical to our discussion today. There are two opportunities for you to contribute. First, you

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can answer one or all three of our polling questions throughout the session today. You'll see them up on the screen at various times and you can also find them by clicking the polling icon on the right side of your screen.

Second, our panelists are looking forward to your questions. If you'd like to ask a question, choose from the drop-down menu so we know who your question is directed to and please feel free to ask questions early in the session as we're expecting quite a few. After we hear from each of our panelists we'll be taking a look at the polling results and selecting some audience questions to address.

Let's get started by introducing you to our panelists. Jim Warden is the Director of the Office of Nuclear Energy, Safety and Security in the Bureau of International Security and Nonproliferation at the U.S. Department of State.

Katie Strangis is the Acting Deputy Director of Nonproliferation and Arms Control Policy at the National Nuclear Security Administration of the U.S. Department of Energy.

Jonathan Chesebro is the Senior Nuclear Trade Specialist in the Office of Energy and

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Environmental Technology at the U.S. Department of Commerce's International Trade Administration.

And finally Lauren Mayros is an International Policy Analyst in the Export Control and Nonproliferation Branch in the NRC's Office of International Programs.

Full biographical details for each of these impressive panelists are available on our RIC website.

I'd now like to invite each of our panelists to share some opening remarks on the impacts of foreign policy on nuclear export licensing from the perspectives of the agencies they work for. We'll start with Jim, then move to Katie, then Jonathan and then Lauren.

Jim?

MR. WARDEN: Thank you, Ms. Holzman. It's a good and great pleasure to be with all of you this morning, this afternoon, evening as the case may be, and it's my privilege to represent the Department of State in these discussions.

Our office within the Department of State has the responsibility for development of policy related to nuclear cooperation, the negotiation of

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agreements for peaceful nuclear cooperation and the fuel cycle, so we obviously are extremely interested in these issues, that and our export licensing responsibility. So we're extremely enthusiastic to be here.

In anticipation of our time today I took a bit of time to reflect, and I really think that there are three main dynamics in play that I want to take a moment's time to address.

The first relates to where states who supply currently are situated. The second relates to where recipient states or nuclear newcomers states -- what their perspectives are. And the third really is the role and the impact of advanced reactor technologies and how that plays into where suppliers and potential new recipients -- how they're going to react to that.

So starting with supplier states. Supplier states really sit -- and I know that this is an often-used term, but we -- many of us sit at a fork in the road because the Generation III technologies that many states have been selling for a few decades now by all accounts are nearing the end of their life span. Obviously there are many states

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that are still interested in acquiring Generation III technologies and many suppliers globally who want to sell those technologies, but we definitely -- we're on the back end of Generation III technologies.

What does that mean? It means that supplier states are trying to figure out how to continue to make their items attractive, but they're also trying to figure out how to use the export of nuclear technologies in ways that go above and beyond the traditional rationale for the exports of these technologies.

And what am I thinking about specifically? As many of you know, I'm thinking about the ways that suppliers have recently been using their exports to advance a government's strategic or political objectives.

For many, many years the United States thought of nuclear cooperation as having two benefits: nonproliferation benefits, because when we make exports we do so under nonproliferation circumstances; and secondly the commercial benefit that comes to the American manufacturer and the jobs that flow from that export.

The reality is these days we're also

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looking at a third benefit that can acquire or that can come to the government, and that's strategic benefit, because when we establish long-term relationships with nuclear newcomers: countries that choose to purchase a reactor, we establish more deeply ingrained government-to-government relationships and private sector-to-private sector relationships. And that's really meaningful.

Many, many governments, not just the United States, engage in these activities and it really does behoove, or it belies I should say, the fact that in the early stages of the 21st Century this is a trend line and it's going to continue to accelerate. And so we have to be mindful of that because it has trickle-down implications for licensing, among other things.

So let's move to group 2, which is the recipient states. Recipient states are looking at nuclear energy, whether it is the tail end of Generation III technologies or SMRs and all of the new advanced reactor designs that we think -- we think will come on line in the next 5, 10, 15 years, depending on what technology we're talking about.

Many countries believe that these

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technologies hold an immense amount of promise, right? No surprise there. They're much more grid-compatible, the proliferation implications that come along some of these designs move the need for many governments and many supplier states, and so there's a lot of enthusiasm.

That in turn goes along with climate change objectives, clean energy objectives and broader energy security objectives that mean a great deal for both recipient and supplier alike. So that ties into the desires of the big supplier states and that kind of takes you to, okay, what's the role of the advanced technologies in all of this?

We are at a point where the regulators of these technologies are -- I don't want to say on the back foot, but they're facing a tremendous amount of uncertainty because for the lifetime of these regulators for the most part we haven't had too much diversity when it comes to what needed to be regulated and licensed.

But because of what's happening globally and this potential proliferation of diverse technologies that from a foreign policy person's perspective seemingly are going to enjoy a great deal

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of popularity globally, all of a sudden the regulator and those of us who are responsible for export licensing decisions are put in a position where our job gets, I would argue, much more challenging.

And we have to peer into our collective crystal balls and say, oh, gosh, which technology is going to be more prominent? Which technology are U.S. suppliers going to want to export? Where do we as government officials put our limited resources in order to best serve our regulatory -- our future regulatory requirements and by extension our foreign policy requirements, again from a State Department perspective?

And that's extremely difficult to look into that crystal ball and say, gosh, yes, SMRs are going to be popular. How popular are they going to be? Microreactors look like they might be a solution for many, many states, or organizations even. How popular will they be? To what degree do they require not just regulation, but coordination or monitoring?

And that kind of brings me to -- the other foreign relations component of this is to what degree are multilateral institutions and multilateral mechanisms a solution, or at least a part of the

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solution, how to take on the challenge? Big organizations such as the International Atomic Energy Agency, the Nuclear Energy Agency -- these are multinational institutions that play extremely important role when it comes to norm setting and deciding what global standards should be.

They obviously are driven at the behest of their member states, but they carry immense legitimacy and subject matter expertise within their own secretariats, and so they're going to play a key role. There's just no doubt about that. And that means that those of us in sovereign state governments need to continue to figure out the smartest way to interact with them.

The other big one that occurs to me because of my own personal -- the privilege I have of working with them is the Nuclear Suppliers Group. This is a group of 48 governments who attempt to focus on export control and nonproliferation guidelines that all supplier states choose to, because it's a voluntary organization -- choose to adhere to. So we have a responsibility as NSG participating governments to try to point the way when it comes to a lot of these things.

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What do we need to be looking downstream -- what do we need to be looking at downstream when it comes to, hey, how are the dynamics of what supplier states are trying to do, what recipient states are interested in and what types of technologies are going to be coming on line that might need to be controlled? And that's why it's been a priority for the U.S. Government, at least for the last few years.

And I tip my cap to my interagency colleagues who have made this a priority in their bureaucracies to look at the role of advanced technologies and how that bumps up against potential future export control needs and, another big component of that, reaching out to our industry partners and working collaboratively with them to try to see downstream and figure out what's important to be thinking about when it comes to export controls so that we have that calibration right between controlling what we must, but keeping our fingerprints off of everything that we can to the maximum degree possible to allow for the free flow of commerce.

So what does all that add up to? It adds

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up to a complicated picture for a licensing entity. And so I think that's why it behooves us to continue to be extremely proactive and extremely thoughtful about collaborating with one another, not just within the United States or within -- bilaterally or multilaterally amongst governments, but in fact multilaterally as well, working with those big institutions that I have referenced, as well as our industry partners, because it's only going to be this comprehensive approach that's going to allow us to take on these enormous challenges which I think lay before us in the next few decades.

But as I referenced a moment ago they're not just challenges; they're immense opportunities for both clean energy goals, providing electricity to people as well as meeting our nonproliferation opportunities as well. So I'll stop there. From a State Department perspective we look forward to working with our partners to take on these challenges. And I'll pause and ask Ms. Strangis to assume the mic. Thank you.

MS. HOLZMAN: Thank you, Jim. Appreciate you providing us with such a comprehensive overview of this complicated landscape, and I know

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we'll have a lot to come back to in the Q & A.

Let's turn to Katie for some perspectives from DOE NSSA. Katie?

MS. STRANGIS: Hello. I'm Katie Strangis. I'm with the Office of Nonproliferation and Arms Control in the National Nuclear Security Administration within the Department of Energy. My office is in charge of nuclear technology and assistance exports under 10 C.F.R. Part 810. We are the technical -- we have the technical responsibility for working with state and the other agencies on 123 Agreements and really most of the fuel cycle activities.

I'm very happy to be here today. I wish it was in person; would love to see all of you. I want to thank the NRC for inviting us to be here and for taking on the task of planning such a huge event virtually. I think it's really important to have contact like this even when we're all separate.

I also just wanted to mention that I think it is a bit fortuitous that we're having this panel on the 10th anniversary of Fukushima, which demonstrates that when it comes to nuclear activities it's a very small world. And as much as we can work

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on foreign policy there are global events that sometimes require the United States to chip in with a bunch of other countries and react to that. And it's proud -- I'm proud that we were able to do that, but that certainly had an impact on civil nuclear cooperation with our foreign partners going forward.

Jim is a tough act to follow. I had not prepared such eloquent remarks as he did, but I echo everything he said. My office is -- lucky is an understatement to be the conduit to our glorious national labs. I would fail at my job every day if it wasn't for having their technical expertise and really brilliance to rely on. And so that helps inform our decisions every day, particularly as we look out ahead, as Jim mentioned, into the realm of advanced reactors and small modular reactors.

From a -- we are looking at how our regulation, 10 C.F.R. Part 810, may need to change or not change to address the coming challenges. We know that global competition once these things move forward is going to be huge. It's coming to come at us fast and furious. And economic factors, national security factors, those are all things we look at for 810. Those are all going to have to be

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considerations for us.

The bigger issue that I'm thinking a lot about now, and I suspect probably impacts many of you, is from a regulatory perspective. When I've met with small groups of advanced reactor developers there's generally a general knowledge base of the NRC and their activities -- licensing, everyone in our world knows that, right? But some of the advanced reactor developers are new to this whole regime and the idea that technology is authorized separately by a different agency; and that can be anything from a blueprint to a computer code to a conversation with a U.S. nuclear engineer is all covered, is often news to them.

Many of these companies are going to look to partner in their development with foreign entities for funding, for content, and we're going to have a huge lift to socialize the idea that the first step in many of the regulatory processes is going to be coming to us. So when they want to share technology they're going to have to meet with us.

We are in a new administration that brings its own challenges and excitement, and often we can't say we've settled foreign policy as it's

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still developing. We're still working on new questions and having a ton of meetings and so busy and working so hard to find out where everything falls at the time. I know so many of you are going to ask about China. It continues to be I would say the hottest topic. And that sounds like it's a good thing, but not in a -- it continues to be one of the hottest topics that we deal with, one of the biggest challenges, one of the biggest relationships we have.

Every indication thus far; and quite honestly I am reading the news stories, as I'm sure all of you are, is that it will be challenging under the Biden administration as well. We look forward to working with all of you on that. And I believe -- this is not a direct quote, but I think Biden said last week we will cooperate with China when it benefits us and we will be competitive with China when we need to be. So all signs are that it's not going to revert to a huge change in policy.

With regard to our foreign engagement, for the 810 team we don't often engage. We engage through the State Department. But one thing in the past few years, looking at the remaining issues for the timeliness of getting authorizations in place,

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are often the foreign government assurances. And with the blessing with the State Department we've put together a one-pager of information for employees in embassies throughout the world really.

We had found that having someone in the embassy that can work on the assurance process with us and with the government is essential. And often they're dropped into a situation where they've never heard of 810; why would they, why should they, and with a government that doesn't understand why they have to give an assurance for a commercial transaction. So we will get that out, if it's not out already, to embassy staff and hopefully that can be just one tiny step in easing the assurance process as we move forward.

We're always happy to hear ideas and interact with industry. I really enjoy my relationships interacting with industry. Some of you I've worked with for years and years and I really value that and appreciate how well we all work together.

I will leave it there. I think Jen's turning it over to Jon, but thank you all again.

MS. HOLZMAN: Thanks, Katie, and thanks

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in particular for the reminder about the important distinctions between all of the responsibilities of the various licensing agencies and the fact that we continually need to engage in that kind of outreach, to spread the word on that before it becomes a problematic situation for someone.

Jon, let's hear from the Department of Commerce.

MR. CHESEBRO: Great. Well, thank you, Jen, and thanks to the NRC for organizing this conference. Thanks to my esteemed panelists.

I'm going to talk about three things today and really look forward to the discussion: (1) Just looking briefly at the global civil nuclear market; (2) looking at what activities the international trade administration does to support civil nuclear energy; and (3) just briefly mention export controls from the Commerce side which is housed in our sister unit, Bureau of Industry and Security.

So in terms of the global market this is something I think we think about all the time. There's 443 nuclear power reactors operating globally; 50 under constructions. Number vary on

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number planned, but I've seen as many as 300 planned in the future. In terms of where they're being constructed, China, India, Republic of Korea, UAE and Russia are the leading countries where there's active construction. In the United States we currently have 94 operating reactors with two under construction. And I just saw a report the other day from the U.S. Energy Information Agency that nuclear share of U.S. energy generation declined from 21 percent last year, in 2019, to 20 percent in 2021. And that's held steady for a number of years.

I think we're seeing a strong interest in using nuclear energy to achieve global decarbonization goals. I think especially with the new Biden/Harris administration we are seeing that focus on climate change. And also I think Jim mentioned SMRs and advanced reactors. This is something that we do a lot of work on and I'm going to mention an initiative that we recently launched at Commerce on SMRs in a moment. There are a lot of challenges: I think the low cost of natural gas, the high capital costs involved in building nuclear plants, and that's something we'll continue to see.

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In terms of the future the National Atomic Energy Act has a low-case scenario by 2050 that looks at nuclear capacity contracting (audio interference) percent. They also have a high case where it would increase by 80 percent. Where this is going to go I don't know; that's a huge window, but I think it really will depend on the licensing policies that all countries have in place, kind of what the decisions and the energy mix for different countries.

In terms of what ITA does -- so we are the lead trade promotion agency in the U.S. Government. I like to think of us as sort of a liaison between industry and governments. We work very closely with all of the colleagues here today to understand what the U.S. Government is doing internationally in civil nuclear energy and then also talking to U.S. industry and foreign buyers to figure out what are the top markets for U.S. exports, how can U.S. exporters be connected to foreign buyers?

And ITA, we're about 2,500 employees, so a smaller part of the Commerce Department. I think one of our unique value-adds is we're located in 78 countries globally and 109 U.S. cities at our U.S.

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Export Assistance Centers. And so if you're a U.S. company either new to market or a mature exporter, you can meet with our staff and just understand sort of where the market opportunities are. And the same with foreign buyers. I think we often hear where do I go for this certain export license, or I don't understand who to talk to. We do have a Team USA approach to how we engage, and so I think making sure people are connected to the right agencies to understand which regulations and which people they need to talk to.

In terms of small modular reactors, we have a new initiative that we launched last June called our Small Modular Reactor Public/Private Program. This is an interagency initiative that Commerce facilitates to help deploy SMRs both in the United States and in Europe.

We're piloting this project sort of with a transatlantic focus, and I think it's got three main components. No. 1 is government-to-government discussions between the United States, the European Commission and also individual member states. No. 2 is a U.S. small modular reactor working group which is comprised of U.S. industry members. And No. 3 is

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working with the individual member states.

And so this I think again, as Jim mentioned, we've seen such a strong interest in small modular reactors and advanced reactors, but there are huge challenges to deploying them. No. 1, financing. No. 2, looking at demand generation. How do we educate utility buyers on sort of how to operate SMRs, how to license them, and then also on the standards and regulations. So it's a very exciting initiative that we're fortunate to working with our U.S. Government colleagues and our European colleagues on.

I did briefly want to mention export controls. So ITA, we don't have any export control purview, but our sister agency, the Bureau of Industry and Security, does handle our export administration regulations. And so this would be balance of plant, and so turbines, generators, pipes and valves, health and safety equipment, and materials and manufacturing equipment. So if there are questions specific to those, I'm happy to put folks in touch with our colleagues at BIS.

And I will stop there and I look forward to the discussion and the questions. Thank you.

MS. HOLZMAN: Thank you so much. Really

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appreciate that perspective. The SMR partnership is particularly interesting and we've been participating in that as well a little bit.

Finally, for an NRC perspective I want to turn to my colleague in the Office of International Programs, Lauren Mayros.

MS. MAYROS: Thank you, Jen, and welcome -- I'll just echo every -- my colleagues -- welcome to everyone who's joining us from around the world. I hope this is beneficial for you. And, yes, I'll just chime in here with the NRC's perspective on export licensing and foreign policy and how they interact. So as Katie and Jonathan highlighted their respective licensing jurisdictions, the NRC is responsible for licensing the export of nuclear equipment and material that has been especially designed and prepared for a nuclear end use as per our regulations in 10 C.F.R. Part 110.

So I think our responsibility as regulators is to strive for regulatory predictability. That's why it's important that we work collaboratively with the Executive Branch and with my colleagues on this panel today to ensure that predictability in the export licensing process for

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our current and our future licensees.

And I think we need to remain vigilant about nonproliferation and foreign policy issues in order to ensure that we maintain a healthy balance between the needs of exporters and foreign policy and national security interests. And I think Jim did a really good job of highlighting where those challenges lie currently as those three priorities intersect.

And so this year I think has shown everyone the importance of being able to consistently and reliably license the export of nuclear material and equipment in the face of some unprecedented challenges and changes at both the global level and also to how we're doing business from our homes for most of us and we accomplish our mission in a virtual environment.

So our 110 licensing process I'm happy to say I think has proven to be pretty resilient when faced with these challenges. Until the beginning of 2020 our goal when it came to foreign policy and export licensing was to focus on nonproliferation and safety and security and economic competitiveness. And so now we're in a situation where we have to

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maintain this focus while also dealing with a global pandemic and a new way of doing business, which has also wide-ranging impacts on foreign policy.

I mean, for the first time this year we were faced with a lot of virtual meetings, virtual international meetings with some of our trading partners. Sometimes they went well; sometimes they were challenging just connecting with them at different times. We were up in the middle of the night to try to connect with them during their working hours. So I think -- so we've been pretty resilient in that respect.

I think we've done a good job by continuing to refine and implement the China export policy. As Katie mentioned, that has definitely been a challenge for our exporters. And we are continuing to receive feedback from them and refine the policy. We've -- also issuing several important orders this year as a result of foreign policy matters that the U.S. Government has taken into consideration such as issuing an order to restrict or to suspend the general license going for the export of byproduct material to Pakistan.

And we've also had to suspend a few

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export licenses to the U.K. short term as we implement all of the updates to our regulations regarding Brexit. Brexit again was something that happened in the U.K. as they left the EU, as they left Euratom. Didn't think it would have far-reaching consequences that would trickle all the way down to our domestic export licensing practices, but in fact they did. And so we were responsive to that this year as well.

All of this, like I said, was accomplished in a virtual environment. And all these policies were also implemented in close collaboration with the Executive Branch in which the NRC was able to advise the Executive Branch as to the impacts of these foreign policy decisions and how they -- the impacts they would have on the NRC's export licensing process. And so at that point the EB then takes our advice into consideration and they assess the impacts a foreign policy decision will have on nuclear export licensing and they decide on that decision's efficacies.

So in terms of foreign policy-related policy decisions the NRC -- we -- as my colleague Dave Skeen -- I'll give him a shout out here -- as he likes to say, the NRC is the policy implementers;

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we're not the policy makers. But that being said, the NRC doesn't operate in a completely independent regulatory bubble. And as Jen said in her opening remarks, we have to take other factors into account when making our overall licensing determinations such as foreign policy considerations, such as security on the ground in a recipient country and the views from the Executive Branch.

Our regulations in Part 110 specify that the more proliferation-significant exports need to be sent to the Executive Branch for their review and for their -- for an inimicality finding. And if the Executive Branch determines that a proposed export is inimical to the common defense and security of the United States, then the NRC must defer to the EB's judgment in that case.

However, the NRC is able to exert its regulatory independence if the EB determines that a proposed export is not inimical to the common defense and security of the United States, and the NRC conversely cannot make that same determination. So it's at that point in this situation where the NRC must submit the export application to the President, actually, who could determine that withholding the

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proposed export would be seriously prejudicial to the achievement of the U.S. nonproliferation objectives or it would otherwise jeopardize the common defense and security of the United States. That being said, that process has only been used one time, and that was all the way back in 1981.

So I think this shows that the NRC is able to exert its regulatory independence when it comes to export licensing decisions, some of which might be based on foreign policy considerations, but I think this also shows that the Executive Branch and the NRC rarely disagree on inimicality judgments. And export licensing decisions are a collaborative process, and we use all the information available to us to make these informed decisions.

And just as we'll have to do going forward for some of these new challenges that we're facing such as the export of advanced reactors, which has been quite -- we actually had a RIC panel on this on Tuesday where we really deep dived into what the NRC is doing to prepare for these new and novel exports and that we are currently assessing our regulations to make sure they are ready for these upcoming challenges, or opportunities, as Jim pointed

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out.

So I'll stop there and hand it back to you, Jen.

MS. HOLZMAN: Thanks so much, Lauren.

What I'd like to do now is just briefly put the first polling question up on the screen so anyone who would like to vote on it from the audience has the opportunity to do so. And we'll come back to the results in just a little while, but I think based on the opening comments from each of our panelists there is a great foundation laid for discussion on these topics and we'd be very curious to see your views on the choices that are up there. So please if you'd like take a moment to vote on the poll and we will come back to those in just a little while.

Before we get started looking at some questions from our audience, once thing I'm curious about, there's all this talk of change and foreign policy is constantly evolving. Nuclear technology is evolving. Everything seems to be in a very evolutionary mode right now. But there's also been a good deal of consistency in terms of nonproliferation priorities over the years that sort

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of have transcended politics in the last few administrations. Can you comment on what are some elements that have remained consistent in terms of policy and nuclear export licensing over the past several decades and what we can learn from that in terms of finding a little bit of comfort or something to hold onto in the face of so much change?

Jim, maybe we can start with you.

And it looks like unfortunately Katie may be having some technical difficulties, but hopefully she'll be back in just a minute. Start with Jim.

MR. WARDEN: Sure. Thanks, Jen. So when you ask about what's been consistent, I would argue that one of the most consistent elements has been the United States Government's commitment to putting nonproliferation equities in the driver's seat when we address these distinct challenges and evolutionary trend lines.

We have always kind of since -- whether it was the Comprehensive Safeguards Agreement or the additional protocol, the United States has kind of championed those causes from their inception and has tried to push at a global norm amongst all suppliers, which has the effect of implicating export control

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policies as well of course as to the necessity of these documents in order for a recipient to take delivery of U.S.-obligated material and items. So that's kind of always been our North Star, I think.

And when we take into consideration broader foreign policy principles, then I think you can see a pretty consistent trend line when it comes to how our bilateral, our broader bilateral strategic relationships -- those stay pretty consistent. And when it comes to how those get baked into export control licensing decisions, I don't think that you would see much of a deviation in a line graph there either.

There are all those other governments that have historically placed nonproliferation at the top rung of the ladder when they make decisions. Those have been the folks with whom we've had the most robust trading relationships for many decades. And I think that's been pretty consistent.

It's the nonproliferator in me that jumps up when you ask that question, Jen, so if I went off in the wrong direction, please correct me, but that's where my head goes.

MS. HOLZMAN: Thank you,

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nonproliferation Jim. And there is no wrong direction here, so we appreciate that perspective.

Jon, from Commerce's standpoint what would you say are some of the consistent elements that have driven export policy in the past few decades?

MR. CHESEBRO: I mean, I think obviously each administration has slightly different policies and views on nuclear energy, but I think overall I've seen a strong commitment to supporting U.S. civil nuclear exporters. Again specific policies such as the recent China policy do change, but I think overall there's a commitment to educating both U.S. exporters and foreign buyers about export licensing, export controls, looking at how U.S. products and services can help other countries achieve their nuclear power goals.

And so I think it's something that's -- obviously the industry has had ups and downs, the nuclear renaissance that we foresaw in the early 20-aughts didn't really come to fruition, but I think the industry and government colleagues I've worked with have remained committed and optimistic that nuclear energy has a lot of benefits to offer. And

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again, especially as we just see a heightened focus on climate, I think nuclear power will have a huge role to play there.

MS. HOLZMAN: Thanks, Jon.

Lauren, I know that the NRC sort of prides itself on being a pinnacle of consistency and people tend to get worried when we are anything but, but what would you add to answer that question?

MS. MAYROS: Yes, I will answer it with a highly NRC-focused response. I think our -- from an export licensing perspective our criteria have changed very little over the past few decades since the Nuclear Nonproliferation Act of 1978 was promulgated. These criteria come straight out of the Atomic Energy Act. They're based on principles of nonproliferation. Some Jim has already mentioned such as the requirement to have a 123 in place before you can conduct major nuclear exports to a recipient country, physical protection standards, full-scope safeguard agreements for non-nuclear weapon states and peaceful use guarantees. And these have been consistent for decades.

And so the fact that our export controls based on nonproliferation considerations has not and

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will not change for our licensees in nuclear material equipment that we license for export by the NRC and the proposed end uses of these commodities have also generally not changed in the past decades, as Jim alluded to, we've been used to licensing the same commodities under the same criteria for a very, very long time. And therefore, the NRC has been licensing the commodities under our jurisdiction according to these criteria for decades.

And so U.S. companies and especially companies that have been exporting these commodities for a long time, I think they're very familiar with the NRC's export licensing process and the requirements that a proposed export must meet in order for the NRC to approve an import or an export license.

So in that vein I think the NRC's regulatory predictability under Part 110 has remained pretty consistent. The process is mature and the nuclear industry can also rely on the fact that these controls are implemented in order to protect the public's health and safety by ensuring that nuclear equipment and materials are not diverted for use in nuclear weapons. So that's our ultimate goal, that's what we're striving to achieve and I

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think that will never change as well.

Of course Part 110 has been amended over the decades in order to make clarifications or add updates from the Nuclear Suppliers Group that Jim talked about from their guidelines. Or perhaps more significantly we make changes to add an item or to remove an item based on -- sometimes based on its proliferation significance or insignificance. Again, we don't want to over-regulate; we don't want to under-regulate. So we do -- we are responsive to that.

For example, in 2005 the NRC transferred export licensing jurisdiction of nuclear-grade graphite for non-nuclear end uses to the Department of Commerce. So in that vein we thought we were over-regulating it and we no longer needed to do that.

And then around the same time Congress also directed us to add new controls for radioactive sources consistent with the IAEA's code of conduct for the safety and security of radioactive sources.

And then as the hot topic of our panel today and of panels this week is the advanced reactors and that we are currently looking at being responsive and being flexible in our regulations to be

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responsive to these new and emerging technologies.

So regulatory predictability is our goal. And I think that that's remained pretty consistent over the past decades, but recognizing the fact that we do have to remain a little bit flexible to be responsive so that we can maintain our mission of protecting the public health and safety here in the United States.

Back to you, Jen.

MS. HOLZMAN: Thanks, Lauren.

And I think what comes out as sort of a common theme across all those answers is that regardless of sort of what the issue du jour is that we're addressing we have a commitment to our collaborative relationship between our agencies and we have a commitment to consistent and transparent outreach to our licensed community and to our foreign partners. And I think that that's really, really important because we rely on those relationships very, very heavily. Especially in times of change that consistency becomes very important. So thank you, all, for that.

Unfortunately I don't see Katie back just yet, but hopefully she will be back soon.

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What I'd like to do is pull up the results of our first polling question, please, to see if folks have had a chance. And it looks like we have a pretty clear winner in terms of the responses.

So essentially the question is asking are foreign policy-related considerations and sometimes restrictions an essential part of the export control regime? And it looks like the majority of our audience who responded to the poll indicate that they would agree that it's important to protect sensitive U.S. technology to maintain our competitive advantage, but that we have to strike the right balance to make sure that U.S. companies don't lose market share.

And I see that Katie is back, which is awesome.

So what I would like to do because as it happens the first two questions I saw that came in from our audience are relevant to this question and also especially relevant to the answer the majority of our audience selected.

So I'd like to pose this question to all of our panelists, and it will count sort of as both a reaction to the results of the panel and as a

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response to -- we had several questions that hit on this common theme. And that is, it appears that SMRs and other advanced technology is becoming quite popular either in practice or at least as an idea that countries are considering. And other countries are already exporting certain technologies or making inroads in new nuclear power states.

And so the questions are asking what are governments doing to help enable these new technologies to become popular without enacting policies that stand in the way of that? Do the participants understand the important ways that government actions can actually slow new technology development and in fact in certain cases our policies are holding back the U.S. from assisting new nuclear countries against other supplier states that may not have the same proliferation requirements?

So essentially it boils down to is there a common strategy among our agencies to address this challenge, to address striking the right balance between making sure we have robust controls and actually stymieing U.S. businesses' ability to market overseas? And so we have a strategy for addressing this at kind of this critical time when new

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technologies are on everyone's mind?

So, Katie, I know you just got back, so I would like to start with you, if it doesn't put you on the spot, to give you an opportunity to react to that. And then maybe we can go around, if that's okay.

MS. STRANGIS: Yes, I, upon IT guidance, just moved closer to my router because I'm having some connectivity issues. So I didn't hear everything you said, but I'll respond anyway.

I think with regard to exporting new technologies, collaborating on new technologies right now we're operating within a legal framework that isn't easily changed. We're looking at what we'll need to do. Honestly some of the technology isn't all that much different than what's currently in the regulation.

One thing that I think is really important and we're participating through Team USA and in interagency is figuring out new markets and how to kind of socialize the idea of the cooperation that has to happen to get them access to the technology. And I mean, I think NRC will probably speak to this, but to -- so ensuring they have a

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stable regulatory program set up and so that they unfortunately the responsibilities if U.S. nuclear technology is coming to their country. What -- re transfer obligations and what they can and cannot do with it and who they can and cannot share with it within their country. That kind of socialization with new markets is going to be crucial and we are all for engaging on that front. It sounds like a small thing, but I think it will end up being a big help later down the road. I have no idea if that's anything close to what you asked, but looks like I'm no now, so --

MS. HOLZMAN: Yes. No, thank you. And, yes, it is. And essentially what we're looking at here is the extent to which we can work to strike the right balance between making sure that our controls aren't watered down, but also that we're not blocking U.S. industry's ability to be competitive. And so you were spot on.

Jon, from Commerce's perspective do you think that -- do you agree with sort of the view of the polling question and what some of these audience members are asking in terms of are U.S. policies hurting competitiveness because they're overly

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restrictive?

MR. CHESEBRO: I mean, I think in talking with you as industry I think the majority may say, yes, these are very difficult policies to navigate, it takes an amount of time to get a license, the foreign buyers sometimes don't understand what their obligations are. But I think everyone understands these are necessary. We're not regulating this because it's an automobile that we can just send anywhere. This is sensitive technology that has nonproliferation safety and security implications. So I think people understand that.

I'm sure -- I know we've heard from industry there's advocacy to sort of revamp regulations, to again sort of put higher walls around things that really should be protected and then have things that are more generally available have lesser controls, but it's -- as my colleagues mentioned, I think this is a process that the U.S. Government has had in place for a long time and it has been working and we do our best to streamline this and make sure that both companies and foreign buyers are educated on what needs to be done to get the necessary licenses.

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MS. HOLZMAN: Thanks, Jon.

Jim, putting your nonproliferation hat back on, from the standpoint of the need for these important controls and the need to meet certain criteria how would you address these questioners who are concerned about the government stymieing competitiveness?

MR. WARDEN: Sure. So I certainly understand the rationale behind the question. And the United States -- I know this may not be a popular thing to say, but the United States takes pride in having the world's highest nonproliferation standards and we expend an immense amount of diplomatic energy trying to compel other governments to attain those same standards.

Now that having been said, just to address the questions more specifically, on the question of to what degree do U.S. policy makers recognize that they are having an impact and have the potential to impact speeding up or slowing down the development of technologies, I would defer to my DOE partners on the specific question of support for specific technology development or picking winners and losers.

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Obviously we recognize the profound significance of that, but I think the answer here is that we recognize it and we're not interested in picking winners and losers per se. We're interested in increasing the national security value to the United States Government, and part of increasing the national security value is increasing the economic prosperity of U.S. suppliers, U.S. companies. So those two things go hand in hand. And because of that, every agency that's represented on this call works with each other every day to try to strike the balances that we are talking about.

We recognize that there are other supplier states who shall remain unnamed on this call who do not have the same high level of nonproliferation standards that the United States does, and we recognize that we are in fights every day against those suppliers. And so that's why it's incumbent upon us to be trying, to strive to find that sweet spot on a daily basis using all of the tools in our toolbox.

There's a question that we can touch on in more detail in a moment about some of the financial tools that maybe we haven't been able to utilize as

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much in the past as much as we like, but we are striving to do that more. I think it's fair to say -- very fair to say that the U.S. Government's collective thinking and coordination on these issues has been more dynamic, more pronounced, more regular on this very question today than it has ever been.

Some may accuse us of that being a relatively low bar, but I would argue that it's been something we've always done, but it's something that we're doing more and more each day because we recognize the strategic nonproliferation and economic implications of needing to do so. And that's why we continue to devote more and more human and financial resources to trying to achieve these objectives. I'll stop.

MS. HOLZMAN: Thanks, Jim. And you've sort of led us directly along the path to the next question that I have here. You talked about certain supplier states that present challenges to U.S., but we also have a number of allies who are also supplier states.

And so this question asks could you please discuss more about the relationships among supplier states and in particular the relationship

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and competition between the U.S. nuclear industry and those countries the U.S. would consider allies such as Korea or Japan and how do we balance the needs of our own industry with maintaining a good relationship with our allies in the face of sort of a common objective of potentially counteracting certain other supplier governments?

MR. WARDEN: Is that one for me, Jen?

MS. HOLZMAN: Well, I think maybe since you kind of got us there you could start it off and then we can turn to our other panelists for their thoughts.

MR. WARDEN: Yes. No, I -- what I would note is that a lot of this subject matter pertains to the types of discussions that we have with other Nuclear Suppliers Group participating governments. That's probably the most natural fit insofar as answering the question. And everybody -- all the agencies on the line here are active participants in the U.S. representation towards the Nuclear Suppliers Group, and so all have valuable perspectives that I want to make sure that get heard.

From the State Department's perspective we talk to supplier states on these issues on a

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regular basis. They're a part of our nuclear nonproliferation dialogues, they're a part of our civil nuclear dialogues, and everybody who supplies at a certain level recognizes that they need to be striking this same balance. And so this the kind of work that we do with them.

And they recognize that their private sector entities have certain interests in mind; we recognize the same. I think it does break down to some degree between governments that have state-owned enterprises and governments that don't. And so those two conversations are different.

And when it comes to governments that do not have state-owned enterprises, we look for commonalities, we look for opportunities to collaborate, but we also recognize that those are private sector enterprises. These are capital forms of government, capitalist economies, free-market economies. And so there are going to be some limitations in some respects, but there are also going to be some incentivization structures that maybe SOE-based enterprises don't have. And so there may be opportunities that exist.

And so it really boils back to the point

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that we were making earlier about finding the most dynamic way to work between private and public sector enterprises in ways that are going to best suit our national security and economic objectives.

MS. HOLZMAN: Lauren, would you like to jump in? You're very actively involved with the Nuclear Suppliers Group and have been for many years, and so you have that perspective as well as the perspective of engagement with our regulatory counterparts.

MS. MAYROS: Yes, I think I have a bit of a different perspective because I'm coming at it with my regulatory hat on and I can't get involved in the promotional aspects of promoting certain industries with our allies.

What my goal is, especially when I go to the Nuclear Suppliers Group meetings as a member of the U.S. delegation, is to ensure that we're on a level playing field with the members of the NSG. That is our goal. We all should be operating according to the guidelines that we have signed up to. And that is the goal of the guidelines is to ensure that all these international industries are being held to the same standards as everyone else.

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And so when I go, that is my goal is to ensure that that is happening.

And so when we are looking at the guidelines, assessing the guidelines, considering adding things or taking things off the guidelines, I want to ensure that that does not have far reaching and negative consequences in our own export -- domestic export licensing program here in the United States.

And just to sort of bring in from the last question is to -- that is the goal, is to ensure that there are no huge gaps in our licensing process that lead to undue delays. So that's what I can do from a regulator standpoint is I can't promote our industry, but I can ensure that or strive to ensure that our regulations are in a good place, that they are ready and they are able to license new and emerging technologies in a way that does not lead to undue delays or burdens on our industry.

And so that's my perspective is I can't go and promote you guys at the NSG, I can't talk about that with my regulatory counterparts, but what we do talk about is how we can all remain on a level playing field internationally and how I can bring that back

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to the domestic licensing program to ensure that we are ready when the time comes and when our industry is ready to start exporting abroad.

MS. HOLZMAN: Thanks, Lauren.

I have another question here that I want to start with Katie and Jon, but before I do that I would just like to ask if we could please put up our second polling question for our audience to consider because I think it's important based on what we've just been discussing, whether there's a perception that the greatest challenges facing our industry today are actually external or internal.

So if you've like to vote on this poll, please take a look at the question and we'll pull the results up before we conclude today.

So the next question for Jon and for Katie particularly, and then of course Lauren and Jim can feel free to jump in, often we find ourselves in a position where we have to potentially deny an export or even make a whole policy to deny exports based on information we receive that may be in whole or in part classified, and that presents a challenge in terms of communicating with industry.

So the question is how open are we or can

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we be with exporters when denials are based on sensitive or classified information and what are we doing to make information available to guide our exporters to both understand what our decision might be at a particular time and potentially inform them before they submit future licenses?

So I know this is sort of a near and dear topic because we've had a lot of conversations with industry, but, Katie, would you like to start us off on that one?

MS. STRANGIS: Sure, I'm happy to. Obviously we can't share classified information. That's a pretty black and white line.

That said; and I will use the Chinese exports as an example, when we developed the China framework which came out in October 2018, it was in part based on an indictment of an individual and a Chinese company. And so we were lucky that that information was public information. So all we had to do was point to the Department of Justice website and industry could understand where we were coming from.

I think we're very clear still on that front, that there is an open indictment and ongoing concern.

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At the time; and I don't want to speak for other agencies, there was a really unique opportunity posed by the FBI and supported by all of the agencies that allowed industry that were cleared at the proper level to actually go into the FBI and have a briefing on certain particular threats that were relevant to their industry.

I wish we could do more like that and share more like that. I understand why it would be helpful for industry. But I also think if we are going back to a company and saying the United States Government has concerns that are based on classified information, information we cannot share with you, but for that reason we will recommend -- the Secretary of Energy can do whatever she likes obviously, but my office recommends based on coordination with the other agencies that we cannot approve that.

My thought has always been that it is also at that point not in a company's best interest to collaborate if the government doesn't believe it is because we're not looking to put road blocks in the way of civil nuclear commerce. But if there are legitimate reasons why we're saying to a company that our recommendation is going to be not to move forward

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with this, I think the company needs to take that information seriously even if we can't provide the very specific classified information that recommendation is based on.

MS. HOLZMAN: Thanks, Katie.

Jon?

MR. CHESEBRO: I think the only thing I would add is that I think we're very open to having one-on-one discussions with companies to understand if there's a particular country or product or service that an export is sought for, before going through submitting an application what's the situation in that country?

We had a conversation the other day where a company said, gosh, I really want to export my product to this country. We talked to our colleagues at the embassy and they said the government is not interested in that right now. They're focused on this. We do think your efforts might be better placed elsewhere. So I think those sort of on-the-ground insights can be very helpful to companies before they invest resources.

And then in terms of transparency I would also note that the Commerce's Bureau of Industry and

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Security does regularly update its entity list in terms of where a license is required if there are any bad actors. So that information is publicly available in the *Federal Register* to make sure that companies are not engaging with an end user that would be restricted.

MS. HOLZMAN: Thanks, Jon.

Lauren, can you comment on from the NRC's perspective how we address this issue when we communicate with our licensees about applications?

MS. MAYROS: Sure. We're not the ones who are deciding the policy. We are the ones that are implementing the policy. And so we look to the Executive Branch for what we can say publicly to our licensees, but this definitely presents a challenge. Our licensees, I think they're getting used to the restrictions that have been put on China in the past two years. But of course they have questions, and we answer them to the extent that we can vis-à-vis the policy.

Luckily at the end of the day we have criteria that's laid out in the Atomic Energy Act and in our regulations that have to be met and if we can't make an inimicality finding at the end of the day, or

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a non-inimicality finding at the end of the day, that is the story -- that is the -- what we have to tell our licenses. That is the ultimate criteria. That is the last one listed in our regulations and that is the final threshold that they have to pass in order to be -- have their proposed application -- their application approved.

And so in what -- in terms of what we can tell them, yes, we definitely look to the Executive Branch to guide us as to what information we can provide when it comes to these policy decisions. And then of course we can readily explain the criteria to our licensees, but again we are just the implementers of these policies.

MS. HOLZMAN: Thanks, Lauren. And just to follow up on that, there's a question since Jon mentioned the Commerce entity list. The question is does that Department of Commerce entity list also apply to NRC exports under Part 110?

MR. MAYROS: So the entity list does not apply to Part 110, and so that list is a Department of Commerce-issued list. Obviously if a country is on that list, it might inform some of our export licensing decisions going forward, but in no way if

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a country is on that list does that preclude them from getting a 110 license.

But of course again going back to my opening remarks, we do have to take information on the ground and classified information into account when making these export licensing decisions. And so we're not operating in that regulatory bubble as I said, but the list does not -- the entity list does not confer onto Part 110.

MS. HOLZMAN: Thanks for that clarification.

We have just a few minutes left and I want to take a look at the results from our second polling question and then I'd like us to react to it.

So what the question was asking is what are the greatest challenges facing the U.S. industry today in terms of exports? And in the interest of fairness in addition to some external considerations we did also put our own export control requirements down as an option just to see where those fall. And as you can see the predominant response is the concern about economic competition with Russia and China and overseas markets.

So with that in mind I'd like to start

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with Jim. In reacting to that we know this is an enormous challenge for all of us and what I'm curious about is what do you feel like we should be doing that we may not already be doing to support industry in being competitive, whether it's more financial incentives or other things so that we can maintain the nonproliferation requirements and standards that are so important to our programs without just running them out of various markets? So can you comment on that?

MR. WARDEN: Sure, happy to. So I think that the reality is if you kind of look at the long timeline on this, the type of government to private sector collaboration, the depth of the collaboration that we have been doing for say the last five-ish years, we simply haven't had it in this much quantity in the past. And because of all of the profound transformations which are ongoing, that we've been talking about so much today, we've needed that collaboration.

And I think that going forward the best path forward for us is to continue to do that because just as the geostrategic and the geopolitical circumstances will always kind of wend their way in

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sometimes predictable and sometimes unpredictable ways, it's going to be incumbent upon us as a government to consistently and steadily be messaging to our private sector counterparts, hey, this is where our head is on the things that we get paid to worry about. Within that framework how can we be working with you to better understand what your priorities are and to make posture adjustments to better assist or lay the groundwork for what it is that they're trying to do with the assumption, with the knowledge that our goals -- the government's goals are complementary to the private sector's goals?

And so we're not assuming that, well, we're just going to do what we're going to do and then it's going to help you. There's two-way collaboration there, but the reason that it's -- that we as government officials believe it's in our interest to do that is because we believe that additional U.S. economic progress is in fact indicative of national security nonproliferation strategic advancement as well.

So I think that a lot of the institutions that you see reflected here, whether it's the good

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work that Jonathan does at the Department of Commerce or all of the remarkable cooperation that our partners at the Department of Energy have with private sector colleagues and the overlay role that the State Department has when it comes to reaching out to foreign partners -- it's that collaboration that we do that we need to continue to work at and be nimble to meet circumstances as they come down the pike that's going to be required in order to address the challenges that come in the years to come.

MS. HOLZMAN: Thanks, Jim.

And I wish that we had more time because we have more questions and I want to hear more from all of you, but unfortunately we're going to need to close today's session. So please join me in thanking all of our panelists.

Jim, Katie, Lauren, Jon, it's been a pleasure.

I hope everyone enjoys the rest of their day and the rest of the RIC, and thank you again so much.

(Whereupon, the above-entitled matter went off the record at 11:47 a.m.)

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