New American Foundation Interview with
Air Force Secretary Deborah Lee James
4 August 2016

MS. BURKE: So I'm going to talk to you a little bit about what we're going to do today, and then we'll jump right with the Secretary. We're going to talk for about -- I think -- 40 minutes or so about the future of the Air Force, the Air Force priorities, the Secretary's priorities, and then her new energy policy and how it all fits together.

Then we're going to come to you, and also I have questions that have been submitted through the clean energy business network that we will pose as well, for the next panel and the next panel will be the top DOD energy leaders who help you actually do business with the Department of Defense, so you can hold those questions to for that panel in particular.

So, let's get started.

SECRETARY JAMES: All right.

MS. BURKE: So the Air Force's mission is to fly, fight, and win in the air, space, and in cyberspace, and that's not necessarily as simple as it sounds. You know, when you started your career there was one domain short of where we are now, cyber wasn't even a domain at that point, and now it is. So the mission is more complicated than it ever has been before. Can you talk to us just a little bit about how that mission is changing and what it means to be a leader of an organization that's in a constant state of change?

SECRETARY JAMES: Well, first of all, Sharon, if I could begin by thanking you, thanking you America, thanking the PEW Charitable Trust, and our partner that is also live streaming today, really appreciate all of you collaborating to put on this important dialog. These are important matters that needs discussing and to continue the dialog even beyond today. So, and really appreciate you including me, so thank you for that.

Everybody at the Pentagon misses you, by the way, and wants you to come back.

MS. BURKE: They say that to all the former employees. [Laughter]

SECRETARY JAMES: You are absolutely right, cyber is our newest domain. In many ways it the most complex domain, it's the domain that we're still exploring that may some of us think we fully understand, but I would assert that none of us fully understand, and it is something that can sneak up on you.

We depend on software, we depend on our networks, we depend on our weapons systems, all of which depend on software solutions now a days, and if you're not careful, cyber can hang you up in the defensive standpoint if we're not defending against that.

Likewise, cyber can be a force multiplier for us if we can figure out how to go on the offense in certain good ways that can help us from a war fighting perspective should we get into a war. So, it can cut both ways.

I will tell you that, as a practical matter, in our Air force when I think of cyber -- I'll just give you a few factoids and then give you a few challenges -- right now we probably spend slightly upwards of four billion dollars a year in what we call the cyber area. And by the way, cyber is a word that means different things to different people, by let's call it about four billion-ish dollars on cyber. We also have tens of thousands of people who are in one way, shape, or form connected with this world.

But, here is the big however -- the vast majority of the people and the dollars at present go to operating our network. Now, operating our network, keeping it running, patching things, bringing it back up if it goes down, this is important but it is insufficient by itself.

We also have dollars and we have people who are destined for the defense arena, so protecting our network, protecting our weapon system, and then we have third category of dollars and people that are more focused on the: let's go on the offense, let's figure out how we can use cyber as a substitute for kinetic effects.

Our challenge -- here comes the big challenge -- over the next few years is going to be to gradually shift dollars and people, manpower, away from the network ops and more to focus on

defense as well as substituting cyber for kinetic effects.

So that's going to be a tough challenge, I think leveraging the private sector to help us in network ops is certainly going to be part of that. But that's the big challenge, how to shift to more defense and the ability to substitute kinetic effects and call it the offense.

Now, if I could just one more minute on cyber and bring it back home to the real subject of today and that is energy and the importance of energy for what we call mission assurance.

I was recently in Europe and among other countries I visited Ukraine and I visited Estonia, so in case anybody doubts that cyber is an important issue these days, go tell it to Ukrainians and Estonians, because in talking with their governments, they have both gone through over the last several years, major cyber-attacks and they believe these cyber-attacks have been malicious and deliberate. In the case of Ukraine, the entire electric grid structure was brought down in certain sections --

MS. BURKE: The first time that an attack like that had succeeded.

SECRETARY JAMES: -- of the country. In the case of Estonia, which just FYI, a very interesting NATO partner, which is very, very dependent, much more than the United States, on e-governance as well as on e-commerce so we all do e-government and e-commerce to a degree, but Estonia is extraordinarily doing it, it is very, very far reaching amongst the entire population. They suffered a cyber-attack as well, which brought down their e-governance and their e-commerce which had a paralyzing effect for a period of time.

So, this is real, and that's one form of a cyber-attack. Another could be against our energy infrastructure and think of it in the care of aircraft. Our aircraft can't run without jet fuel. Well, jet fuel to aircraft, electricity is too cyber. If someone were to stop the electricity to a certain base it could very much affect our cyber activity and activity beyond cyber, and so, that is why we are so focused increasingly on energy assurance. We say mission assurance through energy assurance.

MS. BURKE: And, let's pick up on that a little bit more, and I do want to hit some

more big picture Air Force, but I'm curious, I mean mission assurance is a shift and the past Air Force energy policy has focused on hitting money and on operations, but mission assurance is really a shift in nomenclature, if nothing else. Is this going to be difference? Are you moving away from the Air Force past policy?

SECRETARY JAMES: We are not moving away from our past focus, we certainly still want to save money where ever possible, and we are saving money through efficiencies in the energy arena. We want to continue to focus on cleaner forms of energy and we're continuing that march. We're also trying to create a culture of energy awareness amongst our Airmen, so we're trying to put out more educational materials so that people will be aware of their impact on the energy portfolio and on the cleanness of our planet, and so on.

But you're right, the mission assurance is a new doubling down for the Air Force. So we're going -- we've started a new team of people who are going to focus on this going forward, we're taking a page out of the Army's playbook, because the Army, we feel, has done a great job of focusing on mission assurance and we want to now replicate that. And it's really a recognition of the new world order, and it's a recognition that several of our key -- I'll say core missions -- are really, really, dependent on access to energy and I come back to electricity being a key fuel once again. So I mention cyber, very, very important. Electricity to cyber.

Also very important to our ISR, our intelligence, surveillance and reconnaissance. People call them drones, we call them remotely piloted aircraft.

And the third one I'll give you is space. So, we have space operators sitting on planet earth at certain location and they are operating satellites that are in geosynchronous orbit in some cases. Just imagine if they lost --

MS. BURKE: [inaudible]

SECRETARY JAMES: -- just imagine. This is why mission assurance through energy assurance, particularly in those three areas.

MS. BURKE: So the Air Force is -- you know, the Department of Defense is the single largest user of energy, arguably in the country as a single institution, definitely within the Federal Government, and within that it's the Air Force more than 50 percent of DOD's energy use.

So to say that you're shifting to a mission assurance so -- I mean to me it sounds like this is threat driven to some degree, like we talked about Ukraine and the threat to the grid, is that an important driver here? And the reason I ask that too, is that that's a sustainable driver. Leadership changes, people have different priorities but what is threat driver and is about the Air Force mission, which is again -- make sure I get it right -- fly, fight, win -- then are these things that last and that outlast the tenure of this administration, which is obviously a pertinent question at this point.

SECRETARY JAMES: So, I believe the answer is "yes". Of course, you can never know that for sure, and I will in my final months, I hope, have the opportunity to interface with the transition team and perhaps my successor to be able to emphasize this important area as well as several others, but I think that what makes this most enduring -- and I come back to that word -- mission.

Our biggest cheerleaders for this approach, believe it or not, are some of our most senior general officers. Some of our four stars. Why? Because they recognize the threats around the world have changed. Certain of our core capabilities are very, very much reliant on energy, so we're got to get it right and we need to make sure that we have that mission assurance.

MS. BURKE: Let's pick up on that threat. Question a little bit, because you talk a lot about that in recent days, about Russia and the nature of the Russian threat. About Daesh or ISIS and the nature of that threat. China, North Korea has helpfully put itself in the news, as it periodically does, with ballistic missiles.

Can you talk a little bit about, in general terms, how you're looking at the threat environment in the Air Force and if you want to relate it to energy security that would be great. But I think it's helpful to know, in general terms, what you think that are the drivers right now in terms of threat environment and where they're going to go, and are there threats that are emerging that you are

particularly concerned about?

SECRETARY JAMES: I think we are in the most complex, uncertain, and rapidly changing threat environment, the greatest challenges, if you will, to the national security of the United States and to our partners around the world that I have seen in my 35 years of working on national security issues. You just don't seem -- we never seem to project correctly what's going to happen next.

So you just mentioned the top threats that we are worried about around the world, and many of those threats either emerged or they certainly have gotten worse, I'll say, in the last merely two and a half years that I have been Secretary of the Air Force. So, for example, if you go back a mere three years, we were still partnering with Russian on many different aspects and then it all changed when they invaded the Crimea and of course they are continuing to stir up trouble in Ukraine, they're investing and testing in space and nuclear in ways that are worrisome to us. They're in Syria --

MS. BURKE: Different qualitatively - quantitatively different --

SECRETARY JAMES: Better, better that are different. That's right, that are more worrisome. So, all of this --

MS. BURKE: These are all Air Force missions that you watch very closely.

SECRETARY JAMES: These are Air Force missions and, of course, our missions for the entirety of the joint force, and including our partners frequently because much of what we do enables others. So, again, the whole picture has changed on Russia and to me, that is the top threat, certainly from a long term perspective because they are a major power that is acting in ways that are very worrisome.

So that's relatively new change fundamentally, and then we have much more activity that is worrisome from China in the South China Sea, as an example. China also is investing and testing in space and in different capabilities that are worrisome to the United States.

MS. BURKE: Talk a little bit about what China is doing in space.

SECRETARY JAMES: Well, the best example is several years ago China tested a anti-satellite weapon and they successfully launched that weapon from their territory and they blew to kingdom come one of their own satellites which caused thousands or pieces of debris, many of which -- most of which -- are still in orbit, and by way of background, even small pieces of debris when it's whirling around at something like 40 thousand miles an hour can do significant damage to a constellation, which is not only our constellation, a world-wide constellation of all different types of satellites. So, debris in space is bad, and testing an antisatellite weapon generally doesn't give us great comfort.

Now, there hasn't been a similar test where they've actually done the destruction of a satellite since that time, but they have continued to --

MS. BURKE: To have the capability.

SECRETARY JAMES: -- continued to test and you have to assume that if a country is spending money and testing and it's going on for years, that there is a purpose behind this.

So, that is probably the top --

MS. BURKE: Space is a contested domain as you --

SECRETARY JAMES: Exactly.

MS. BURKE: It's been -- we've had dominance in that area, but we're looking at a future where that may not be the case, and that directly impacts the Air Force.

SECRETARY JAMES: Well, we have to, of course, remain in defense of our assets. We have to remain in control of the situation and so we've got to make sure that we're doing the correct responses.

The biggest thing in space for us is, yes, we're shifting dollars and manpower and new types of systems space situational awareness is understanding what's going on in orbit is critically important, but even more important is we're shifting the culture of the people who are --

MS. BURKE: I wanted to --

SECRETARY JAMES: -- focused on space.

MS. BURKE: Right.

SECRETARY JAMES: Because this is a domain where we hope not, but it is certainly possible, that a conflict on earth could bleed into space and if that happens what do we do? So just like we have war games and exercises and we create tactics, techniques and procedures for all kinds of eventualities on earth, we're now thinking this way as well for the space domain to make sure that we're ready should this occur.

MS. BURKE: And you mentioned culture as a part of being ready, as a culture change. And this fits very nicely into the top three priorities that you talk about quite a bit, which is people, balancing readiness and modernization and money.

So, I wanted to talk to you a little bit about those three things.

Culture in particular. So you've talked already about the changing mission in cyber and in space, which is, you know, the dominant culture going back to the dominants word, for at least the image that you have of the Air Force as the fighter pilot, fighter jock, and that's kind of been the soul of the Air Force for a long time.

Are we looking at a very different Air Force where it's no longer a culture with the fighter jocks, it's now gamers in dark rooms with joy sticks? I mean, how do you manage that kind of cultures?

SECRETARY JAMES: Well, our fighter pilots and our other pilots remain very important to us, but if you add up all of the people in the Air Force who are pilots it is actually a relatively small number, vis-à-vis the entirety of the Air Force.

So, the way I like to think about it is we are focusing some additional attention on other communities that haven't received quite as much attention in the past. So, we've talked about cyber, we've talked about space, we have the nuclear enterprise.

So, very early in my tenure, some of you may recall there was a cheating incident that

occurred at Malmstrom Air Force Base and that caused me to shift what I was doing. I went out to kind of look at what was going on a Malmstrom, talked to not only the leaders but some of the Airmen as well, and [inaudible] and other leaders in the Air Force was doing a similar program and we all came back to Washington and compared notes and we realized that they were some cultural issues going on. There were some systemic problems with the way we were training, the incentives that the Airmen had in place to do well and so on, and that we kind of fundamentally look at that and make some changes.

So that's another community that we've focused on and then the final community I'll tell you about is the world of the RPA, remotely piloted aircraft, which have been absolutely critical in a number of ways but particularly in another threat that we're facing and that's the threat of Daesh in the Middle East, and I'll say extremism in all of its forms.

So having the ISR and that strike capability has been extremely important for us. Yet the pilots, who albeit are not in the air they're on the ground, but they are piloting these aircraft, they haven't necessarily received the full up attention and culturally, at least in the beginning, they weren't fully, I think, viewed in the same light as other types of pilots and we've been working to change course on that ground as well.

So, you see, I wouldn't say that we're reducing the importance of any one community, I would say prefer to think of it as we're elevating and we're giving recognition and we're giving focus to some of the other communities.

MS. BURKE: So we're multivariate community at this point.

SECRETARY JAMES: Yes.

MS. BURKE: Going forward, and does that affect how you recruit and retain people as well? You mentioned a little bit in there about the nuclear community and that you needed to go, you know, almost a full vertical rebuild in the incentive structure.

SECRETARY JAMES: We're -- our focus for recruiting and retaining and the results

that are developing in there, because in order to retain of course we need to develop a current family and there is a lot that goes into it, but the type of Airmen that we need in the future we want to continue to get very high quality people who have come through high school, some have already received some college education, we need agile, you know, quick thinkers, people who are prepared to run with ambiguity at times, because we don't always have full information. So, what we are looking for are those sorts of qualities, obviously people who respect our core values, prepare to live the core values and integrity and service before self, excellence in all we do, and then of course when we get them in the front door, we've prepared to give them a lot of training. Training specifically in the area that they will enter, so whether it's the nuclear enterprise, whether it's the world of the RPAs, they'll get all of that necessary training for us. Obviously, we like people who have a tendency toward science technology, engineering, and math, but there's openings really for all sorts of people. Liberal arts --

MS. BURKE: Are you worried about being able to compete for those people long term?

SECRETARY JAMES: We are. As the United States of America we are probably not producing, certainly not enough graduates of the more senior level college, masters, PHD, but nor are we producing enough high school students who have an affinity for science technology and engineers and math. But I think we're all worried about that. The Air Force is in the, so called, work or talent along with the other services, along with the private sector. So, it is a concern. So far, though, we are holding our own. We've got high quality young people coming in.

MS. BURKE: So, you are modernizing your people but you're also modernizing your force structure and your actual equipment and platforms. But I wanted to ask you about one in particular, I'm sure you know it's coming, which is: you talk a lot about that tension between readiness and modernization and how does something like that a F-35A, which the Air Force just announced is ready, how does -- what's the opportunity costs of a big expensive platform like that

when you're talking about across your entire force structure? Nuclear, space, cyber and [inaudible]. How do you balance that?

SECRETARY JAMES: Well you just said, it's a balancing act. There's no secret sauce formula, these matters come down to judgment calls.

So, if we look back at the history of the F-35, it's a history of, if I had the power to rewrite it, I would. Because, of course, overall it's taken too long, there were too many schedule slips and of course it's gone over budget. That's the part I would like to rewrite. But the part that I am really bullish about is the fact that we're there now with what we call the initial operating capability that's combat capable, but, it's not yet whole war fighting capability. So over the next few years the plane will better and better and better and more capable. The thing I'm bullish about is it's exactly the type of aircraft we need for some of these high end trips around the world that we believe are going to be the huge threats of the future.

When I say high end threat I mean anti-access aerial denial types of environments. That is to say the type of an environment where we have integrated air defenses. Surface to air missile, the ability to shoot us down, or the ability to interfere in some substantial way in cyber space, but those --

MS. BURKE: Stop us from achieving our own aims.

SECRETARY JAMES: Those are the high end sights. The fight of the Middle East of today is a much more permissive environment. That is to say the enemy on the ground does not have the ability to shoot us down. They can't reach as high as we are. They cannot interfere in a substantial way in cyber. They can't interfere in space. So that's a much more permissive environment.

So we're building for the high end threat, as well as taking care of the more permissive environments along the way, and the F-35 will be the core of our fighter force. The core of that high end capability for the future. So that's why I'm bullish.

MS. BURKE: So to put a fine point on it, are we going to have the money for all of this? Including, you know, you laid out a new energy mission, mission assurance, which has a price

tag with it, presumably, and if you're going to start building up and being robust to threats and risks in the energy space there's a price tag, and there's a price tag for the F-35, and there's a big price tag for space and there's a big price tag for nuclear modernization, and we're in an incredibly turbulent budget environment. I believe this is the eighth consecutive year that Congress has not passed the budget on time, is that right?

SECRETARY JAMES: That sounds about right.

MS. BURKE: Yeah, it is -- are we going to have the money for this? Is this the new normal that we never know what we're going to have and it's never enough in the defense sector, or is it enough and we just need to be smarter about how we use it?

SECRETARY JAMES: Well, in my 35 years of being an observer on this team, there has never been enough money to do all of the different tasks that we as military authorities would like to do. So, it is always to a degree a balancing act not being able to do everything in year one, maybe you have to wait awhile, et cetera, et cetera. So, I think that will be the forever story. There will be never enough to satisfy every combatant commander, every -- what the services feel they need, and then this is why it comes down to judgment calls. Now with that said, the environment that we have here now in Washington is now helping. The fact that we have a bipartisan budget agreement, which we all literally celebrated because we thought it would reduce the divisiveness, we thought that it would give us some very needed stability, hasn't produced as much of that stability and as much of that denigration of divisiveness as we'd hoped because we're still arguing about way too many things here in Washington. So it's not healthy and I would like to think we can get over the hump and get back to the way I remember it when I was a much younger person starting out in my career where if there were disagreements you sat down and you compromised and it was much more civil and above all else, we needed to get the bills passed and we needed to get it done on time.

You're right, that hasn't happened in recent years. It's very unsettling to the people who have to plan and execute. Can you imagine if you were a private business if you didn't know how

much budget you would have to be able to accomplish your goals and you didn't know when you would know, and yet you had to come forth with a proposal anyway and you had to do it now for the next year but a five-year plan, it just -- first of all we have to do things three different ways and hugely inefficient.

So, I never missed an opportunity to, you know, call upon Congress: please get those bills done, please get them done on time. If you can't get quite get it done by October 1st, get it done within a couple of months after that, but don't let it go into a long term continuing resolution and, for heaven's sakes, lift sequestration which remains the law of the land and will come back to us in FY 18 if they don't affirmatively act to lift it.

I suspect we will go down to the wire on that, I wish that weren't the case because, again, going down to the wire plays havoc on the people who are charged with planning and executing.

MS. BURKE: I think -- that's why I have a bunch of questions from the Clean Energy Business Network, and most of them, I think, are better directed at [Hamil], but I think I can extract a couple of themes that would be great to ask you. One is even relating to what you just said about sequestration.

A lot of businesses find it hard to do business with the Department of Defense, with the Air Force. Can you talk a little bit about that and about what sequestration might mean for businesses, why they should care because I thought that question was huge? Especially, out on the West coast once, I was talking to a bunch of energy businesses and they saw no reason why they should care about sequestration, but it's about what's going to be available to pay people at the end of the day. So if you talk a little bit about the business climate and the Department of Defense and the Air Force and how you work with the private sector.

SECRETARY JAMES: So let me take the second part of the question first. Why should businesses care? Well, if you are a business who is doing business with the government you should care quite a lot. Speaking as someone who was in a company prior to being Secretary of the

Air Force, who was doing business with the government, it played huge havoc on our business as well. We didn't, once again, there were very few mechanisms to be able to project exactly how sequestration would be implemented. At the time it was going to be in an across the board decrement to every single program and that there were going to be protections for military personnel and maybe for this area and maybe for that area over here. So it was as difficult for us to plan and we were telling out employees with 30 or 60 or 90 days' advance notice depending on what state they lived in because there was state law that governed, that there was the possibility of layoffs. There was the possibility of furloughs for our private sector employees. It wreaked havoc on our people and it wreaked havoc on business planning so that's why businesses should care, first and foremost.

I have often -- the first part of the question -- I have often heard it said that for companies who don't typically do business with us, we're a difficult customer to work with and to understand and I totally get that.

The big companies, the Lockheeds, the Boeings, the ones that know us well, that have worked with us, they have whole departments that track what we do and have cost accounting systems that can do business with us, et cetera, et cetera, and small businesses or new businesses, of course that have never done business, don't have those things.

So, although this was not directed specifically at the energy sector, let me tell you about something that was more directed at IT and cyber high tech sector, high tech in that regard that could be of interest as well to the energy sector. We fairly recently through a series of initiatives we call bending the cost curve, introduced the new contract vehicle approach.

MS. BURKE: Okay.

SECRETARY JAMES: Which is more understandable, less pages of legalese to get the government seat to work through, and if we have -- like the offering we can get you under contract in weeks rather than months. It's called OSA is the acronym for this contracting vehicle. As a matter of fact, I see Dr. Cameron Gorganpour right here in the front row who sort of was the one who came up

with this approach, and OSA which stands for Open Systems Acquisition, and perhaps we could look at doing something like this for the energy sector if it doesn't apply as it currently stands, but the whole idea was let's see if we can speed it up and get some new companies to do business with us so we can get access to some of those innovations.

MS. BURKE: That's great. I want to give the audience the chance now to ask some questions, so if you will hold up your hand we have microphones. Please wait for the mikes because we have a big audience online and we want to make sure they hear your questions. Okay? This gentleman in the front -- and while we're waiting for his question, I'm going to sneak in one last thing here which is it is significant to have a service secretary committing to an issue like energy security. Is there going to be money for this in the Air Force budget, or mission assurance and energy?

SECRETARY JAMES: Well, we're going to have to make sure that there's some money there. Of course, like with any new approach, you perhaps start on the smaller side and then you scale from there. So, what we have done so far is -- thanks to Miranda Valentine, I want to give her a shout out and she will be on your panel of course following our panel, Miranda is our Assistant Secretary of the Air Force for Installation, Energy and the Environment and this is her brain child: how do we advance the ball in the Air Force? We focused more on this critical aspect of resilience and mission assurance and so we again took a page out of the play book of the Army, we felt they were doing a pretty good job, and we wanted to learn from them and so we've set up a team and we're going to take it from there and focus on this.

MS. BURKE: Okay, and we'll look forward to hearing more about that. If you would please identify yourself, who you are with and if you ask -- if you give a treatise I may look nice but I'm not and I will cut you off, so please in the form of a question.

SPEAKER: James Drew from Aviation. Secretary James [inaudible] next generation on [inaudible] and cruise missile programs, competitions just last week and so with this close to a presidential election and a new administration, what are you doing with those programs to ensure the

next president will have the flexibility to either speed those up or slow those down or make alterations to those programs?

SECRETARY JAMES: Well, first I'd like to say that you're right, James, that we are approaching a presidential election, but even in a year or in several month period leading up to a presidential election, the work of government needs to proceed. And the fact of the matter is, we in the case of these two RFPs that you've referenced, one is for the next generation, ICBM, the other is for the long range stand-off weapon which will replace the aged ALCM so that's a weapon that would go on aircraft. Both of these are to replace systems that will age out and if we don't take action we may find ourselves behind the eight ball. And our nuclear deterrents which is -- the triad, of course, has three legs and we the Air Force are responsible for the bomber legs, which the LRSO is associated with that, and we're associated with the ground base and the ICBM replacement is associated with that.

We are responsible for making sure that those two legs are credible and effective and it's not very credible to a potential adversary around the world if they know that your systems are aged out or aging out and they aren't going to work beyond a certain date. So we felt that this is part of our charge as government officials we need to keep advancing the ball. Now, of course, any new team can come in just as when President Obama came in there as a nuclear review conduced at the time. That nuclear review essentially endorsed what I just said, that we need to proceed to modernize appropriately to make sure that our triad remains credible in the future and that the systems are safe, secure and work. A new team could likewise do a similar review and if there is a course change that would of course be up to them. But for now, for as long as we're here, we're charged with doing our very best to fulfill the objectives of government.

MS. BURKE: Well, good. We'll take a couple of questions but you made a comment yesterday about "there's no persecution policy" which is germane to this, can you comment on that as well?

SECRETARY JAMES: Well that question had to do with -- the person asking the

question had heard that there was some discussion in the White House about different nuclear matters and what about the nuke first abuse policy. What I said was I would be concerned about such a policy, it's above my pay grade, time will tell what happens with that but having a certain degree of ambiguity is not necessarily a bad thing. You certainly want to communicate certain things to your allies and to your potential adversaries around the world but you don't necessarily want to show all your cards all the time and so that would be my question. Now I'm personally not in those discussions but I'd --

MS. BURKE: But [inaudible] be your advice.

SECRETARY JAMES: But my thought there is a certain degree of ambiguity could actually be helpful.

MS. BURKE: Okay. Questions? Let's take a couple if we could -- right there?

SPEAKER: Kent Myer, [inaudible]. Last December Russia introduced a resolution in the U.N. General Assembly to ban the first placement of weapons in space. The vote was 129 in favor to 3 opposed, the three being Ukraine, Georgia, and us and not even Israel voted with us this time. Are we planning to be the first to place weapons in space?

SECRETARY JAMES: We don't have weapons in space and we were -- my understanding, we voted against that resolution because we were not convinced that it met several key criteria that we considered that we -- and when I say "we" I mean the U.S. government at large -- so certainly DOD had some thoughts on that but there were other parts of government that also checked in. I would say a key position for the Department of Defense is we want to see any sort of agreement of this nature have the property which, first of all, no debris or at least minimize debris. I gave you the example of the Chinese ASAT created thousands of pieces of debris, so we think any kind of an agreement or treaty or accord ought to have front and center the question about debris. So you can have a weapon on planet earth that's going to create debris and so just simply saying something about a weapon in space wouldn't have covered that. So that's an example. We just didn't feel that than U.N. resolution had enough of the criteria that gave us comfort. The other one was: no matter what

we reserve the right to always defend, defend ourselves on earth, defend ourselves in space. That particular resolution didn't contain those words, so for those reasons we were against them. Against it.

MS. BURKE: Okay. Thank you.

SPEAKER: Leandra Bernstein with Sputnik International News and another question about the nuclear enterprise. With the B61 modernization, the Russian Foreign Ministry yesterday raised some concerns that I'm assuming related to the possible [inaudible] of the modernized B6112 that it could lower the threshold for using those weapons, so I'd like to know how you address those concerns specifically with the range of yields and the fact those are going to be, I believe, primarily deployed -- the U.S. weapons that deployed in Europe.

SECRETARY JAMES: There is no effort a foot to lower the threshold for using nuclear weapons. Nuclear weapons use is about the worst thing that I can think of. So the B61 program is like these other programs I described. It is designed to replace something in the inventory which will not in the future be credible and will not work. So it is simply just designed to make sure that we maintain our ability to use that sort of an approach, God forbid, should it ever become necessary and it would go on a variety of aircraft, would be able to be used on a variety of aircraft.

MS. BURKE: We have a question right here, this gentleman.

SPEAKER: Yes, Ms. Secretary, are you happy with the boundary line between DOE and DOD both in terms of energy initiatives, like R and D, and also on the nuclear front because DOE does a lot of nuclear stuff. So if you had a new administration what kind of split would you have liked to see between DOD and DOE?

SECRETARY JAMES: I have been happy. The degree of partnership that I have felt with DOE, so I'm not aware of any huge controversy there, certainly not at my level. We have worked very collaboratively with them, there have been times when their piece of the program and our piece of the program, because of developmental issues, perhaps gets out of sync where one side is ahead of the other but you know I've seen this happen within the Pentagon as well. So I would not lay that at the

feet of the fact that we're two different agencies.

So I'm sure there is always more room for collaboration and more improvement but I have been very satisfied with the relationship.

MS. BURKE: If there are no other questions I have a question for you to wrap it up. My colleagues here in the International Security Program under Peter Bergin have done a great deal of work on what they would call drugs and what you would call remotely piloted vehicles, and they've looked at a full range in their work of everything from the human race connotations to what it means for a counter insurgency strategy using these kinds of weapons. Do you have any comments or thoughts on that? Are these different weapons quantitatively, do they have a different world dimension of war when you start using artificial intelligence and unmanned vehicles in robotics? Have you thought about that and any comments on that area?

SECRETARY JAMES: I have thought about it. I am a big believer in these systems and the reason why we are sticklers and we don't like the word "drone" but we do call them remotely piloted aircraft, is because the word "drone" gives the connotation, I think a lot of the American people perhaps feel this way, that there is no human in the loop and let me assure you, there are quite a few humans in the loop. It just so happens those humans are controlling the aircraft on the ground, so we have not only the pilots which we've talked about today, we have sensor operators, we have intelligence analysts that take the feed, who make sense out of what is being seen, and then, yes, at times there are precision strikes that occur from those vehicles. I want to underscore the word here, "precision". So, let's just take the operations that have been ongoing now in the Middle East for some number of years. The operations in the and the coalition particularly led by the United States and a big chuck of that has been the United States Air Force has been remarkable in the history of warfare. There has never been a more precise campaign. All of the weaponry that we are using is precision weaponry. Now that's not to say that it's perfect. War is ugly and it can become confusing. So there have been some mistakes made but if you look at the totality of the operation and the number of strikes

it is remarkably small. To me it's a miracle. But that's the power of the precision and not all, but some of that, has come from the unmanned systems. So I am a believer in these and to the extent that we can use those systems that puts fewer of our own pilots at risk and I would turn that around and ask what's the morality of not doing our very best to keep our own people safe. To me that's a [inaudible] position.

So I have done some thinking about it. I am a believer and I do think we have all kinds of checks and balances in the system, not to mention the rules of engagement which place a high premium on take good care and be as sure as you can be before a strike occurs and then we use precision weaponry and the vast majority of the time we hit precisely what we are trying to hit and they are the bad guys and the infrastructure surrounding the bad guys.

MS. BURKE: You know, we started out with how much has changed since you started in this business, and so just for a last comment what do you think the future of the Air Force looks like? And where do you think there's going to be a lot of change going forward? Because, I mean, it seems sometimes like the pace of change is just so fast now and it's almost hard to imagine where we might be ten years from now, but you have to do that when you run an organization like the Air Force, so what do you see coming down the pike?

SECRETARY JAMES: Ten years from now I hope to see an Air Force which is somewhat larger than the Air Force of today. You know, we've been downsizing for 25 years. That stopped a couple of years back and we've been on a modest growth path ever since which is crucial we keep that up because we have -- we've probably gone too far in that downsizing so we need to recover from that and we need to grow certain key areas.

So I see an Air Force that will be somewhat larger. I see an Air Force that will be more modern in terms of our systems 10 years from now. So by way of background our aircraft inventory is on the order of 27-28 years old as an average but we have some that are 50-60 years old and we have others that are newer than that. So on average we ought to see a newer Air Force. We'll have more F-

35's, we'll have KC-46 online by then. We'll maybe have -- we will have the first B-21s by that point. That's the new --

MS. BURKE: Long range bomber.

SECRETARY JAMES: That's the new bomber. We'll be more modern and more resilient in our [space] detection. We'll be more advanced in cyber. We'll perhaps have a new generation of ISR ten years from now.

So I see a more modern Air Force in all of the key ways and I also hope that we will have by our own measurement system a more ready Air Force. So it doesn't give me comfort that on the order that half of our combat Air Forces are not what we consider, or I should say that our top commanders would consider, to be sufficiently ready in the case of a high end fight.

I want to get those numbers up and ten years from now I would certainly hope that that will be the case. That we will have moved the needle substantially and then finally, because 10 years from now I suspect we're still going to be concerned about money and why shouldn't we be. Because it's taxpayer dollars we're dealing with. I hope we will be an even more efficient Air Force and that's why I always talk about make every dollar count and looking for efficiency where ever possible and energy is just one of those elements where we hope to do better and better.

MS. BURKE: That's a great note to end on and thank you very much for your time today and for sharing your thoughts with this audience and this new America. So thank you.

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