Easy as 123? The Future of U.S.-Saudi Civil Nuclear Cooperation

[00:00:00] Speaker 1: Okay. How are y'all doing? Settled in? Good. My conscience is in the front row.

[00:00:13] Speaker 2: All right. I think we're going to go ahead and get started. Thank you guys so much for joining us for this very timely conversation about the future of U.S.-Saudi civil nuclear cooperation. And thank you in particular for after a really packed whole day, it's great to see so many people here in the audience on the afternoon of the second day. So really excited about this. So as many of y'all know, earlier this month, the U.S. Secretary of Energy, Chris Wright, announced that the United States and Saudi Arabia had revived talks about civil nuclear cooperation and we're on the pathway to finally reaching an agreement and that we should be expecting meaningful developments this year. Of course, we've been hearing something kind of similar for a while. Like a lot of countries, and we've been hearing about this over the last few days, Saudi Arabia has ambitious plans to scale up its still nascent nuclear energy program. Unlike a lot of those other states, it also has ample resources to devote to that effort. And for a number of reasons that I'm sure we're going to get into today, a lot of people in the United States think that it's important for Washington and for U.S. companies to be involved. So in addition to the geopolitical and economic drivers, the question of U.S.-Saudi civil nuclear cooperation has also been implicated in discussions about some kind of broader deal that could also include U.S. security guarantees and normalization between Saudi Arabia and Israel. And so kind of keeping with the spirit of this whole conference, this is a place in which a lot of these different threads really come together. So getting down kind of to the nuts and bolts, to cooperate on nuclear technology specifically under U.S. law, Washington and Riyadh need to first enter into what's known as a 1-2-3 agreement. That has been both a topic of discussion and it still hasn't yet materialized over the last two administrations for a number of different reasons, including questions about sensitive technologies, in particular uranium enrichment. Given that this is clearly a priority for the current administration and considering the broader impact that the terms of any such agreement could have for bilateral relations, regional dynamics, and the nonproliferation regime more broadly, I'm really delighted to be joined by the three people up here today to kind of dig into some of these questions. So I'm going to do these introductions and bear in mind that I am tired and y'all have a lot of affiliations that are very impressive. So starting back there, Ali Loubite is a senior fellow in the Nuclear Policy Program in Technology and International Affairs Program at Carnegie. Bernard Heichel is a professor in Near Eastern Studies at Princeton University and also is affiliated with the Hudson Institute. And Dan Poneman is a senior fellow at the Council on Foreign Relations as well as associated with the Belfer Center and the Atlantic Council. So there's sort of got to catch them all approach to the think tanks. And of course, he was president and CEO of Centris Energy and the U.S. Deputy Secretary of Energy. As a quick housekeeping note, we'll start with about 35 minutes of moderated conversation and then we'll open up to audience Q&A. And if you are just joining us for the first time now, that is impressive, but the way you participate in that is via the conference app. So I want to kick things off with Bernard. So you're currently writing a book about Crown Prince Mohammed bin Salman and the way he's sort of transforming Saudi politics and foreign policy. And I guess my question for you is, where does the nuclear question fit in to Riyadh's sort of broader strategic calculus right now? And what do you see as some of the key ambitions or aspirations,

[00:03:43] Speaker 3: as well as impediments on the Saudi side? Okay. Thank you. It's a real pleasure to be here and I would like to thank Carney for inviting me. So Saudi Arabia is right now in a phase, a very nationalist phase of trying to, you can think of it as Saudi first, and the ambition is to diversify away from oil and fossil fuels, including petrochemicals, to build out the economy, build new sectors, one of which is mining and energy that is not reliant on fossil fuels. So the nuclear ambition is to have a civilian nuclear program, which would allow them to sell more oil effectively, because they would be able to generate energy through the nuclear, and it would also help them with other ambitions, such as having large server farms and AI data centers that would require a lot of energy. Again, they would provide that through nuclear, through solar, through wind, and try to minimize the use of fossil fuels for that energy generation. So that's where it fits in with the diversification. They believe they have a huge uranium deposit as well, and they would like to be involved in the mining and export of uranium, so that's another aspect of the nuclear equation for them. And I think it is also symbolic of sort of being a great power, a great regional power, a great world power. There are these ambitions that the country has to be in the top 20, top 10 of everything, and I think nuclear

[00:05:25] Speaker 2: comes into that as well. I guess maybe kind of turning to Dan, so thinking about the U.S. side of this, you've worked on these issues both from your purchase in government and also from the perspective of industry. I guess my sort of first question for you is, what do you think is at stake here? You know, why is it important for us to be talking about this, and what are the U.S. interests

[00:05:44] Speaker 1: in this case? There's a lot of stakes, Jane, and first of all, let me thank you and Carnegie. I think it's the first time I've been at this conference in 20 years or so, so I'm honored to be back. But I recall during the Bush 43 administration, we had a program called the Global Nuclear Energy Partnership, and I remember saying at the time in internal discussions, look, nuclear energy, it's not a choice, it's a fact. And if it's a fact at a global level, you want it to be safe and secure, and you want nonproliferation to be very important. And to me, that means the United States has to be a major player. And the 123 agreements are the vehicle through which we engage with the world. So at level of national security, nonproliferation, etc., safety standards, I think it's important in that context. I also think from a climate change perspective, all you have to do is read the reports of the Intergovernmental Panel on Climate Change, IEA, and see that over 30 governments have signed up for a tripling pledge at COP 28 and COP 29, and it's with a view to somehow mitigating, of course, we're blowing past already 1.5 degrees, most people think we're heading to a 2100, 3 degree or higher, and we've got to get on with it if we are going to be successful. And that means a lot of reactors getting built, and to me, to have the best possible set of peer reviews and statutory and other nonproliferation requirements, which is what you get when you have a 123 agreement with another country, that's why

[00:07:16] Speaker 2: we're doing all of this. So Elie, I want to sort of zoom out and first look at this from the regional lens. And I guess my first question to you is, how are other states in the region, including Israel, kind of thinking about these things? And what would a U.S.-Saudi civil nuclear cooperation agreement, if one were to come about in this next year, what would that mean for the nuclear Middle

[00:07:37] Speaker 4: East and regional politics more broadly? Thank you, and it's a great pleasure to be here alongside two old time friends. I think, obviously, I'm not

speaking for the Israeli government, just to be clear, or for any other government for that purpose. So a couple of things. I think everyone is approaching it with a question of what is driving the Saudi nuclear ambition? What is really behind it? And one of the reasons, Bernie may have given you this contemporary approach, which I think is important to have to bear in mind. But when others are looking at it, the Saudis have expressed a strong interest in nuclear program now for two decades. Nothing came of it. So the first question that countries in the region are asking themselves, is it a pipe dream or an action plan? And if it's an action plan, as Bernie has now suggested, what is actually driving it? Now Bernie has mentioned two. Dan has added another one. But I think that people are also contemplating whether there is something more than that, or what is the priority between those motivations? And I'm not getting down to the question of who is assigning what priority, but is it prestige that is driving it? And Bernie was saying, in part, there is an element of this. Is it sheer ambition to be at the forefront of the top 20, or 10, or whatever, and so on? Are the real energy needs that are driving it in a country that is oil rich, and so on? And if it's energy need, what is it that you want to displace so you could actually sell more oil, and so on? So that's the third question. Is it something that is merely supposed to lubricate other types? I mean, it's something to woo in your partners, and get something in return for this. I mean, I offer you a nuclear power plant project in return for getting whatever, security guarantees, or things of that nature. And then finally, is it climate change that is driving it? Or finally, is it proliferation-oriented? And so I think that a big part of the debate is what is actually driving the Saudi ambition at the moment. And if it's any of those, or all of the, or at least some of the above, how do we address it in ways that are constructive? Constructive in the way Dan Poneman had referred to, which names it, it actually checks the boxes of climate change, but doesn't evoke safety and security concerns, and doesn't affect anxiety about proliferation. Is it something that could address the kind of things that Bernie was talking to? I mean, facilitate data centers to go along with it. Does allow for the Saudis to tap their uranium resources, the indigenous resources. So I think the debate in the region is, if we understand what is really driving it, one. And number two, if we would have confidence that whatever is driving it would be sustainable. Because in a lot of people's minds, in general, and in the region in particular, there is a constant question, all right, how safe is MBS's regime? And how predictable is MBS's behavior? And so I think that what you get here is into a very complicated analysis, which I defer to someone who closed the kingdom much better than I ever will, that is sitting to my right, and saying, here is what is actually driving them at the moment. Here are the priorities. Here is so on. And then once we have that understanding, I think we're able to tailor a package that would check the boxes they're looking for, without causing anxiety. Because for example, as an Israeli, I'm first of all worried about the safety and security of the operation of the power plants, maybe in part because of domestic security within Saudi Arabia. And then the second thing is, am I worried that if the Saudis enrich, others will enrich? And I could go on with the list of and so on. And only third is, will the Saudis actually use it for all the wrong purposes? And we can go on with the list.

[00:11:50] Speaker 2: Okay. There's a lot on the table here, and it's all really great. So maybe picking that up a little bit and taking some of the... I think there's kind of a... If you read an article in the New York Times, there's a couple of things that are mentioned in every article, right? And there's a couple of quotes that you see recurring every time. And so maybe kind of picking up from there and turning back to you, Bernard, one of those is the fact that contingent upon what happens with Iran,

there has been not just a refusal to renounce, but a promise to consider moving from a peaceful to a non-peaceful program. And that is, of course, a looming question. So I guess maybe my question for you would be, how do you interpret those types of statements? And do you think that there's been any change? So I mean, relations between Iran and Saudi Arabia, there's a longer history there, but the recent history looks kind of different than it did when some of those comments were first made. So how do you interpret that? And how should we be thinking about that

[00:12:45] Speaker 3: when we approach some of these issues? So I think that MBS should be taken literally. So when he says that if the Iranians acquire a weapon or the capability of producing a weapon, that he would want the same. He would want the same capability. And I think that's to do with the idea that this is, even though it's a neighbor, it's an enemy. And the Iranian regime has never shied, this regime has never shied from expressing its desire not just to expel the United States from the region, it's a revisionist power, it's not a status quo power, and to destroy Israel, but also the dynasty of the al-Saud are a target of the Iranian regime as well. They want to get rid of this regime with the aim of ultimately having a friendlier regime in charge of Mecca and Medina. So I mean, that's part of the ideology of the Islamic Republic. So I think MBS would want a weapon if the Iranians acquire one. And that should be taken literally. You know, then there's a question of the Pakistani weapon, and to what extent, you know, were they involved in that? And would they get it if they asked for it? So that's, I think, the answer to that question as to how seriously. Now, the relationship with Iran has changed over the last few years. It's become much more, much friendlier. I mean, there's a detente between the two countries. Essentially, MBS realized that in order to get on with this project of rebuilding his country and diversifying his economy, he cannot have missiles and drones being fired at his cities and his facilities. And that's what the Iranians and their proxies were doing. So he wants to try a different tack with the Iranians to calm things down. And that's what he's been pushing, really, since 2022, 2023, with the help of the Chinese. And so far, it seems to have worked in as much as Saudi Arabia hasn't been attacked since.

[00:14:54] Speaker 2: Yeah, I think there's a lot there. And I think coming back to the question of China in a bit, is there anything with Eli, or would either of you want to respond to that?

[00:15:02] Speaker 1: I think you heard it from somebody who was closer to the regime than certainly I am. I wouldn't speak for Eli.

[00:15:08] Speaker 4: The only thing that I would add is that I think there are two linkages to the Iranian issue. One is the security dimension. And Bernie has already alluded to it. Namely, if they get it, we should have it as well. And the question then becomes, because the Crown Prince, as I recall, had actually said two things. He said, they will go for it, and then they will go for it overnight. Which is very important for the purpose of our discussion here, because if they want to do it overnight, it won't be based on their indigenous nuclear program. But that's an aside. We'll get to that probably later. That issue aside, there are the other linkages, is the one that I think very closely aligned with the earlier comments. Namely, if as a result of a nuclear deal now, Iran gets 3.67% enrichment or higher, can you envisage Saudi Arabia settling for less? I think the answer is already given by the facial expressions you're hearing, you're seeing here to the right. So that's a second linkage. However, if you actually think about it and listen to statements that have been made by the

Kingdom earlier, the Kingdom actually put on the table something that is intriguing, and I would hope that Dan would comment on it. So I won't take your role, JD, but I would still provoke my friend, Dan. The Saudis have said, let's go for a regional arrangement. Because a regional arrangement would be the one that would both assure fuel supply, would take off their hands the need to individually enrich, and or at the end of the day, deal with the spent fuel and so on. But in the process also reassure each other that you don't have hostile intentions. On the face of it, the Iranians agreed. But the Iranians said, yes, there is one caveat. It has to be on our soil. Whereas the Saudis were actually open to negotiation where this will be located. Let's say Bahrain or somewhere else. So I think that we have a third linkage here, and I would hope that as part of any arrangement, you know, as the only one who would run enrichment operation on his, on anywhere sort of its own, I would refer the issue to Dan. But the question is, rather than having national programs anywhere that do not have a large energy nuclear power plant fleet, doesn't it make more sense to go for regional

[00:17:33] Speaker 2: arrangements? And that's why I would refer to my colleague here. I was going to say, Elie, you've kind of hopscotched the order I was going to go in there. I was actually going to think it's a, it's kind of remarkable we've gotten, you know, this far into it without immediately having the gold standard come up. And I did that somewhat deliberately. And so I want to frame that a little bit, sort of moving back to first principles, then I want to return to this question of, you know, other ways we can do it. So the other thing that you see, you see that quote, and then you see the question of the gold standard. And, you know, when this was being floated a few years ago, this is a big issue. This is something that the current Secretary of State felt very strongly about. So this idea that, you know, and this really came about because of the UAE, the idea that the U.S., when it makes these agreements, does not want states to be enriching uranium or reprocessing domestically. So I want to kind of frame it slightly different. And starting here with Dan, I think the way you've, I've heard you put it as, you know, the gold standard is neither gold nor standard. Can you say a little bit more about what you mean about it? And is there a better way to

[00:18:32] Speaker 1: be talking about this? Yeah, this is actually a good byplay. And I'm intrigued by the regional arrangements suggested by Ellie. I think I saw Steve Miller in the back. My first publication was on regional fuel centers in Pergamon Press in 1977. I wrote about this. So, but just to repeat what some of you have already heard, the gold standard isn't gold and it isn't standard, right? I mean, the 123 agreements are governed by the Atomic Energy Act of 1954 as amended. And the most robust set of amendments was in 1978 with the Nonproliferation Act. I see a lot of heads nodding. That was a response, a somewhat delayed response to the Indian nuclear test. And we insist on full scope safeguards, the condition of significant nuclear supply, catch all export controls. And that was the gold standard. And we spent decades, and I was part of this, and many people here were part of persuading the whole nuclear suppliers group to sign up to these. And it was hard work, but it worked. I mean, people thought we're just going to unilaterally disarm ourselves in terms of the U.S. insisting on something nobody else will insist on, and then we'll just lose all the business and all the influence that goes with it. But sure enough, and I think we finished during Obama with the nuclear suppliers group and the enrichment and reprocessing controls. Ambassador Holgate here, too. We got that, right? And then, I won't go into the whole back and forth about it, but the

Emiratis basically embraced their own policy based on their own white paper, based on their own legislation. And they said, hey, look, we're developing nuclear technology. We don't want bombs. And therefore, to kind of reassure the world, we will decide on our own to renounce our own enrichment and reprocessing and go with commercial services. By the way, that's what Saudi said back at that time, too, in 2008. And that was fine. I mean, what was not fine was then for people to think, oh, good, we can sort of, and there were more turns of the wheel. People here know about it. But basically, somebody, in my view, with poor judgment, thought this would be a good thing to gloat over. So let's gloat, and let's call it a gold standard. And immediately, you make it radioactive, forgive the expression, right? So no other self-respecting country will ever say, I know, I'm going to kowtow to the gold standard that's forced down my throat. So that's why I say, and therefore, it's not standard because nobody else is going to want to do this. And it's not gold because we had gold. It's more like a platinum non-standard, okay? However, but since I've been teed up by Bell Alley, there's an interesting idea in there. And I would just say, I might sequence it, and I'll now give a plug for what I had proposed instead in concert with Secretary Moniz back when he was Professor Moniz in 2004 and our mutual friend Arne Cantor, may he rest in peace. And that was to say, look, after the 2003 Iraq War, we realized we had to do things differently if we wanted to have non-proliferation standards be robust. And if we did not want to see countries, everyone developing its own little enrichment program to support their own little reactor program, there's no justification in pure financial analysis for a country with less than about 25 reactors to make this kind of huge investment. And therefore, we proposed what we called an assured nuclear fuel services initiative, in which a country that was already an enricher could provide sufficiently robust supply guarantees at attractive prices that countries that wanted nuclear reactors but didn't want bombs could have assurance that they would not be cut off because it's no fun to spend five, ten billion dollars on a reactor and have no enrichment to support it, right? And you would backstop this with a series of guarantees. There'd be a commercial guarantee backed by a national guarantee backed by the IAEA. And of course, the IAEA did do one fuel bank, which we used for this kind of purpose. So that's a way in which nobody has to give up their Article 4 rights. It doesn't become, you know, a test of national will. It becomes an energy ministry, not a foreign ministry issue. And if you genuinely solve the problem of ensuring enough fuel to make sure that this great tripling of nuclear capacity that COP 28 and COP 29 have pledged, that's how you do it. And I will stop there because I don't want to take up all the oxygen in the room, but it dovetails very nicely with the possibility of a regional approach which Ellie has teed up. So maybe throwing that back to you, Ellie, how do we

[00:23:10] Speaker 2: get there? So these ideas have been around and then they kind of sort of fell by the wayside, and now they're coming back up again in slightly different circumstances. But you know, there's also issues on the US side with the domestic fleet as well. So how do we get there politically, geopolitically, as well as sort of practically?

[00:23:25] Speaker 4: So let me take a back step for a minute in order to move forward. The arrangement that we've just talked about does not address all of the motivations that Bernie was talking about. So, for example, he was saying we want to take advantage of the uranium resources available in Saudi. That's not inconsistent with going towards a regional arrangement. It only means that Saudi Arabia would be mining uranium. Could that, without evoking tremendous

proliferation concerns, include also producing yellow cake? I don't think, you know, and engaging in conversion, I don't think that that should be a problem, right? If eventually, with the supplier's consent, they can also produce fuel rods, right? I mean, the enrichment won't take place in Saudi, but part of a regional arrangement. But the fuel rods should be dedicated to the power plants that they're going to be used and certified for that purpose. I don't think so. I think that that could provide the Saudis with the prestige, the use of the resources, and so on, and would also enhance the security, the secure supply guarantees that they're looking for without actually evoking proliferation concerns or being economically nonsense, as Dan Poneman had said. So I think that what I'm basically trying to say is, both as an interim step, but also to complement the regional arrangements, and given what the Saudis want to take advantage of, regardless whether it's just prestige or also technical knowledge and supply guarantees not to be entirely dependent and so on, there are ways of combining the two, both initially and then subsequently getting so, in any event, I can't, and there is one more, just one more thing here. Dan Poneman, and I would, feeling, being a friend, I push him a little bit further than that, and saying, he was talking about the 123 agreements and the role they play, whether it's a standard, it's not a standard, and so on and so forth. But let's talk for a second about the commercial application of that standard. When you provide the power plants of those, right, then in many of those cases, you want to make sure that the fuel you provide, you know, is only the fuel that has been assured to be deployed in those power plants and so on. So what happens is, and the Russians actually, if we would look comparatively at the advantage, the Russians are saying, you can't introduce another fuel into this, because they sell you the reactors at the discount, and what happens is that then they sort of, but from a vendor's perspective, I think that the guarantee, you're saying, it's only fuel that we would approve that can be introduced into the reactor, and so on. So it doesn't, it's not included in the 123 agreement, but it's actually anchored in the kind of commercial agreement. So I think there are ways of building towards the regional arrangements until the politics are mature enough that would give us the kind of assurance that this is not a proliferation prone, until we can actually get to the level that we're talking about, and so on.

[00:26:49] Speaker 1: I had to drop a footnote here, because when I was Deputy Secretary, we approved Westinghouse fabricating fuel for the VVR-1000s in Ukraine, and boy am I glad we did, and so were the Ukrainians, and you know who was very unhappy with us? The Russians, of course. So there are, only a footnote to say there are other issues, including energy security. As Winston Churchill famously said in 1913, you get energy security from variety and variety alone. So we have to be mindful, not only of how we think about it, but how the customer thinks about it in terms of their own energy security, and how they vouchsafe their security by having a robust supply chain. Not to get into the weeds.

[00:27:34] Speaker 2: No, I think there's some weeds I want to go back to, but I actually want to throw back to, Bernard, your kind of opening comments about taking MBS seriously, and also taking him seriously in the fact that these sort of, a number of different things can be running alongside each other. So how do you think some of these goals can be met, and then thinking about everything that's happening at the same time, if we're to take him seriously at his word, what does that mean when we're thinking about, if there is genuinely a proliferation risk in certain settings, like, how do you then go about addressing some of these other commercial incentives, or looking at sort of broader frameworks you can create for the region?

[00:28:11] Speaker 3: So, as I said, you know, he's trying to negotiate with the Iranians to bring down the temperature in the relationship. So for instance, a regional arrangement is one that he would welcome. And in fact, from what I hear, they negotiated, he negotiated with the Biden administration, a nuclear agreement, which now was invoked by the Secretary of Energy. This is not going to be signed on President Trump's trip on May 12 to the kingdom. But the Saudis, when they did negotiate with the Biden administration, they agreed to, I heard they agreed to the 123 rules. They didn't want the extra golden standard thing that the UAE, and I guess Taiwan also agreed to. And I think they genuinely don't want a weapon, and they don't want the Iranians to have a weapon. So the fact that they don't want nuclear proliferation, they don't want the weaponization, because the Saudis also are not just thinking about the Iranians, they're thinking that if the Iranians get one, and they develop one, then the Egyptians will want one and the Turks will want one. And that's not something that they want to see. The Turks are rivals to the Saudis. And so a regional arrangement like the one that was just invoked, I think would be perfect, would fit perfectly in as much as it would bring down the possibility of weaponization and generally tensions in the region, given the strong kind of desire to just build and develop the economy. So their views are very much driven by sort of we want to prosper, we want wealth, we want to become a global hub for all kinds of things, logistics, travel, tourism, and so on, all of which don't go with any of the kind of tensions that arise from the different wars that surround them.

[00:30:11] Speaker 1: Can I just offer a comment on the same question, Jane, from a slightly different perspective? Given the statements that have been referenced from the Crown Prince and Elie's quote about overnight, it would seem from that set of comments that if they are going to go in that direction, it's not going to be with a six-year construction program, et cetera, et cetera, et cetera. And one of my other non-proliferation heroes, Bob Gallucci, used to always like to say, life is full compared to what's. And it's not as if when it comes to the development of nuclear energy, the Kingdom of Saudi Arabia is a multiple-choice test in which the options are United States, Russia, China, France, Korea, none of the above. None of the above is not an option. And from a non-proliferation standpoint alone, without getting to the other ones, which I would also make an argument about, I think it's in the U.S. interest that that partner would be the United States. And I think we'll get the best safeguards, the best non-proliferation standards, and so forth. So I don't want to take ourselves out of the running. And they seem to have, and I would defer to my colleague who knows them much better, they seem to have tried on repeated occasion to keep the bidding open long enough for U.S. bidders to have a fair shot at it. So I just don't want us to be sitting here thinking that, oh, you know, it's like a four-year-old says, if you cover your eyes, I'm invisible. It's not like if we do that, then they're going to have to go off and sit in the corner and just burn oil to make electricity forever. They're going to go somewhere else. And I don't like the other places nearly as much as I like the United States. That's right.

[00:31:47] Speaker 4: I want to introduce a caveat to what Dan Poneman had said, respectfully. There is one thing which is saying, okay, they want nuclear power plants, let them have nuclear power plants. When we get to the question of fuel, of the fuel, both the production of the fuel and then ultimately the disposal of fuel, we're getting into a more sensitive area. From a commercial point of view, it makes absolutely no sense for Saudi Arabia to actually be in that business. Okay. So there is an anomaly there. However, assuming that we, that the Saudis do not want to

create the impression that weapons is what they're after in this program. They really want energy and whatever, all the reasons that Bernier was talking about. And that it's in the interest of the provider, whether it's the US or Korea or whoever it is, to actually reassure others that the Saudi intentions are indeed benign. And in an effort to try and prevent this from being an avalanche, where you open the floodgates because saying, okay, you've agreed to this arrangement and so on. What would be the other steps that could reassure us all? Okay. So just to give an example, Saudi Arabia was dragging its feet beyond this with a small protocol, you know, small quantities protocol to evolve towards comprehensive safeguards. All right. Finally, there is some progress on that front, which is reassuring about their intentions, so on. However, there are additional IEA instruments that could help and make this even more reassuring. I would put this as part of the negotiation with the Saudis. And I assume that the Saudis won't offer to do these prematurely, but might be convinced that this is something that is consistent with their intentions, not to make this into a bomb-making project. So that's one thing and so on. There are others that when you'd say, okay, what would you want the commercial arrangements to look like, that would actually give you further. So I assume that whoever American vendor is actually in the business that is going to sell to Saudi Arabia, assuming there is such a project and so on, you would want that vendor to be in a position to say, I've provided these reactors in order for them to provide electricity. But I detect some anomalous behavior, okay? I see them scramming the reactors prematurely after three months. Is it a technical problem that they're encountering? Well, let them explain why. And if it's not a technical problem, then you raise your eyebrows. So what happens is, what I'm trying basically to suggest, and I'm not exhausting the whole list here, is merely to suggest that I think consistent with the fact that this is designed, and I don't care whether it's ambition, energy, or whatever other things, as long as it's not proliferation, to convince everybody, A, that this is from a safety and security point of view, something that you needn't worry about. And in the kingdom, this is a serious issue, for geological reasons and others. And the other thing is, how do you reassure them that this is not a path to proliferation? The other prospects of proliferation require a completely different thing, and that's what they're pursuing through their security guarantees with the United States.

[00:34:59] Speaker 1: Yeah. May I just make a comment here? I think we have to be careful. I was really gratified to see, at the conference earlier today, Rafael Grossi, and Corey did a great job interviewing him. I mean, he's an outstanding leader, and he's leading an outstanding organization, the International Atomic Energy Agency, that's been doing a great job. I think it's not a good idea to, like, reinvent the wheel over and over again. I mean, going back to 1957, we have a system of safeguards, as we talked earlier in this session, that's been enhanced by the Nuclear Suppliers Group, and it's been enhanced through the additional protocol and so forth. And I don't want to have us get in the game of 180 different bespoke arrangements, because we think this country thinks this, or that government thinks that. I think it's really important to have a set of consistent criteria, consistency applied, providing timely warning, you know, guards, dogs, and lights, seals, all that kind of stuff. But I think we are going to get in trouble if we start getting to the point, and maybe you're not suggesting this, Eli, that you say, okay, I want you to, like, renounce your Article 4 rights, because then you get into this big political fight you don't want to do.

[00:36:09] Speaker 4: No, I don't want them to renounce, just to be clear. I don't want them to renounce the rights. Special inspections are not invoked by the IEA. Broader conclusion is invoked selectively. Additional protocol is done, is a voluntary thing that is only subscribed to by Ms. Sunderman. I'm talking about IEA instruments. Complementary information exchange is also applied by some. So, first of all, I want to rely heavily on the IEA. I'm also saying it's in the vendor's interest. We're supplying nuclear power plants for peaceful purposes, that those would be exclusively used for peaceful purposes. And I think it's in the vendor's interest as much as it's in the country's interest. So, just to be clear, and besides, I think we have here sort of the first mover issue. I am hugely worried that we're about to open the floodgates. I think the Saudi, the sort of Iran has been, you know, what does Grossi say in his public statements? There isn't another country in the world that says we're legitimately enriching to 80%. There is nothing that prohibits us from doing so. In fact, we could enrich to 93%. We have no commercial justification for this, but we're nevertheless going ahead and doing it and so on. So, they're using the current, some holes within the current arrangements to actually legitimize what they're doing. In the Saudi case, there is one more dimension. They're saying we are committed to getting nuclear weapons under some scenario. So, what I'm saying is that the country that makes that sense, it's in its interest to say this will not come from this nuclear project that you were talking about now.

[00:37:39] Speaker 2: I'm going to ask one more question. I want to throw it back to you, Bernard, and then we're going to open up to the audience in part because the audience had anticipated the other ones I was going to ask. So, in the last few years, the question of US-Saudi civil nuclear cooperation has been tied to a lot of other things from security guarantees to normalization. Where do you think we stand on that? Is that still the case or might we see this sort of being pursued as its own independent thing now?

[00:38:06] Speaker 3: Yeah. So, I mean, there are basically five things that the US is negotiating with the Saudis and it's what the Saudis want. So, one is a mutual defense treaty that's comparable to South Korea and Japan. That's not going to happen because the Saudis are refusing to normalize. As long as the war in Gaza is ongoing and the Israelis don't make, you know, guarantees for a viable Palestinian state with East Jerusalem as its capital, they're not going to normalize. And that's very clear. And President Trump is going to get nowhere in May if he pushes this with the Saudis. The other is the nuclear agreement. That, I think, can be pursued without normalization but not immediately. That's going to take time. What you're going to see now in May are lots of promises of economic agreements, MOUs on investments, that sort of thing. The free trade agreement is the third. A more streamlined and easier process for purchasing weapons from the United States, which is a perennial ask for many countries. And lastly, an AI agreement where the Saudis essentially agree to decouple from China on AI and commit to American AI.

[00:39:20] Speaker 2: Yeah. And, you know, AI and nuclear and nuclear energy in particular are getting linked more and more. And there's a lot of people who want to see this.

[00:39:26] Speaker 3: So, I think what we'll see is beyond just the economic and investment agreements, we will see, not immediately, but in the coming year, more progress on nuclear and more progress on AI.

[00:39:42] Speaker 2: Yeah. Great. Okay. So, I'm going to turn, because there is a number of audience questions about the additional protocol. And so, I'm going to pose those, because they're a little bit more interesting than the one I was going to ask. So, from Thomas Countryman, we have, I led several SivNuke pre-negotiations with Saudi, which failed to progress because they refused to consider signing an additional protocol. Would they be willing to do so now? If not, can this be sold to Congress simply with the promise of big contracts to US vendors? Mark Champagne similarly asked, you know, will a 123 agreement include the requirement for the Saudis to join the additional protocol?

[00:40:14] Speaker 1: Well, I defer to our Saudi whisperer, too. I would never presume to conjecture what they're thinking now.

[00:40:22] Speaker 3: Yeah. I mean, my understanding is that they're willing to accept very intrusive, not just IEA, but actually American sort of inspections. And also that if there's to be any enrichment and reprocessing in Saudi Arabia, it wouldn't take place with Saudis involved, but rather Americans over there. Which, I don't know if there's a precedent for this anywhere in the world, but that's something that I've heard discussed.

[00:40:54] Speaker 2: Ali, do you want, do you or Dan?

[00:40:55] Speaker 1: I have not heard discussion of, I don't know of any other country in the world that is contemplating building a US plant inside their borders. I would note, sort of implicit what I said earlier, that, and again, I'm no longer associated with that company I used to lead, but there is a building the size of the Pentagon that could house thousands and thousands of centrifuges, which could be the first regional center. I mean, you just got to ship it overseas. So, had to get that in there.

[00:41:29] Speaker 3: I mean, there is also the possibility that could happen here, but it would be Saudi owned, but again, run by Americans here.

[00:41:35] Speaker 1: Actually, just to take it one step further, the original concept of this article allowed for shareholding, even by Iran. And if you are a shareholder in this multilateral plant, I mean, why wouldn't it make sense to have the first multilateral plant at a site that already exists, already licensed, it's owned by the US Department of Energy. It's got room for thousands of machines. It's got a license. It's got a technology. And you let, and I've discussed it in the terms of the trilateral cooperation that was going on in the spirit of Camp David between the Republic of Korea, Japan, and the United States. They could all be shareholders. The Saudis could be shareholders. The Iranians could be shareholders. And everybody who has a share gets a share of the profits. And they also get a guaranteed offtake.

[00:42:17] Speaker 4: Share the losses, too.

[00:42:19] Speaker 1: I'm assuming it's going to be profitable.

[00:42:23] Speaker 2: All right, we've got a question from Christian Williams. So to Ellie's point regarding commercialization of any 123 agreement, given the Trump administration's goals for US manufacturing, how will a US-Saudi 123 agreement benefit US companies? Is this a US solution or will it look more like the UAE where

it's a third party Korean with minor US commercial participation? And sort of similarly, I guess, a related question from Spencer Tuhill. Given that Saudi Arabia has multiple nuclear supplier options, what realistic leverage does the US retain with the 123 agreement? And are we overstating our ability to shape their nuclear path?

[00:43:03] Speaker 4: No, no. Dan would probably want to pick on part of it. So I'll just address one part of it. I think the comment was already made that the US nuclear industry isn't in great shape at the moment. And while there are significant ambitions, the question is for what purposes? So if we're talking about large nuclear power plants, then sort of a hell of a lot depends on when, what is the timetable that the Saudis actually want those deployed and so on. At the time, I do think that along the lines that was discussed here, there is a lot of room for Korean-American collaboration in this space. And I mentioned it particularly now that Westinghouse had sorted out the contractual issues on IP with the Koreans that have for quite a while been stood in the way of such a collaboration. I think that that makes sense for many reasons, and it goes beyond nuclear. But I think it could significantly accelerate and expedite this. So there will be significant benefits to position the US also to provide the larger nuclear power plants quicker and so on in a way. So that's one part of the answer. Then I think that if it's actually the collaboration involves into interest in SMRs, we're talking about a different story altogether. But clearly by the time SMRs could be commercialized and so on, I think the Saudis, to the extent that they are indeed serious about this thing, would want to see something that is already certified by the NRC, where there is already ideally a kind of operating experience and so on. And then down the road, and clearly some of the benefits of the US could come, as Dan Poneman had suggested, from the provision of the fuel, and not just from the provision of the nuclear power plants. Or provision of some of the parts and whatever, and so on. I could see some of the expertise. For example, even when the project was built in the UAE, some of the expertise that was leading it along was US expertise.

[00:45:07] Speaker 1: And significant US subcontracts. I mean, in the Baraka deal, there was a, I'm not here to speak commercial terms, but the US piece was not insignificant. But let me answer the question this way. I think there's a lot to be gained by US industry. We have a terrific industry. It's just a little atrophied because we stopped building for 30 years. This would be a great way to help ramp up our supply chain, ramp up our talent pool. I think it's important to remember facts are stubborn things. The last Ross Adam report, which came out within the last month, pegged the Russian nuclear reactor order book at $200 billion. And a lot of experts, does anyone want to guess what the US order book is today? In round numbers. In round numbers. The roundest, like zero. We have a line of sight on Poland, maybe Bulgaria, but as the commercial says, it's not soup yet. So we have every reason to try to get back, as Secretary Moniz used to say, no exports, no influence. Why would anyone buy from the US? We still have got great technology, great companies, and to Bernard's point, there's a much broader agenda. There's an AI agenda, there's a national security agenda. People still remember FDR and the king on the USS Quincy. There's a history there and a strong bilateral relationship that I think can be leveraged to our mutual benefit. And I think that we should. I think that I remember sitting across from my Russian counterpart when we were doing the US-Russian bilateral working group under Obama and Medvedev. And he said, you want to know why Russia is beating America all over the world commercially? And I knew there was no way I was going to prevent him from telling me. And I go, okay, what? He

goes, when the Soviet and US programs started, we wanted to do everything. But Malaysia, Turkey, all these other countries, they want electrons. And I go in there and I go, I'll mine the uranium. I'll mill it. I'll convert it to gas. I'll enrich it. I'll design the fuel. I'll build the fuel elements. I'll build, own, operate the plant. I'll finance the whole thing. And I'll take back the spent fuel. Your move. Now, we are never going to be able to get to that point. However, if we unleash Ex-Im Bank, the Development Finance Corporation, US diplomacy on 123s, our very impressive technology, OEMs, original equipment manufacturers, we can do much better. And I think we should. And I think Saudi is a very good place to try.

[00:47:51] Speaker 2: All right. We got a question from Joyce Connery. Many speakers throughout the conference have noted the challenge of a nuclear workforce. It's clearly challenging for women in Saudi Arabia to work. Where would the workforce come from? Would it be indigenous or would there be recruitment from outside?

[00:48:09] Speaker 3: All right. So, that was true. It no longer is true. The workforce in Saudi Arabia, a female workforce, has gone, I think, from something like 16% to over 30% now. And there is a fact that the Crown Prince and the government are well aware of, which is that the women in Saudi Arabia are better educated and more disciplined, harder working, and just better trained. And even though he's not a feminist and the society is very patriarchal, they look at their human capital and they see that the women are the better element in the labor force. And so, they're very much encouraging women to go into the labor market. In fact, so much so that it's changing the norms in society. And fertility rates, for instance, have gone down significantly because of it. So, I think, in fact, women will be welcomed in this industry or any industry. Purely for pragmatic reasons, not for feminist reasons.

[00:49:18] Speaker 4: But the issue of raw talent versus experienced talent and regular talent is still a big issue. It's a big issue here. And it's getting much worse, not better. You heard Mr. Magwit today and so on. The issue here is that there's incredible brain drain as well as other things because people were not convinced that nuclear has a vision. Schools have shrunk and so on. The salaries were already... So, the issue is how do we build a regulatory function in Saudi Arabia that would be... Now, the Emirati example is actually inspiring, right? They hired a lot of foreign talent to at least create this bridge period until they actually grow local talent. So, I would take your question, JD, to say there is sort of an interim solution and there is a long-term solution. I think in the interim phase, they will have to rely a lot on other people outside the country that would come in and so on. If they're smart about this, then they would use their educational facilities, the King Center and so on to train and bring about...

[00:50:27] Speaker 3: Yeah, and just like in the UAE, I mean, they have something like 9, 10 million workers in Saudi Arabia are foreigners. So, they have a long history of bringing in outsiders if they need them at different levels. So, I don't think it poses a problem. Unfortunately, I think many of them won't be from the United States. They'll probably be from South Korea or Asian countries, Pakistan as well. All right.

[00:50:51] Speaker 2: We got a question from Sharon Squassoni. The U.S. asked Egypt to abstain from reprocessing in its 123 agreement as well as a no-undercut policy in the Middle East with regards to its 123 agreement. Why wouldn't an

agreement with Saudi that allows for enrichment trigger renegotiation of other 123 agreements, for example, the UAE, which also has that sort of provisionally within it?

[00:51:11] Speaker 1: Well, I'm less familiar with the Egypt case, but the UAE agreement does have what I would call, for want of a better phrase, most favored nation. I think that you're going to have to have these conversations. The Emiratis made the decision they made out of pure health-calculated self-interest. It may or may not alter depending on what happens, but they say hard cases make bad law. I go back to the underlying thing. If we turn this into a die-on-this-hill issue with the Saudis and end up driving them into the arms of the Chinese and the Russians, I think it's a net loss all around. Throughout the region. I think also the logic that Elie has adduced, which I agree with in terms of the sheer economics of it, there are people who are not sentimental. There are people who are going to make investment decisions based on the rate of return on the investment and so forth. I think we just have to take each case as it comes and deal with the facts as reality presents them.

[00:52:23] Speaker 4: There has been a gold standard and there has been a rusty gold standard. The rusty gold standard that I am referring to is one that existed in the JPOA but didn't exist in the JCPOA for those who are, which basically tied enrichment to commercial requirements. I think that the way ahead, given that a deal with Saudi Arabia along these lines is bound to trigger the kind of discussions that Dan Poneman was talking about. The arguments in each and every one of those cases, if they don't buy from us and we liberalize our export on enrichment or tolerance for enrichment and so on, they will go Russian, Chinese, Korean. We can go on French, God forbid, and so forth and the list. Then we need to build some kind of a framework that addresses these gates that we're about to open. I think that the AP in and of itself is not enough. The reason I mentioned, for example, the broader conclusion because the fact that the IEA is called upon on an annual basis to ascertain that the program is exclusively for peaceful purposes is an extremely important instrument and yet applied by less than half of the members of the IEA. There are other instruments there that could and should accompany and this is not bespoke arrangement. These are multinational instruments that are in existence.

[00:53:55] Speaker 1: At the risk of agreeing with Ellie, it's always a dangerous thing. I agree with that. I will not be outflanked in my commitment to nonproliferation. I just want to do it smart. What you're talking about is a robust diplomatic effort. I think, again, as long as the IEA is led by somebody with the drive and talent of somebody like Grossi, I think we've got a very good interlocutor on the international community side of the table. If we get the other half of the world to sign up to the additional protocol, that would be great. Look, just as Fukushima and Chernobyl showed us that an accident anywhere is an accident everywhere, if we have a proliferation incident anywhere, games that match on all of these aspirations to save the planet through nuclear energy and its peaceful uses. I'm all for the most vigorous possible diplomacy to get the most vigorous controls. I just want to be smart about it, which includes, for example, making sure that we're not the only ones insisting on it. The first place to go if you wanted to pursue something—I'm not going to say the gold standard word, but I just did—the first place to go is not the country you want to foist it upon, but the other suppliers so that there's nowhere to escape to. I just want to have a coherent, multilateral, well-led approach.

[00:55:17] Speaker 4: But there is one more nuance there, which is, is the U.S. going to go at it alone, or is actually going to collaborate in how it applies this norm

that we're talking about? Obviously, when I was talking about the French earlier, I was tongue-in-cheek, but I think that the issue in front of us is, just as you've talked about, Dan, about what happened within the nuclear supplies group, who can you align behind those expectations that if you want to engage in enrichment and reprocessing, here are the things that need to do. Can we line up the Koreans behind it? I think we can. Can we line up the French? I think we can. Can we line up the Chinese? I think you can. With the Russians, it's going to be tougher. But I think that there are other considerations for not going Russian at this point.

[00:56:02] Speaker 1: Just very quickly, because this is getting very dangerous. I actually agree with you again. We have a good representation from KH&P here. KH&P resolved their differences with Westinghouse, it is said. We have former U.S. officials here who know that the Republic of Korea composed its differences with the U.S. Department of Energy. I think there's a strong strategic opportunity for the U.S. and the ROK to work together in a number of countries. I agree with you. With that kind of beachhead, I think there's a good shot with France, and I actually don't give up on China either. I think Russia is going to be tough.

[00:56:45] Speaker 2: We've got so many questions. I can't get to all of them, and they're all really good. I want to ask one more from the audience, and then I'll pose a final question to the three of you. From Kelsey Davenport, giving the shifting proliferation landscape and recent examples where the U.S. has granted exceptions on nonproliferation norms or is considering them, is the current congressional review process for 123 agreements sufficient? Going back to the question to add on to that, I would say when this was up for debate a few years ago, it looked like there was going to be a lot of congressional resistance. If we're going that route, do you think that's still true? Then that broader question of is this process still fit for purpose? I'll take it in reverse order.

[00:57:24] Speaker 1: I don't know the zeitgeist enough to see how it would go down now compared to a few years ago. Government is kind of sloppy. I think I'm okay with the existing process, which requires that, and somebody will give me the exact verbiage, that any proposed 123 lie before the Congress for 90 days of continuous session, and in the absence of the passage of a joint resolution identical in both houses, then the 123, oh good, I'm getting nods. 123 goes into effect. I'm okay with that because it's so hard to get one of these 123 things done, and you have to have certifications from state, from NRC, from DOE. It's a non-trivial thing to get it that far, and I don't think it should be easily overturned, and so I think the existing legislative review process is probably about right.

[00:58:19] Speaker 2: Anything you guys want to add to that? All right, a final kind of closing question. A lot of conversations about this, and I'm including this one in it, have been framed as should the U.S. support this, and in what ways, and what might it look like? If we're going to take Chris Wright at his word that we're going to see something like this, what do you think comes next? What are the big things we should be thinking about for the day after, okay, we reach an agreement. Are we ready to deliver? Are there going to be issues? What do you think is, if we were having this conversation a year from now, and that had been concluded, what are the key things you think we'd be talking about?

[00:58:53] Speaker 4: Bernie?

[00:58:55] Speaker 3: I mean, first is whether the Saudis are going to go the UAE route with the South Koreans, with American technology. I mean, I think versus, you know, appealing to President Trump's desire to remake the U.S. industry. I mean, in other words, to what extent are the Saudis going to be committed to a process that they already have seen developed and working versus something much more ambitious? And the other thing I would say is that, you know, if our efforts with them fail, they're going to turn to the Chinese. The French, I know, are keen, very keen, and have gotten nowhere. But they will turn to the Chinese. And that, I think, would be a very bad thing. Because the relationship with China will not just stop at nuclear. It'll go on to many other things. And I think we should be very wary of that and stop it. Yeah, I'm going to pick up right from there.

[00:59:56] Speaker 1: Don't have much time left. If the United States get this opportunity, we have to perform. Okay? There's many things that we have to deal with in terms of nonproliferation rules. But we have to get our industry in place. And I missed Magwood, but it's the supply chain. It's the talent pool. We have to execute very well. And I think it's an opportunity to have a new beachhead, perhaps working with the Koreans, including on advancing some of these fuel cycle concepts, including perhaps a regional center for enrichment to mitigate the proliferation challenge, which, if we don't handle it correctly, could wipe out the whole opportunity.

[01:00:35] Speaker 4: And I would say that I think we have an even chance that we'll be exactly in the same place, given the complexity of the agenda. Even at the next Nuclear Policy Conference, it would be two years away. But even if that were not the case, and Dan has made a very strong case of why he would want it to make progress, and Bernie, I think, is on board, then I think the question is, how are we going to do it?