

Stenographic Transcript
Before the

COMMITTEE ON
ARMED SERVICES

UNITED STATES SENATE

HEARING TO CONSIDER THE NOMINATION OF
LIEUTENANT GENERAL BRADLEY C. SALTZMAN,
USSF TO BE GENERAL AND
CHIEF OF SPACE OPERATIONS

Tuesday, September 13, 2022

Washington, D.C.

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1 HEARING TO CONSIDER THE NOMINATION OF LIEUTENANT GENERAL
2 BRADLEY C. SALTZMAN, USSF TO BE GENERAL AND CHIEF OF SPACE
3 OPERATIONS

4
5 Tuesday, September 13, 2022

6
7 U.S. Senate

8 Committee on Armed Services

9 Washington, D.C.

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11 The committee met, pursuant to notice, at 9:31 a.m. in
12 Room SD-G50, Dirksen Senate Office Building, Hon. Jack Reed,
13 chairman of the committee, presiding.

14 Committee Members Present: Senators Reed [presiding],
15 Shaheen, Gillibrand, Blumenthal, Hirono, Kaine, King,
16 Peters, Rosen, Kelly, Inhofe, Wicker, Fischer, Cotton,
17 Rounds, Ernst, Cramer, Scott, Blackburn, Hawley, and
18 Tuberville.

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

3 Chairman Reed: Good morning.

4 The committee meets today to consider the nomination of
5 Lieutenant General B. Chance Saltzman for promotion to
6 general and to be the next Chief of Space Operations.

7 General Saltzman, welcome. I thank you for your
8 decades of service and willingness to serve in this very
9 important position.

10 I would like to welcome your wife, Jennifer, your son,
11 John, and your daughter, Sarah, and while not present today
12 let me also acknowledge your parents, Randy and Belinda
13 Saltzman, who are watching from home, I am sure, and I know
14 they are very proud of your nomination.

15 Recognizing the increasing importance of the space
16 domain and the growing threats to our critical space assets
17 by China and Russia, Congress established the Space Force in
18 the fiscal year 2020 National Defense Authorization Act.

19 The first Chief of Space Operations, General Raymond,
20 then the commander of the U.S. Air Force Space Command, was
21 legislatively transferred in 2020 to be the chief. So you
22 are the first to be nominated and have a hearing for this
23 position.

24 Given that the Space Force is only two years old, it is
25 still becoming institutionalized within the Department of

1 Defense and there are many challenges in that process.

2 First, the Space Force must develop its ability to
3 train and equip Guardians. Space is a remote domain, one
4 that is now contested. Your Guardians will have to have the
5 ability to integrate digital and other advanced technologies
6 to accomplish their mission, all underpinned by a strong
7 STEM background.

8 My understanding is the Space Force is standing up a
9 Space Training and Readiness Command, or STARCOM. I will
10 want to know your views, if confirmed, at how STARCOM will
11 train future Guardians as a warfighting force in the space
12 domain.

13 Second, you will have to foster a service culture that
14 can succeed in the dramatically evolving space environment
15 often called "New Space." We are witnessing an enormous
16 surge in the space industry with some satellite
17 constellations that numbered one or two dozen satellites a
18 few years ago now having thousands in low earth orbit, all
19 interconnected to provide high-speed internet anywhere on
20 the globe.

21 Rockets that were once disposable are now reusable,
22 lowering the cost of launch to a fraction of what it used to
23 be. The Space Force of today and tomorrow must adapt to
24 this rapid change in pace of innovation and utilize it to
25 protect and defend our assets in space and on the ground.

1 The Space Force, its organization, and its Guardians
2 need to reflect this changing environment.

3 Third, in response to the growing adversarial threat in
4 space, Congress not only created the Space Force as a
5 warfighting entity, it also reorganized the way we acquire
6 space systems, the way we formulate space policy, and the
7 way we fight in space with a new combatant command.

8 If confirmed, you will lead the Space Force in this new
9 national defense enterprise. I want to know what you
10 foresee as major issues you expect to face and how you will
11 ensure the Space Force can respond to them.

12 Most importantly, an integral part of the military
13 service is its new culture and its unity of mission. When
14 the Space Force was established, most Guardians necessarily
15 transferred from other services and, thus, had to adapt to a
16 new culture.

17 I was pleased to learn in our meeting last week that
18 successful recruiting efforts have ensued that soon one-
19 third of the Space Force will never have served in another
20 service.

21 General, I am interested in how you intend to create a
22 unique culture with the blend of transfers and new recruits.

23 Thank you again for your willingness to serve our
24 nation. I look forward to your testimony.

25 Let me now recognize Ranking Member Inhofe.

1 STATEMENT OF HON. JAMES M. INHOFE, U.S. SENATOR FROM
2 OKLAHOMA

3 Senator Inhofe: Thank you, Mr. Chairman, and I would
4 also like to extend a welcome to the general and I
5 appreciate the time you spent with me giving me an idea of
6 what you have in your mind, and also the fact that you have
7 your family here today it is very meaningful to us. We
8 appreciate that very much because you are not going to see a
9 lot of them in the days to come.

10 Our National Defense Strategy is not shy about the
11 scope and scale of the threat from China and the speed of
12 the advances. There is no better example of that than
13 space.

14 In a decade, the United States has gone from the
15 unquestioned leader in space to merely one of two peers in a
16 competition. Most people do not realize that.

17 There is a lot China and Russia are doing in space we
18 cannot talk about today but even what we can talk about in
19 public is very concerning.

20 For years, we have kept noting that everything our
21 military does relies on space but we never really acted like
22 it. Worse yet, space is no longer simply an enabler for
23 other functions.

24 So we have a different environment altogether today and
25 you are only the second one to take on this awesome

1 responsibility, and we appreciate very much the effort that
2 you are making and the background that you bring.

3 Thank you, Mr. Chairman.

4 Chairman Reed: Thank you, Senator Inhofe.

5 And, General Saltzman, you are recognized for your
6 opening statement.

7 Could you please bring the microphone as close as
8 possible and -- thank you.

9 General Saltzman: Can you hear me okay?

10 Chairman Reed: Yes, sir.

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1 STATEMENT OF LIEUTENANT GENERAL BRADLEY C. SALTZMAN,
2 USSF TO BE GENERAL AND CHIEF OF SPACE OPERATIONS

3 General Saltzman: Thank you, Chairman Reed, Ranking
4 Member Inhofe, distinguished members of this committee. I
5 am honored and deeply humbled by the opportunity to be with
6 you this morning.

7 I would like to begin by introducing my family. With
8 me today are the most important people in my life.

9 First, my wife, Jennifer. I am very proud to announce
10 that just yesterday we celebrated our 30th wedding
11 anniversary. Jennifer has been steadfastly by my side for
12 this entire military journey through 15 moves, nearly 200
13 overnight ICBM alerts, countless late nights and trips away
14 from home, and most recently a year separated while I
15 deployed to the Middle East.

16 She has taken on all these challenges and conquered
17 them with a smile on her face and warmth in her heart. But
18 her most amazing accomplishment has been raising our two
19 children into the fine young adults you see here.

20 Our son, John, is a director of social media content
21 for a sports marketing firm and our daughter, Sarah,
22 recently completed a master's degree in public
23 administration with a perfect 4.0 GPA.

24 Jennifer and I could not be prouder of these two. They
25 have followed Mom and Dad all over the country and been

1 successful at every turn. They meet challenges head on and
2 have always shown maturity beyond their years, optimism, and
3 a contagious wit.

4 My home and family are my bedrock and they are,
5 clearly, at the center of any career success that I have
6 enjoyed. I owe all of that to these three, and I will be
7 forever grateful for the love and support they have shown
8 and the sacrifices they have made.

9 I would also like to take this opportunity to offer a
10 special thanks to General Jay and Mollie Raymond. The
11 Saltzman and Raymond families go back many years and we have
12 benefited greatly from their mentorship and friendship.

13 They are concluding 38 years of distinguished service
14 to our nation but these last three years have been critical
15 to the historic establishment of the Space Force. Their
16 passion, dedication, and vision have set the Space Force on
17 a solid foundation.

18 If I have the good fortune to be confirmed, Jennifer
19 and I will work hard to build on their successes and
20 continue to push the Space Force to new heights.

21 I would also like to express my appreciation to this
22 committee for your relentless support and advocacy for our
23 Space Force, its Guardians, and their families.

24 For the last two years, I have had the privilege of
25 serving with these Guardians and I can attest that they are

1 the finest men and women that America has to offer. If
2 confirmed, it will be the honor of my life to lead them as
3 the second Chief of Space Operations for the United States
4 Space Force.

5 Not quite three years ago Congress established the
6 Space Force to provide freedom of operation for the United
7 States in, from, and to space, to conduct space operations,
8 and to protect the interests of the United States in space.

9 In the few short years since the Space Force was
10 established, the number of satellites on orbit has doubled
11 and the global space economy is approaching half a trillion
12 dollars.

13 Space is truly a critical domain for U.S. interests so
14 we must be clear eyed in our understanding that our
15 strategic competitors have invested heavily in fielding
16 systems capable of disrupting, degrading, and even
17 destroying our space capabilities.

18 If confirmed, I will work to ensure that Space Force is
19 ready to protect these vital interests from these threats.

20 It is truly an honor to be nominated to serve as the
21 Space Force's next Chief of Space Operations. I am excited
22 about the opportunities ahead for the Space Force.

23 If confirmed, I look forward to working with this
24 committee, other members of Congress, to continue to ensure
25 the Space Force fulfills its mission as part of America's

1 Joint Force.

2 I look forward to your questions. Thank you.

3 [The prepared statement of General Saltzman follows:]

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1 Chairman Reed: Thank you very much, General Saltzman.

2 Before I begin the questioning, there are a series of
3 standard questions for nominees and you can respond.

4 Have you adhered to applicable laws and regulations
5 governing conflicts of interest?

6 General Saltzman: Yes.

7 Chairman Reed: Have you assumed any duties or taken
8 any actions that would appear to presume the outcome of the
9 confirmation process?

10 General Saltzman: No.

11 Chairman Reed: Exercising our legislative and
12 oversight responsibilities makes it important that this
13 committee, its subcommittees, and other appropriate
14 committees of Congress receive testimony, briefings,
15 reports, records, and other information from the executive
16 branch on a timely basis.

17 Do you agree, if confirmed, to appear and testify
18 before this committee when requested?

19 General Saltzman: Yes.

20 Chairman Reed: Do you agree, when asked before this
21 committee, to give your personal views even if your views
22 differ from the administration?

23 General Saltzman: Yes.

24 Chairman Reed: Do you agree to provide records,
25 documents, and electronic communications in a timely manner

1 when requested by this committee, its subcommittees, or
2 other appropriate committees of Congress and to consult with
3 the requester regarding the basis for any good faith delay
4 or denial in providing such records?

5 General Saltzman: Yes.

6 Chairman Reed: Will you ensure that your staff
7 complies with deadlines established by this committee for
8 the production of reports, records, and other information,
9 including timely responding to hearing questions for the
10 record?

11 General Saltzman: Yes.

12 Chairman Reed: Will you cooperate in providing
13 witnesses and briefers in response to congressional
14 requests?

15 General Saltzman: Yes.

16 Chairman Reed: Will those witnesses and briefers be
17 protected from reprisal for their testimony or briefings?

18 General Saltzman: Yes.

19 Chairman Reed: Thank you very much, General.

20 General, in my comments I talked about the Force Design
21 that the Space Force must lead. The intent in Congress is
22 to centralize that Force Design in the Space Force, and the
23 Senate version of the 2022 National Defense Authorization
24 Act deemed the Chief of Space Operations to be the Force
25 Design architect for space of the armed services are no

1 different in many ways of how the Chief of Naval Operations
2 is the designer of the fleet of ships for our Navy.

3 The conference bill required the Secretary of Defense
4 to designate the Chief of Special Operations as the Force
5 Design architect and the August 17th letter sent to the
6 committee by the Secretary does, indeed, designate the chief
7 as the Force Design architect except for all of the other
8 authorities of space residing in the armed forces in the
9 Office of the Secretary of Defense, which are rather
10 extensive.

11 Do you think this is a workable designation and follows
12 the intent of Congress?

13 General Saltzman: Yes, sir, I do.

14 I have had extensive discussions with the Secretary of
15 the Air Force and General Raymond, the current Chief of
16 Space Operations, and it is my understanding that the
17 exemptions that you mentioned really are not about
18 authorities associated with the Force Design architect and
19 that the authorities and responsibilities that the Secretary
20 of Defense gave to General Raymond as the Chief of Space
21 Operations is sufficient to accomplish the intent of
22 Congress.

23 And, if confirmed, I would continue to execute those
24 same authorities and responsibilities so that I could take
25 seriously those priorities for Force Design to make the

1 Space Force as capable as possible.

2 Chairman Reed: Thank you.

3 General Saltzman, if confirmed, your job will be to
4 present training and equip forces to U.S. Space Command
5 primarily but also you will have the duty to support other
6 combatant commands such as EUCOM, et cetera.

7 Is there any significant distinction in your mind
8 between your responsibilities between those two or the
9 different commands you will support?

10 General Saltzman: No, Senator. The responsibilities
11 of the Chief of Space Operations are to make sure there are
12 ready forces that have the flexibility, the agility, the
13 training, and experience necessary to support all combatant
14 commanders.

15 Of note, of course, is that U.S. Space Command has
16 primary responsibilities for that space area of
17 responsibilities as well as some key missions providing
18 capabilities for the Joint Force.

19 And so while over 90 percent of the Space Force
20 capabilities are presented to U.S. Space Command, there are
21 critical other capabilities -- regional capabilities -- that
22 are also presented to the other combatant commands to
23 fulfill their missions as well.

24 Chairman Reed: Thank you.

25 General Saltzman, the administration has sent a

1 legislative proposal to create, essentially, full and part
2 time Space Force military personnel in lieu of our separate
3 Reserve and Guard elements as in other services and this, I
4 think, originates because the Space Force is relatively
5 small and the Reserve and Guard elements would be smaller
6 still. Do you support this proposal?

7 General Saltzman: Senator, the most important aspect
8 of this is that there are critical capabilities and
9 expertise that currently reside in the Air Force Reserves as
10 well as the Air National Guard.

11 The primary responsibility, of course, is to make sure
12 that we have complete access to that experience, that
13 expertise, and those capabilities.

14 So from a readiness perspective, I can tell you as the
15 Chief of Operations currently that is high on my list to
16 make sure that we have unfettered access to those
17 capabilities.

18 We are also looking at flexible and innovative ways to
19 make sure that we have viable and flexible career paths for
20 our Guardians. It is important that we retain this talent
21 for an extended period of time to get the most out of them,
22 and having the ability to seamlessly and have a permeable
23 way to move between full time and part time capacity inside
24 the Space Force, we think, is a tremendous benefit to the
25 Guardians and, ultimately, to the force to maintain that

1 readiness.

2 So, if confirmed as CSO I would, certainly, welcome the
3 opportunity to continue to work with members of this
4 committee and other stakeholders to make sure that we get
5 the right organizational structure to take advantage of
6 these capabilities.

7 Chairman Reed: Thank you.

8 Again, one of the great challenges you have facing you
9 is creating a culture in the Space Force as a warfighting
10 force, one that is highly technical and one that innovates
11 constantly. We find sometimes culture is more determinative
12 of outcomes than a lot of other factors.

13 So that is something, I think, you will be working on
14 and we hope to work together with you. Thank you very much.

15 Now, let me recognize the ranking member, Senator
16 Inhofe.

17 Senator Inhofe: Okay.

18 General Saltzman, let me get the two required questions
19 out of the way so no one else will have to do it. The two
20 are what worries you the most and what do you intend to do
21 about it, and secondly, what will be the first challenge
22 that you go after?

23 Two questions.

24 General Saltzman: Yes, sir. Thank you.

25 The most immediate threat, in my opinion, is the pace

1 with which our strategic challengers, first and foremost,
2 the Chinese, are aggressively pursuing capabilities that can
3 disrupt, degrade, and ultimately even destroy our satellite
4 capabilities and disrupt our ground infrastructure.

5 They have watched how we perform Joint Force
6 operations. They know how critical the U.S. -- how critical
7 the U.S. space capabilities are to the Joint Force.

8 They have learned from that and they recognize that it
9 is an asymmetric advantage of theirs to go after our space
10 capabilities and deny them to the Joint Force, and they have
11 invested heavily and demonstrated capabilities that can deny
12 us this.

13 So it is one of my earliest priorities to make sure
14 that we are on track to build and field effective
15 capabilities and then train the Guardians to operate in a
16 contested domain so that we can counter this activity by our
17 strategic competitors.

18 Senator Inhofe: Good. Thank you, General Saltzman.

19 Thank you, Mr. Chairman.

20 Chairman Reed: Thank you very much, Senator Inhofe.

21 Senator Shaheen, please?

22 Senator Shaheen: Thank you.

23 Congratulations, General Saltzman, on your nomination.

24 Now, I hope that for your 30th anniversary you are
25 doing something other than just bringing your wife to this

1 hearing.

2 [Laughter.]

3 Senator Shaheen: You know, the pearls are the gift for
4 the 30th anniversary so I hope Jennifer has got that on her
5 list.

6 General Saltzman: You are getting me in trouble,
7 ma'am. I appreciate that.

8 Senator Shaheen: Seriously, I appreciated the
9 opportunity to meet with you last week and I especially
10 appreciated the conversation that we had about the risk that
11 is involved with our space capabilities.

12 And I wonder if you could speak to how important it is
13 to have the SBIR and STTR programs with our small businesses
14 who are able to assume more of that risk and what would --
15 what your assessment is if those programs are discontinued
16 because we do not get them reauthorized this year.

17 General Saltzman: Thank you, Senator.

18 The size of the Space Force, the criticality of the
19 missions, means we are going to have to innovate. We are
20 going to have to do things differently in order to deliver
21 the kinds of capabilities that the nation needs to protect
22 its Space Force, to protect the space capabilities, and then
23 protect the Joint Force from our adversaries.

24 It is my opinion that when you are trying to innovate,
25 when you are trying to be creative, the best way to do that

1 is to open up the aperture of ideas, and I think small
2 businesses have a tremendous role that they can play in
3 helping provide some of those innovative creative
4 capabilities that we can then leverage to build a full
5 spectrum response to what our adversaries are trying to do.

6 And so I firmly believe we ought to lower the
7 thresholds to make it easier for small businesses to offer
8 their capabilities for us to take into.

9 Senator Shaheen: So I assume you would agree with me
10 that if we do not get those programs reauthorized it is
11 going to be a real loss in terms of the innovation that our
12 small businesses are providing to the space program and also
13 to our military?

14 General Saltzman: If confirmed, I am, certainly,
15 committed to any authority's responsibilities that help pull
16 the maximum number of innovators in to solve my problems as
17 possible.

18 Senator Shaheen: Thank you.

19 Can you also talk about the risk issue in terms of our
20 procurement process?

21 I think General Hyten talked about the bureaucratic
22 hurdles that impede our ability to procure the capabilities
23 we need and as we are looking at our adversaries,
24 particularly China, they do not have to deal with that.

25 So what do you see in terms of policy changes that we

1 should do that would help us address the procurement issues
2 that we have got?

3 General Saltzman: Well, we have a very deliberate
4 process to make sure that we are wisely using our taxpayer
5 dollars. You bring up an excellent point that the urgency -
6 - the sense of urgency that our adversaries have imposed on
7 us require us to move quickly to develop these capabilities.

8 And so I am, certainly, committed to making sure that
9 we streamline our processes. Congress has helped with the
10 establishment of a Force Design architect in the CSO -- the
11 Chief of Space Operations.

12 I think streamlining the requirements, being clear
13 exactly what we need, innovating to pull in as many ideas as
14 possible to solve those problems, will streamline our
15 efforts and deliver operational capability faster.

16 The cultural piece of this, sometimes we get focused on
17 the fact that we need to purposely build capability to
18 provide space capabilities for the nation.

19 Out at Space Systems Command they have adopted a mantra
20 about exploiting what we have, buying what we can, and only
21 building what we must, and I think having that open thought
22 process for how best to bring capabilities to bear will
23 actually streamline the process and make us do a better job.

24 Senator Shaheen: Thank you. I appreciate that.

25 During our meeting, you also talked about and you did

1 -- as you did in your opening statement the importance of
2 the people in our Space Force and that they will make a
3 difference in our success or failure.

4 One of the things that I understand Space Force may be
5 rethinking is some of the requirements that disqualify 70
6 percent of young Americans from military service.

7 Can you speak to what we ought to be thinking about as
8 we are thinking about how do we get more of those Americans
9 into service?

10 General Saltzman: We may be a small force, ma'am, but
11 we require highly-skilled technical experts to be brought in
12 to do these important critical missions for the Space Force.

13 We also have an advantage by being small that we can
14 consider on a case by case basis precisely the right people,
15 the right kinds of people with the right skill sets, the
16 right diversity of thought, into the Space Force to optimize
17 our capabilities.

18 And so by being able to consider this on a case by case
19 basis, I think we do not have to put blanket restrictions on
20 types of people, on types of qualifications, that bring you
21 into the Space Force.

22 So we have a tremendous opportunity, I think, because
23 of the numbers that we need to bring in to be more
24 individualistic, and if confirmed as CSO I would want to
25 expand that and actually broaden this out to as many people

1 as possible.

2 Senator Shaheen: Well, thanks very much. I look
3 forward to that -- continuing that discussion.

4 Thank you, Mr. Chairman.

5 Chairman Reed: Thank you, Senator Shaheen.

6 Senator Cotton, please?

7 Senator Cotton: General Saltzman, welcome, and
8 congratulations on your nomination.

9 I want to explore a little bit your thoughts on the
10 relationship between the Space Force and the National
11 Reconnaissance Office. You are well suited for that not
12 only in the Space Force but having served at the NRO.

13 I have heard it said by some that once any asset goes
14 into space it becomes strategic intelligence and, therefore,
15 should fall underneath the NRO, although that point of view
16 would seem to conflict with the mission of Space Force.

17 So could you explain how the Space Force should relate
18 to the NRO and how that should look and function?

19 General Saltzman: Yes, sir.

20 I learned to fly satellites in the NRO. I was an NRO
21 ground station commander so I speak from a personal basis
22 from an insider, if you will, that that mission that the NRO
23 does -- the missions that the NRO does are critical,
24 critical to the United States.

25 But they do -- there are differences in the missions

1 that they support, the requirements that they support, and
2 the customers that they support, and although there are
3 differences the collaboration between the two organizations
4 is essential for both's success.

5 And as I mentioned earlier, Space Systems Command
6 thinking through how do we exploit what we have, how do we
7 buy what we can and build only what we must is that mantra
8 that underpins some of the collaboration.

9 We will need to look as we examine where our missions
10 start to overlap whether it is intelligence, surveillance,
11 and reconnaissance or some of the other protect and defend
12 missions.

13 Wherever we overlap we need to evaluate what current
14 capabilities exist, what we need to -- what we can buy
15 commercially and what we need to build specifically to fill
16 the gaps, and then not walk all over each other, to not be
17 overly redundant, because we cannot afford to be.

18 And so I think through this collaboration, and the NRO
19 relationship right now is solid and we do have good solid
20 collaborations. The current analysis of alternatives proves
21 that out.

22 And so I think we are on a good pace. I think we just
23 need to keep it up.

24 Senator Cotton: Are there any changes to the law that
25 need to happen to ensure that Space Force can do that?

1 General Saltzman: I am not tracking any changes that
2 need to occur now, sir. As I get into the position, if
3 confirmed, I would welcome the opportunity to come back and
4 evaluate any changes or make any requests that need to be
5 modified.

6 Senator Cotton: You have said this morning, as have
7 others, that space is a warfighting domain. Most people, I
8 think, understand that our troops on the ground or on the
9 seas or in the air use our space assets to help fight war in
10 their domains.

11 But you also mean that space itself could be a
12 warfighting domain, correct?

13 General Saltzman: I do.

14 Senator Cotton: Okay. So the timeless principles of
15 war that have stood the test of time, from Alexander to
16 Washington to Napoleon to Grant, would apply in space just
17 like they apply here on Earth, right?

18 General Saltzman: I agree.

19 Senator Cotton: And one of those principles is the
20 priority of the offensive. Can you talk to us a little bit
21 about what offensive operations in space would look like?

22 General Saltzman: When I think about space
23 superiority, which is kind of the phrase we use to mean that
24 we are going to contest that domain to make sure that we
25 have access to the capabilities, part of that also means

1 that we are going to protect the Joint Force from an
2 adversary's ability to use space to target them.

3 I think the best way to achieve this is through
4 deterrence; prevent a war from extending into space denying
5 us those capabilities. But the best way to deter is to have
6 a resilient capability and to have offensive and defensive
7 capabilities that creates a credible force. That is where
8 you really get your true deterrence.

9 Senator Cotton: All right. Thank you, General.

10 Chairman Reed: Thank you, Senator Cotton.

11 Senator Gillibrand, please?

12 Senator Gillibrand: Thank you, Mr. Chairman.

13 Congratulations and congratulations to your family.

14 The federal government has struggled to recruit cyber
15 and digital service professionals both in the civilian and
16 military service. This challenge is also seen in other
17 high-tech fields as well.

18 To address this challenge, I have worked with Senator
19 Rounds and Senator Sasse on proposing the creation of a
20 Cyber and Digital Services Academy to recruit and train the
21 next generation of cyber professionals into the government
22 service.

23 Given the highly technical nature of Space Force's
24 work, should Congress consider integrating Space Force
25 cadets into the Cyber Academy and using a potential Cyber

1 Digital Services and Space Academy as the service academy
2 commissioning source for Space Force officers and civilians?

3 General Saltzman: Senator, there is no way the Space
4 Force can be successful without capable cyber professionals.

5 We simply rely too much on our ground networks, on the RF
6 links that connect our satellites to our ground nodes.

7 The distribution of data that is required to really
8 meet our goals all relies on highly capable, highly
9 technical cyber professionals.

10 So in the pursuit of finding them and training them and
11 continue to provide advanced training for them, I would be
12 open to any institutions or capabilities that can add to our
13 portfolio to make sure that our cyber operators are trained
14 and continue to be at the leading edge of technology.

15 If confirmed as CSO, this would be one of my
16 priorities.

17 Senator Gillibrand: And what do you think some of the
18 recruiting challenges -- what do you think they will be for
19 Space Force and have you been able to recruit and retain the
20 technical workforce that you need and where are some of your
21 current shortfalls?

22 General Saltzman: Yes, ma'am.

23 We currently are not seeing the recruiting shortfalls
24 that some of the other services are facing. Primarily, that
25 is because we do not require as many in the Space Force. We

1 have that good fortune of being smaller so that our
2 recruiting numbers are lower.

3 But that small workforce is highly skilled, highly
4 technical, and so we have to reach out and find just the
5 right people, train them to do our specific and sometimes
6 military-unique missions inside the domain, which then means
7 it is important for us to retain them over the course of
8 their career so that we can continue to benefit on their
9 gathered experience.

10 That is going to be, I think, more difficult as they
11 see opportunities in the private sector to use the skills
12 that we provide them.

13 So, in my mind, this is about culture. This is about
14 giving them challenging work, respecting their inputs, and
15 making it a place they just want to show up to work every
16 day to protect the nation. That is what I am committed to
17 if confirmed as CSO is getting that culture right.

18 Senator Gillibrand: And I listened very carefully to
19 your response to the chairman's question about the National
20 Guard. In your written response to advance policy questions
21 you wrote that you are most concerned with maintaining the
22 readiness of the space units in the Air National Guard.

23 I have heard some concerns that the training pipeline
24 for these Air National Guard units will be cut off, given
25 the transition of the active duty space missions to the

1 Space Force.

2 How will you ensure that these Air National Guard units
3 are able to fully execute these missions?

4 General Saltzman: As I mentioned, those capabilities
5 are critical to the success of the Space Force. The way I
6 see it, they can be organized in several different ways. I
7 think there is three options that are being considered.

8 The key is that there are pros and cons and advantages
9 and opportunities in each of these that are slightly
10 different, and so what is important is that we take the time
11 to evaluate all of those second and third order effects to
12 make sure we optimize the capabilities, optimize their long-
13 term viability, the training, the recruiting, the retention,
14 of that expertise.

15 And if confirmed as the Chief of Space Operations what
16 I would like to do is work with the committee, work with the
17 other stakeholders, to really evaluate all of those nuances
18 to make sure we optimize the organizational structure.

19 Senator Gillibrand: But, basically, you want to use
20 the space units that are part of the Air National Guard as
21 your feeder?

22 General Saltzman: I think those capabilities are
23 important to the success of the Space Force.

24 Senator Gillibrand: Understood.

25 I saw that the Space Force's direct commissioning

1 program began this spring with the Cyber Constructive
2 Service Credit Board in order to acquire cyber
3 professionals.

4 Can you speak to what specific operational billets are
5 needed that this initiative to commission cyber
6 professionals can help fill and how has the process gone so
7 far?

8 General Saltzman: What we are recognizing is that to
9 get the mid-grade officers -- the 15-year technicians -- it
10 takes 15 years to grow them if we start from scratch at the
11 accessions point.

12 If we are able to take advantage of the expertise they
13 gain in the private sector and pull them over, we want to
14 give them credit so they can lead our organizations and not
15 start at the bottom of the organization. And so we are
16 seeing a lot of positive interest in that and the pilot
17 program is going successful so far.

18 Senator Gillibrand: Thank you. Thank you for your
19 testimony and thank you for your service. I do hope you get
20 to meet all the former heads of Space Force, including Steve
21 Carell.

22 [Laughter.]

23 Chairman Reed: Thank you very much, Senator
24 Gillibrand.

25 Senator Tuberville, please?

1 Senator Tuberville: Thank you, Mr. Chairman.

2 Congratulations, General, to you and your family. Just
3 a couple of questions here.

4 Do you believe our national security launches should
5 remain on U.S. soil?

6 General Saltzman: Sir, assured access to space is a
7 national imperative. I am open to making sure that we can
8 put any kind of payload, any type of payload, into any of
9 the orbits that are required.

10 This will take establishing a number of launch
11 providers, a number of launch locations, to maintain the
12 kind of agility and flexibility we need to ensure that that
13 mission continues.

14 So I am open to exploring all options to make that the
15 most flexible capability possible.

16 Senator Tuberville: If confirmed, what would you do to
17 protect the DOD and U.S. contractors from intellectual
18 property theft, which is a huge problem, as we know?

19 General Saltzman: Yes, Senator.

20 If confirmed -- again, I think about this in terms of
21 cyber defense because a lot of times that is how they are
22 gaining access to our capabilities and, as I mentioned, we
23 cannot do anything without our cyber networks, without our
24 cyber professionals defending those networks.

25 So what I would commit to is looking at the tools they

1 need, the training they need, the experience they need to
2 make sure that they are the most capable force in defending
3 our intellectual property and our networks from the actions
4 of our adversaries.

5 Senator Tuberville: What would you say our percentage
6 of cybersecurity is in the Space Force -- percentage of your
7 people? How much would that be? Ten, 15, 20 percent?

8 General Saltzman: Senator, I do not think I have a
9 specific number. We only have five officer categories and
10 an equal number of enlisted categories.

11 So all of our operators, all of our personnel, are
12 really focused on operations. One of those subsets is
13 cyber. But I am happy to take that for the record and get
14 back with you on a specific number.

15 Senator Tuberville: Thank you.

16 We have previously been told that Space Force is not
17 looking at any new launch requirements for Phase 3 the
18 National Security Space Launch program. Given Chinese
19 developments just this week, do you believe that we should
20 explore in establishing new requirements?

21 General Saltzman: Senator, it is my understanding that
22 we are still developing the Phase 3 of the National Security
23 Space Launch strategy.

24 We are still trying to figure out the best way to bend
25 the requirements, to take advantage of both the high-end

1 established launch service providers but also find room for
2 these emerging smaller launch service providers, and I think
3 that mix creates the kind of flexibility we need and it is
4 about getting the requirements set just right.

5 And, if confirmed, I would be committed to looking and
6 working with stakeholders to make sure we get that balance
7 just right.

8 Senator Tuberville: Thank you.

9 You know our supply chain remains a challenge,
10 especially for our national security space ecosystem.

11 How will the Space Force address these new requirements
12 in future systems? Could you give me your thoughts on that?

13 General Saltzman: Senator, what we are learning is we
14 have to account for the supply chains -- the veracity, the
15 robustness, of the supply chains as we go through our
16 acquisition process.

17 You cannot wait till after you decide what you are
18 going to buy and then figure out if the supply chain works,
19 and I think our Space Systems Command and the other
20 providers in the acquisition system have done a good job of
21 characterizing that, and once you characterize it
22 effectively then you can make sure you are defending it,
23 making it as robust as possible, making it flexible so it is
24 not sensitive to problems in the supply chain, that we have
25 other areas to go, and, if confirmed, I would continue to

1 promote that.

2 Senator Tuberville: Thank you, General. Good luck.

3 It is going to be a tough job.

4 But thanks for being here today, you and your family.

5 It is it. This is quite an honor -- obviously, the second

6 head coach, basically, of Space Force. So thank you very

7 much.

8 And, Mr. Chairman, this is National Peanut Day so that

9 is the reason I put all these peanuts in front of everybody

10 from Alabama. So thank you, sir.

11 Chairman Reed: Thank you very much, Senator

12 Tuberville, and thank you for the peanuts.

13 Senator Hirono, please?

14 Senator Hirono: Thank you, Mr. Chairman, and thank you

15 for the peanuts. We need to -- energy.

16 General, welcome to you and your family.

17 To ensure the fitness of nominees for appointment to

18 senior positions within any of the departments I ask the

19 following two initial questions of all nominees in any of

20 the committees that I sit on so I will ask you these initial

21 questions.

22 Since you became a legal adult have you ever made

23 unwanted requests for sexual favors or committed any verbal

24 or physical harassment or assault of a sexual nature?

25 General Saltzman: No.

1 Senator Hirono: Have you ever faced discipline or
2 entered into a settlement related to this kind of conduct?

3 General Saltzman: No.

4 Senator Hirono: General, over the past several years
5 the regional SATCOM Support Center Pacific has experienced a
6 significant amount of mission growth as the armed forces
7 have become more reliant on satellite communications.

8 Unfortunately, regional SATCOM Support Center Pacific
9 has not seen corresponding manpower increases to handle this
10 additional work. With Army satellite operations set to be
11 consolidated under Space Force in the near future, will you
12 consider increases to the Space Force's manpower levels to
13 ensure every unit is able to keep pace with its mission
14 requirements?

15 General Saltzman: Senator, I think one of the most
16 important things that the Space Force has done since its
17 inception is consolidating military SATCOM -- military
18 satellite communications -- under a single service.

19 It gives us a lot of authorities, responsibilities, and
20 opportunities to do just what you are saying and that is
21 increase the readiness of those units so that they can
22 provide these critical capabilities.

23 And so we are redesigning currently how we assess and
24 force present for readiness all of our units. First and
25 foremost amongst those are these new units that are coming

1 across from other services.

2 And so the short answer is if confirmed as the CSO I
3 would take the readiness of these units very seriously and
4 the manpower elements of readiness is a key concern.

5 Senator Hirono: That sounds like a yes.

6 You have been asked a number of questions from both the
7 chairman and Senator Gillibrand about the role of the
8 National Guard in Space Force, and I recently met with
9 members of the Hawaii Air National Guard to discuss their
10 concerns about the potential transition of space missions
11 away from the Air National Guard to the Space Force.

12 These men and women have committed to the space mission
13 on Kauai and have dedicated their time and training to
14 building their expertise in space electronic warfare.

15 However, remaining assigned to the Air Force while
16 carrying out Space Force missions has resulted in budget
17 gaps and training delays.

18 It is my understanding that the Space Force and Air
19 Force are evaluating three potential actions to resolve this
20 issue, including the establishment of a Space National
21 Guard.

22 I think that we, in Congress, is expecting or was
23 expecting a report on how Space Force was going to be
24 constituted due in March and we do not have that report yet.

25 So until the decision is made as to how the Space Force

1 is going to be constituted, how will you ensure that such
2 National Guard units which, by the way, exist in a number of
3 states -- that would be, excuse me, California, Colorado,
4 Florida, Hawaii, Ohio, Guam, and Alaska -- how would you
5 ensure that such National Guard units are adequately
6 resourced and have access to the requisite training required
7 to carry out their space missions?

8 General Saltzman: Yes, Senator. I think you have
9 characterized that just right.

10 I know that this is also a concern for U.S. Space
11 Command and as one of the key force providers to U.S. Space
12 Command we were involved in those discussions where the Air
13 Force and the Air Guard through the Air Reserve also provide
14 those capabilities.

15 And so readiness, again, is my primary concern, having
16 access to that expertise, and as a part of the Department of
17 the Air Force, if confirmed as CSO, I would be in those
18 deliberations to make sure that those forces are as ready as
19 possible to meet the combatant commanders' requirements.

20 Senator Hirono: And, if confirmed, would you agree
21 that the National Guard should be consulted in any decision
22 or cost estimate related to a creation of a Space National
23 Guard?

24 Some of the concern is that creating a Space National
25 Guard is too expensive and, really, setting up an entire

1 other way to constitute the Space Force could be much, much
2 more expensive because you already have these units in a
3 number of the states that I mentioned.

4 So I would like your commitment that you will be
5 consulting with the National Guard in going forward.

6 General Saltzman: Senator, if confirmed as the Chief
7 of Space Operations, I commit to collaborating with the
8 National Guard on a host of issues, this being one.

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

10 Chairman Reed: Thank you very much, Senator Hirono.

11 Senator Rounds, please?

12 Senator Rounds: Thank you, Mr. Chairman.

13 Good morning, General Saltzman, and thank you to you
14 and your family for your years of service.

15 General Saltzman: Thank you.

16 Senator Rounds: I most certainly appreciated the
17 comments that you have made so far today and I want to
18 approach this from a little bit different angle.

19 Recognizing that we are in an unclassified environment,
20 can you provide your assessment on Russia and China's space
21 capabilities as compared to ours?

22 General Saltzman: Yes, Senator.

23 We are still the greatest spacefaring nation on the
24 planet. The Space Force's capabilities, what we can provide
25 to the Joint Force, are extremely capable and I still put us

1 at the head of the table.

2 Unfortunately, our adversaries are investing heavily to
3 close that gap and supersede us. I am worried about the
4 pace with which they are making those changes, China first
5 amongst them, but Russia also committed to investing heavily
6 in the kinds of capabilities that are going to disrupt,
7 degrade, and even destroy our on orbit capabilities.

8 And so it is that pace of change and their commitment
9 to disabling it that is most concerning to me, Senator.

10 Senator Rounds: If you take a look at the existing
11 capabilities, I am really curious because we have all seen
12 what has happened in Ukraine. And, yet, if Russia has
13 capabilities in space that are good and, perhaps, advancing,
14 how do we account for their -- well, their repeated failures
15 to provide relevant and timely information to strike
16 Ukrainian forces on the ground?

17 General Saltzman: I am, certainly, not in a position
18 to comment on the Russian operational failures. I will tell
19 you that we have learned some lessons watching that
20 operation. It may be a little early to say complete lessons
21 learned but there are observations that are important.

22 For example, the use of commercial space capabilities
23 to augment military and national decision-making
24 capabilities has proven to be effective for the Ukrainians.

25 The disaggregated proliferated nature of some of the

1 constellations that they are using has shown a level of
2 resilience to degradation attempts that, I think, is
3 noteworthy.

4 And then, finally, I think we see how important it is
5 to defend our cyber networks because those cyber networks
6 create vulnerabilities if attacked to actual space
7 capabilities.

8 And so when I look across what we are seeing in that
9 Ukrainian theater I see some important lessons that we
10 should take to heart in terms of building our Space Force
11 design.

12 Senator Rounds: General, the new Advanced Battle
13 Management System, or ABMS, will be a critical piece of our
14 command and control on the battlefield and I understand the
15 reasoning behind moving away from J-STARS. In fact, I
16 support moving away from J-STARS due to the survivability
17 issues in a contested environment.

18 I am concerned that a specific alternative that has
19 gained support within and outside of the department might
20 not provide the same level of situational awareness and
21 targeting capabilities to our troops on the ground that the
22 J-STARS radar is able to provide.

23 Part of what we look at when we talk about the ABMS is
24 the broad picture but also specifically the need for an
25 officer -- a commanding officer on the ground to rely on

1 good, specific, and very timely data in a close quarter
2 battle situation.

3 Do I have your commitment that, if confirmed, you will
4 assure that the Joint Requirements Oversight Council
5 validated requirements for this system are met so that our
6 troops on the ground are provided the capabilities that they
7 need to win on the battlefield?

8 General Saltzman: Senator, one of the important
9 responsibilities that is given to the Chief of Space
10 Operations is to be the DOD integrator for joint space
11 requirements.

12 It is just that kind of concern which, I think, we take
13 seriously by establishing that critical position. And so as
14 we evaluate the requirements we have to take all the
15 perspectives into account. That ground commander that has
16 to make the final decision is one of those key inputs.

17 So you have my commitment, if confirmed as CSO, that I
18 will account for all the requirement stakeholders when we
19 make critical decisions about whether missions should be
20 migrated into space or performed by other platforms and
21 other domains.

22 Senator Rounds: In Ukraine, Russia, clearly, has good
23 space capabilities and, yet, they are not able to implement
24 them and to use them effectively. There is not that line of
25 command down to that local commander.

1 The last thing that we want to see when we move in to
2 the ABMS system is one which gives broad informational
3 situational awareness but is not capable of providing what
4 we do today with regard to J-STARS to that commander on the
5 ground.

6 Would you agree with that?

7 General Saltzman: I agree that closing that last
8 tactical mile to make sure the right decision maker has the
9 right information at the time and place that is
10 operationally relevant is important.

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

12 Chairman Reed: Thank you, Senator Rounds.

13 Senator Kaine, please?

14 Senator Kaine: Thank you, Mr. Chair.

15 General Saltzman, congratulations on your nomination.

16 I want to ask you some questions about leveraging
17 commercial space technology to ensure U.S. space dominance.

18 In the run up to the Russian invasion of Ukraine our IC
19 doubled its procurement of commercial satellite imagery to
20 help prepare and provide intel to our Ukrainian allies.

21 The IC was also able to leverage satellites operated by
22 Virginia Company HawkEye 360 to detect jamming efforts that
23 were being undertaken by the Russian military in the Donbas.

24 This is not the first time where commercial
25 technologies have been leveraged in effective ways but I

1 think it is really hitting a warp speed. In your view, how
2 important is leveraging innovative commercial technologies
3 to preserve U.S. space dominance?

4 General Saltzman: It is critically important, Senator.

5 The idea -- the mantra that we are using to exploit
6 what we have, get the most out of the systems that we have
7 already paid, for but then also to consider how commercial
8 capabilities -- a broad spectrum of commercial capabilities
9 -- can contribute directly to our mission set and, perhaps,
10 do it more cheaply than us building our own systems is
11 essential.

12 The final element would be when there are still gaps --
13 as we look at our mission set if there are still gaps we
14 might need to consider a specific military solution --
15 military-unique solution to that.

16 But the commercial services, commercial capabilities,
17 are profoundly growing and we need to take advantage of it.

18 Senator Kaine: Let me ask you about one example of
19 this.

20 Last year the Space Force approved experimentation and
21 prototyping for a new tactical space layer that would
22 leverage commercial satellite imagery to provide battle
23 space awareness and bolster targeting capacity.

24 What is the time line for the development of this
25 capacity so that our warfighters might be able to use

1 satellite-based information in real time to make battlefield
2 decisions?

3 General Saltzman: Senator, I do not have a specific
4 time line. If it is okay I will take that for the record
5 and get the specific time line back to you. But I can tell
6 you it is an important capability that we consider very
7 seriously.

8 Senator Kaine: Excellent. Thank you. I will ask that
9 for the record.

10 Over to another topic, the increase in the number of
11 commercial space launch providers, together with a
12 substantial reduction in the cost of access to space and
13 then the proliferation of commercial constellations, could
14 create a kind of a traffic jam in the demand for launch
15 services, and I imagine that demand could play significant
16 challenges on federal launch ranges such as Vandenberg and
17 Cape Canaveral.

18 There are state space ports, for example, the Mid-
19 Atlantic space port in Wallops Island, Virginia, that are
20 being used significantly not only by private sector space
21 operators but by NASA and others.

22 What would -- what could the potential relationship be
23 between Space Force and state space launch facilities be in
24 the future?

25 General Saltzman: Senator, assured access to space is

1 a national imperative, simple as that, and I believe that
2 having agility, having flexibility in the types of
3 capabilities that provide payloads to orbit to all of the
4 orbits is essential. That means maximizing the number of
5 launch providers as well as the amount of launch locations
6 that are available to the nation.

7 Currently, our capacity on our ranges meets the
8 governmental needs. But with the proliferation of small
9 satellites that is going to change rapidly and I think that
10 the number of launches is going to go up dramatically and we
11 are going to need to look at other opportunities.

12 We are currently engaged in an interagency process to
13 look at a national space port strategy and I think the
14 capabilities like at Wallops Island will naturally be a part
15 of that discussion.

16 Senator Kaine: Should you be confirmed, and I am
17 confident you will be, I would love to carry that discussion
18 further.

19 Let me ask you about one other topic. This is one that
20 I am kind of a nerd about. My favorite government
21 publication is Orbital Debris Quarterly News -- ODQN -- that
22 is published by NASA.

23 It is getting more and more important because there is
24 currently 4,500 active satellites in orbit. SpaceX has
25 deployed more than 1,700 Starlink broadband satellites into

1 low earth orbit, and then last year the FCC received from
2 companies like Amazon, ASTRO, and Boeing petitions to put as
3 many as 38,000 more broadband satellites in low earth orbit.

4 Are you concerned about how the proliferation of
5 commercial investments could interfere or complicate
6 national space needs and do we need to look at international
7 rules of the road both about commercial use of space but
8 also about the handling of debris that can -- a small amount
9 of orbital debris can wreak havoc on a super expensive
10 satellite platform?

11 General Saltzman: I am not concerned at this point
12 about the traffic, as you mention it. I am always concerned
13 about debris. We are committed to making sure that we lead
14 and model responsible behaviors in space and I think that
15 will help reduce the amount of debris associated with launch
16 and other kinds of operations.

17 Senator Kaine: Thank you very much. Thanks, Mr.
18 Chair.

19 Chairman Reed: Thank you, Senator Kaine.

20 Senator Cramer, please?

21 Senator Cramer: Thank you, Mr. Chairman, and, thank
22 you, General.

23 Jennifer, good to see you and your family here. This
24 is a really great day, and congratulations.

25 I am going to -- Senator Kaine brought up the issue of

1 commercial companies. I want to emphasize small commercial
2 because one of the things -- you are in the innovation
3 business if anybody is in the innovation business, and so I
4 am going to ask sort of maybe three questions in one and let
5 you just opine, if that is okay.

6 So, piggybacking, again, on Senator Kaine's point,
7 maybe elaborate a little bit on the role of small commercial
8 space companies that are seeming to just going great guns,
9 thank goodness, and having access.

10 At the same time, we are coming up on October 1st at
11 which time as a matter of legislative policy Space
12 Development Agency will move over to Space Force.

13 One of the benefits, I think, of Space Development
14 Agency has been their autonomy, their independence. That
15 has allowed that innovation to really grow.

16 At the same time, I think they and Space Force and all
17 of us will benefit from the discipline, the oversight, and
18 the collective, if you will, of Space Force -- the
19 collective opportunities, the strategies, if you will, and
20 that is part of why we stood up the Space Force.

21 And at the same time -- and I know there has been some
22 talk already of cyber -- once again, the coming together of
23 commercial and government becomes all the more critical.

24 Could you just maybe elaborate a little bit on those
25 specific things -- small SDA and its autonomy blossoming

1 under your jurisdiction -- and then the role of cyber in all
2 of that?

3 General Saltzman: You hit on the key principle there
4 and that is that innovation is going to be critical to the
5 success of the Space Force.

6 So I will start with the small businesses. One thing I
7 can say for certain is that with regards to ideas the more
8 the better, and if you can look across the broad space
9 ecosystem and pull in as many ideas as possible, regardless
10 of the size of the vendor that is promoting that idea, you
11 are going to be more successful at putting solid innovative
12 ideas on the plate.

13 With regards to Space Development Agency, I could not
14 agree more. Their innovative business model, if you will,
15 has been very successful in the early efforts associated
16 with missile warning, missile tracking, space data,
17 transport layer, et cetera.

18 When they come over to the Space Force 1 October we
19 have already been working with them. We have been planning
20 for months to make that transition seamless, to make it
21 smooth, and we want to make sure that we do not violate that
22 secret sauce, which is the innovation engine of Space
23 Development Agency.

24 So, if confirmed as CSO, I will be committed to making
25 sure that we do not lose the goodness as we bring them over.

1 Now, we need to integrate them and make sure they are a
2 part of the Force Design. That is what is going to make it
3 an effective force when it is finally fielded. But I do not
4 want to lose that innovation engine.

5 And nothing requires staying at the technical forefront
6 than cyber. It is such a fast-paced changing environment
7 that innovation, our ability to stay engaged with the
8 leading edge of technology there, is going to be essential.

9 One of the innovative ideas that we came up with is
10 something we are calling Super Coders and the idea is that
11 we take our Guardians, especially the ones who kind of do
12 coding as hobbies, quite frankly, and pull them in, give
13 them advanced training and then put them back into the units
14 so that our operational units have direct connection to
15 people that can code and develop applications that support
16 the mission.

17 And that is -- it is already paying off. We are seeing
18 some new tools being developed for how to monitor our
19 systems and how to do crew logging activities, for example.

20 And so those are the kind of innovative ideas to stay
21 on the forefront of cyber.

22 Senator Cramer: Thank you.

23 In the last minute, let us talk a little bit about my
24 favorite space topic PARCS radar. As you know, the Cavalier
25 Space Force Station has that beautiful old gigantic piece of

1 concrete that watches space and missile warning, of course.
2 It has for several decades.

3 But modernization is important, and some has taken
4 place there already and appreciate that. We were able to
5 put \$5 million into the fiscal year '23 NDAA here in the
6 Senate. Hopefully, that survives.

7 But maybe you could just share a little bit in the
8 closing seconds your vision for that radar.

9 General Saltzman: Sir, the missile warning mission is
10 a no-fail mission for us. Missile tracking is going to be
11 just as important with hypersonics, and what those radars
12 provide is not just missile warning but the space domain
13 awareness, and I, certainly, will not be able to do my job,
14 if confirmed as CSO, if I have no idea what is going on in
15 space.

16 And so the more data that we can collect from the
17 sensors on the planet the better we are going to have for
18 space domain awareness and I think the better we are going
19 to be able to do our mission.

20 Senator Cramer: Thank you, General. Good luck. I
21 look forward to supporting you.

22 Thank you, Mr. Chairman.

23 Chairman Reed: Thank you, Senator Cramer.

24 Senator King, please?

25 Senator King: Thank you, Mr. Chairman. Are we on?

1 General, I have to tell you at the outset I have rarely
2 been as impressed with a witness' preparation and grasp of
3 the issues as you have demonstrated here this morning. You
4 have really, I think, thought deeply about a lot of these
5 issues and I want to start with a more conceptual question.

6 The conventional political position through the '80s
7 and '90s and, perhaps, the early part of this century was we
8 do not want to militarize space. My concern is that this
9 administration may still be holding on to that concept to
10 some extent and that train has left the station, has it not?

11 We have to react to the militarization of space that
12 has already taken place by our potential adversaries.

13 General Saltzman: Senator, it is one of my primary
14 objectives to make sure that a war does not extend into
15 space. That is not a good day for the United States.

16 I believe the best way to create a deterrent capability
17 to prevent that is to have a credible force that can both
18 deny benefits of those actions and impose costs where
19 necessary. That creates doubt in our adversaries' mind that
20 it is a good idea to start attacking capabilities in space.

21 Senator King: But the implication of what you just
22 said is that we have to have both offensive and defensive
23 capability in space in order to have an effective deterrent.

24 Is that correct?

25 General Saltzman: We, certainly, need to defend what

1 we have and if we are going to protect the Joint Force from
2 what the adversaries have already put in space -- their
3 space-enabled targeting -- we are going to have to have
4 counter capabilities.

5 Senator King: I appreciate that and I hope that you
6 will argue that effectively in the administration because
7 this is -- as I say, this train has actually pretty well
8 left the station.

9 I wanted to follow up on a question that Senator Cotton
10 asked and just sort of tie it up in a bow.

11 General Raymond said that the joint effort -- unity of
12 effort between the Space Force and the NRO has worked well
13 and that the two entities should remain separate. Is that
14 your position?

15 General Saltzman: I think because there are two
16 organizations it allows them to focus on different
17 requirements and different customer bases. The key will be
18 to how they collaborate where their mission sets get close,
19 and I think it is in that collaboration we make sure the
20 right lanes in the road, the right authorities, the right
21 funding, so that we are not overly redundant, that that is
22 going to happen in detailed collaboration.

23 Senator King: Is there a formal process by which that
24 collaboration is ensured? Is there -- in other words, are
25 there monthly meetings or communication back and forth?

1 Because you can say collaboration but if you are not talking
2 it is not going to happen.

3 General Saltzman: Yes, sir. There is an executive
4 committee that meets routinely. Both are parties -- and
5 members of the Space Acquisition Council and both are
6 parties to what we are calling the Program Integration
7 Council, which is even a lower level organization committee
8 that gets together to talk about requirements, acquisition
9 strategies, to make sure that we are meeting the mission
10 requirements of both without being overly redundant.

11 Senator King: Thank you. You had a lot of discussion
12 this morning about innovation, which is -- as you suggest,
13 is absolutely critical to the mission of your agency,
14 perhaps more so than any agency in our government.

15 We have also talked about -- Senator Cramer asked about
16 smaller businesses. We have had testimony before this
17 committee from innovative smaller companies, particularly in
18 Silicon Valley, who, basically, said we have given up
19 responding to the Pentagon RFPs. It is just too burdensome.
20 The process is too lengthy, too expensive and so we are
21 losing those suppliers.

22 I would hope that you might meet with -- take your 20
23 smallest companies that you are working with, pull them
24 together, and have a discussion about how they feel about
25 the process and are there ways that that can be improved.

1 I am concerned that just the nature of the Pentagon
2 acquisition process may itself be an impediment to smaller
3 companies even getting into the game.

4 General Saltzman: Senator, we cannot afford to lose
5 those contributions. So, if confirmed as CSO, I would
6 definitely explore opportunities to get their feedback to
7 make this a better process.

8 Senator King: A final question about -- and you have
9 touched on this -- about culture and recruitment.

10 You indicated that you are not having any problem with
11 recruitment. I guess one measure of how you are doing is
12 how many Air Force Academy graduates, when they leave, want
13 to join the Space Force?

14 General Saltzman: More than we have slots for.

15 Senator King: So that is a good sign in terms of their
16 view of the future in this area.

17 I said that was the final question but I thought of
18 another one. A lot of your space capability -- we are all
19 -- our military is based upon, in many ways, space
20 capability, GPS being the best example.

21 Do you not believe, however, that we need to be sure
22 that our military has the capability to effectively deploy
23 and act without GPS? Because that may be the first thing to
24 go in a conflict?

25 I have heard that they are teaching celestial

1 navigation at Annapolis. But I want to be sure that that is
2 the case because we could be blinded in the first day of a
3 conflict and we need to have backup.

4 General Saltzman: Sir, I am a military planner at
5 heart. Our job is to prepare for the worst case scenario.
6 So I agree with you, we always need to plan for
7 contingencies for when things go wrong or when things are
8 not available to us.

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

10 Chairman Reed: Thank you, Senator King.

11 Senator Ernst, please?

12 Senator Ernst: Yes. Thank you, General Saltzman, and
13 to your family as well for joining you here today.
14 Congratulations on your nomination and thank you for your
15 service.

16 General Saltzman: Thank you.

17 Senator Ernst: I would like to go back to the
18 deterrence discussion.

19 So the bedrock of Biden's administration -- their
20 National Defense Strategy is a so-called integrated
21 deterrence, and how does this concept account for cross-
22 domain deterrence, so holding terrestrial targets
23 accountable and at risk to deter attack on U.S. space
24 assets?

25 General Saltzman: The idea is integrated deterrence

1 leverages a whole of government approach to imposing costs
2 and denying benefits if an adversary were to think about
3 taking actions detrimental to U.S. interests.

4 So I think in that whole of government approach then on
5 the military side of things you look at all of the domains.
6 If there is a threat against a particular domain or a
7 particular target set then we can take asymmetric action and
8 others to impose costs or deny benefits, and it is the
9 collaboration of the Joint Force that brings power to that
10 full set of capabilities.

11 Senator Ernst: Very good. And would you support
12 revealing some of our space capabilities for deterrence,
13 demonstrating to our adversaries that we can respond
14 effectively to their attacks?

15 General Saltzman: You bring up an important point
16 about deterrence and that is if you do not know the
17 capabilities are there it is hard to deter specifically an
18 adversary if they do not know the capabilities there.

19 The problem is is if we think too much about revealing
20 capabilities that are vulnerable that we might be
21 jeopardizing those capabilities. If confirmed as the CSO I
22 would welcome an opportunity in a classified environment to
23 talk about some of those tradeoffs.

24 Senator Ernst: I would appreciate that.

25 And going along with that, the Biden administration had

1 recently announced a unilateral moratorium on certain anti-
2 satellite tests.

3 Do you believe that this self-imposed restriction will
4 inhibit or stop China and Russia then from conducting anti-
5 satellite tests?

6 General Saltzman: I think it is a commitment to not
7 conduct destructive ASAT missile tests, which is currently
8 the most dangerous thing to U.S. space capabilities in the
9 form of what the Chinese and the Russians are doing.

10 So I do not know if it is going to dictate that they
11 will not do it. I am not hopeful of that. But I think it
12 does show a commitment to, hey, there are better ways to
13 test. There are more responsible ways, and I think by
14 demonstrating and modeling that behavior we do not give up
15 much because we have other ways to test our capabilities but
16 we lead by saying we are not going to intentionally create
17 debris in space.

18 Senator Ernst: Okay. I can appreciate that.

19 However, I do not want to continue to set the United
20 States up by operating from a doctrine of appeasement. So I
21 do think it is important that we can signal to our
22 adversaries that we have the capabilities of destroying
23 satellites. Maybe we do not conduct those. But, again,
24 maybe in a classified setting, we can talk more about that.

25 How can the United States go ahead and promote or, as

1 you said, model the norms of conduct for space? How can we
2 do that and then encourage other countries to do the same?
3 And if they do not, then how do we impose penalties on those
4 countries or states that are violating them?

5 General Saltzman: I think as we clearly define what it
6 means to be responsible and professional in space activities
7 it will cause -- put into greater relief those activities
8 which are not responsible, and I think by building a
9 coalition of like-minded spacefaring nations around a set of
10 responsible behaviors, again, it will create peer pressure,
11 if you will, for the international community to deem certain
12 activities professional and responsible and other activities
13 to be irresponsible, and that would be the focus, I think,
14 of those tenets.

15 Senator Ernst: Thank you very much, General Saltzman.
16 I look forward to supporting your confirmation.

17 But probably the most important question, General
18 Raymond had a daughter that attended Iowa State University.
19 Did any of your children attend Iowa State University?

20 General Saltzman: Ma'am, they are proud graduates of
21 the University of Missouri. M-I-Z back there.

22 Senator Ernst: Okay. Close enough.

23 [Laughter.]

24 Senator Ernst: Thank you very much, sir.

25 General Saltzman: Yes, ma'am.

1 Chairman Reed: Thank you, Senator Ernst.

2 Senator Kelly, please?

3 Senator Kelly: Thank you, Mr. Chairman.

4 General, welcome. Very nice meeting you and your
5 family.

6 The administration's fiscal year '23 budget request
7 requested a growth in Space Force end strength from 8,400 to
8 8,600 Guardians and this committee's version of the NDAA
9 supports that request.

10 The military's emphasis and reliance on global space
11 operations will demand a robust force, moving forward. But
12 there are concerns that budgets for the Space Force are
13 expected to flat line in fiscal year '27.

14 So what type of growth do you foresee in the Space
15 Force over the next five or 10 years?

16 General Saltzman: Senator, I would not want to comment
17 on any particular numbers. Just have not had a chance to
18 really dig in and see what appropriate levels would be.

19 However, I can tell you that, in my estimation, looking
20 at the readiness of the force, there is substantial
21 capabilities in test and training infrastructure that we
22 need to invest in.

23 If we have exquisite weapon systems, exquisite systems
24 on orbit to provide joint capabilities but our Guardians and
25 our operators do not have the skills, the training, the

1 experience, they need to make the most out of those systems,
2 then I feel like we are not really fully combat ready, fully
3 ready to do those critical mission tasks.

4 Senator Kelly: What are some examples of those
5 capabilities?

6 General Saltzman: We do not have simulators that allow
7 our operators to practice their tactics against a thinking
8 adversary. Even if it is a simulated adversary, we do not
9 have good simulators.

10 We do not have ranges where they can routinely practice
11 their tradecraft. We do not have the ability to link
12 multiple units together so they can practice the
13 coordination that is necessary to do large force
14 employments, if you will.

15 We have just been operating in a benign environment for
16 so long we did not need to necessarily have those kinds of
17 capabilities. And so I think over the next few years we are
18 going to have to look at that and be as specific as we can
19 but provide that kind of training and experience to our
20 operators.

21 Senator Kelly: Yeah. I mean, having the equipment and
22 the capability is one thing. Being able to use it is
23 entirely another and being able to simulate operations on a
24 range, operate jointly, as well. I imagine that is
25 something that is on the agenda.

1 A simulator and range, that is infrastructure. Is
2 there any other infrastructure capacity that you feel you
3 need?

4 General Saltzman: We are continuing to build and
5 design a more resilient defensible architecture. As I
6 mentioned, we have operated for years in a benign domain and
7 so we were focused more on the capabilities of the payloads
8 and how long they would last on orbit, try to get the most
9 out of the expensive launch that put them into orbit.

10 Launch prices are coming down. We are doing
11 distributed architectures because they are more resilient.
12 We are trying to think about ways to disaggregate our
13 payloads so they are not as easy targets.

14 All of that is new investment in new Force Design and
15 so it is going to come with a transition from our legacy
16 capabilities to these new architectures. That will be work
17 that we are doing in the requirements phase and in the Force
18 Design phase and, if confirmed, I look forward to working
19 with the committee to get that balance as we transition from
20 legacy to the new architecture right.

21 Senator Kelly: Senator King asked about recruiting and
22 you mentioned from the Air Force Academy you have more
23 volunteers to go into the Space Force than you have spots.

24 In the enlisted ranks, how is recruiting there?

25 General Saltzman: It is very good. Again, despite the

1 fact that we are looking for highly capable, highly
2 technical skills, we have more volunteers than we have spots
3 to fill. Just -- again, we are lucky. We are a small force
4 at this point, doing a very specific mission set, and so we
5 can handpick and we are really getting solid volunteers.

6 Senator Kelly: It is one thing getting people. It is
7 another thing getting the right people. Have you felt the
8 need to do any marketing of the Space Force at this point?

9 General Saltzman: Lots of people are doing marketing
10 for us. It is working out to our advantage.

11 We are also very active in going to specific
12 universities where there are underrepresented populations
13 and make sure that we are looking across the board to bring
14 the right people in, the right kind of diversity, the right
15 kinds of diversity of thought, the right backgrounds and
16 skills, and, so far, we have been very successful in doing
17 that.

18 Senator Kelly: All right. Thank you, General.

19 General Saltzman: Yes, sir.

20 Senator Kelly: And I yield back.

21 Chairman Reed: Thank you, Senator Kelly.

22 Senator Fischer, please?

23 Senator Fischer: Thank you, Mr. Chairman, and thank
24 you, General, for your willingness to step forward once
25 again to serve this country. My thanks to your family for

1 their sacrifices and service as well.

2 General, as you know, the Next-Gen OPIR Satellite
3 Program is one of the key components of our future missile
4 warning architecture along with the proliferating
5 constellations of smaller satellites operating in lower
6 orbits.

7 Your predecessor, General Raymond, testified in support
8 of this approach before this committee in May. But I am
9 concerned about discussion of alternative proposals that
10 have not been developed with input from the combatant
11 commands and would, ultimately, accept greater risk in the
12 mission of the department that the department itself
13 describes as no-fail.

14 I hope this is something you will take a look at and
15 ensure that we continue to pursue a diverse architecture of
16 complementary constellations that meets the warfighter needs
17 for capacity in the schedule.

18 Do I have your commitment on that?

19 General Saltzman: Yes, ma'am. As you mentioned,
20 missile warning is a no-fail mission and bridging that
21 transition for new capabilities, legacy capabilities, so we
22 have no gaps in coverage is a high priority for me.

23 Senator Fischer: Thank you.

24 I know the Space Force is in the process of designing
25 the requirements for Phase 3 of the National Security Space

1 Launch program.

2 Do you see Phase 3 as being more of an evolution of
3 Phase 2 or a revolution in terms of its structure and
4 capabilities?

5 General Saltzman: I will be honest, ma'am. I have not
6 really dug into the details of what that strategy proposes.
7 I have had some briefings in preparation for this.

8 And so I would offer there was a great deal of effort
9 that was put into going out across all of the stakeholders
10 and getting as many inputs as possible so that the strategy
11 would at least learn the lessons of the previous phases of
12 National Security Space Launch, not ignore those lessons and
13 bring those forward into Phase 3.

14 I think keeping a fair open competition to make sure as
15 many providers, both established launch providers as well as
16 emerging launch providers, was also a key element of the
17 strategy being devised and I think that they are on the
18 right path.

19 We will see as we get closer to the final decisions on
20 how that strategy plays out. But, if confirmed, I look
21 forward to getting inputs from all the committee members as
22 well as the other stakeholders in this -- in our critical
23 mission set for the Space Force.

24 Senator Fischer: There has been some criticism of the
25 program, particularly its use of block buys and certified

1 providers. But I want you to know this committee
2 understands the importance of maintaining assured access to
3 space, especially for the most challenging orbit.

4 We want to take advantage of the private sector's
5 innovation -- you talked about that earlier -- but we are
6 talking about unique and very expensive payloads, that if
7 they are not delivered perfectly it will result in
8 capability gaps for our warfighters.

9 So we understand there has to be a balanced approach to
10 that risk. When you say that you want to include all
11 stakeholders, give me examples.

12 General Saltzman: Certainly, all the launch service
13 providers. Certainly, the people whose payloads we are
14 putting onto orbit. Certainly, the acquisition community
15 has to balance contracting requirements, cost profiling, all
16 of the key considerations when you put an acquisition
17 strategy together -- a procurement strategy together --
18 making sure that all those variables are accounted for so
19 that we can thread the needle to get the balance that you
20 just mentioned right.

21 There is risk to mission but there is also cost
22 overruns that we want to avoid. Spending too much for these
23 required mission sets is something that is on my mind. And
24 so I think we just need to pull as many of those key
25 opinions from all the stakeholders together to make the wise

1 decision for the strategy, going forward.

2 Senator Fischer: And how do you balance the risk?

3 General Saltzman: It is a challenge because we have to
4 -- it has to be a no-fail mission. We have to be able to
5 put the payloads we need into the orbits that we require.
6 But we need flexibility across that. So it is this balance
7 between mission assurance and flexibility, which is always a
8 conundrum for military planners.

9 But I think the best way to do it is just to have open
10 deliberate debates about what the merits are on both sides
11 and make sure you try to get it as close to perfect as you
12 can.

13 Senator Fischer: Last question. Can you talk about
14 how the Space Force has made changes to deliver capabilities
15 faster so that it is more responsive to the needs that we
16 face such as restructuring of Space Systems Command and how
17 you plan to build on these steps to ensure our space
18 enterprise is responsive to both threats and technological
19 changes?

20 General Saltzman: With the help of Congress, we
21 established the Force Design architect in the Chief of Space
22 Operations. The Joint Requirements Oversight Committee gave
23 us responsibility as the DOD integrator. This is allowing
24 us to streamline the requirements development, and if we get
25 the requirements just right it sets us on the right path for

1 the major acquisition programs.

2 We are also considering exploiting what we have and
3 then the commercial capabilities that we can buy as a
4 complement to those major acquisition programs that we have
5 to build from scratch. Through those processes, I think, we
6 have streamlined at least the early phases of that larger
7 complicated acquisition process.

8 Senator Fischer: When you look at these reforms what
9 benchmarks do you look at in order to determine success or
10 measure success?

11 General Saltzman: The classic acquisitions are cost,
12 schedule, and performance. But for me, it is about
13 delivering a full set, a full-throated capability, that
14 gives us both the mission agility to do the job,
15 sustainability over time.

16 Just because it works today in a dynamic environment
17 against a dynamic threat it may not work in the future. And
18 so I am looking at always being able to provide a capability
19 to the President, to the combatant commanders, that give
20 them flexibility in execution of their mission set.

21 So it is the readiness of the force to meet that broad
22 spectrum of anticipated threats that I am looking for as a
23 measure of effectiveness.

24 Senator Fischer: Thank you, sir. Thank you, Mr.
25 Chairman.

1 Chairman Reed: Thank you, Senator Fischer.

2 Senator Rosen, please?

3 Senator Rosen: Thank you, Chairman Reed, and for
4 holding this hearing. I also want to thank General Saltzman
5 for testifying today, for your service, and for your vast
6 knowledge in this area.

7 And I want to talk a little bit about our tech and
8 cyber challenges in space because our nation, of course, we
9 know facing increasingly sophisticated cybersecurity threats
10 in space from disruptive technologies, including the threat
11 of stealing data, jamming satellite signals, hijacking
12 satellites, and disrupting internet services.

13 So I have kind of a multi-part question. And so, if
14 confirmed, how are you going to work to keep our space-based
15 assets like satellites safe from cyber attacks? Who are you
16 going to -- what other agencies interdepartmental or
17 otherwise?

18 Do you need to coordinate to protect that all of
19 government approach on cyber that we have been trying to
20 work on and how are you using emerging technologies in all
21 of this?

22 General Saltzman: Thank you, Senator.

23 That is an important topic, and watching what happened
24 in Ukraine to cyber attacks that had space effects
25 dismantled to some degree showed that there is a large

1 concern for just what you are pointing out, that our cyber
2 networks are an avenue to disrupt and degrade our space
3 capabilities.

4 So this is a critical issue for me as well. We have
5 organized one of our units, Delta. Delta 6 is actually
6 dedicated to cyber operations and specifically cyber mission
7 defense of Space Force systems.

8 We also leverage the authorities that U.S. Cyber
9 Command has to monitor and, if necessary, defend -- actively
10 defend in protection of those capabilities. So those you
11 mentioned, which ones are the stakeholders, who are we
12 collaborating with, U.S. Cyber Command is at the top of that
13 list, certainly.

14 But what we are doing is training our cyber operators
15 on our mission-unique -- what we call cyber terrain. They
16 are living day to day inside our weapons and the networks
17 that feed them and make them work, and they are monitoring
18 for malicious actions, malicious behavior, and they are
19 continually updating the defenses to make sure they are as
20 secure as possible. I am comfortable that they are actively
21 doing it.

22 Now, what I want to give them are some of the tools to
23 do the job better and some of the training and education
24 that they are going to need as this very dynamic field moves
25 down the road.

1 And so I want to keep them at the forefront of that
2 technology to have the tools, the monitoring systems, and
3 the ability to defend our critical cyber networks.

4 Senator Rosen: Well, you must have read my mind
5 because that is my next question because as a former
6 computer programmer I am very excited to hear you talk about
7 Super Coders. That is very exciting to me.

8 But it is so important that we think about our STEM
9 outreach, generally, and that, like you said, Space Force
10 provides an opportunity to ensure our Guardians, including
11 the Space Force unit stationed in my state at Nellis Air
12 Force Base, they are fully equipped to address evolving
13 threats in space, and I really hope this new branch of the
14 military can also play a role in promoting what I think are
15 exciting STEM career fields and helping bridge the
16 technological gaps facing military and industry because it
17 is a collaboration.

18 And it is why I am glad in 2020 the PROMOTES Act,
19 bipartisan legislation I introduced, it authorized DOD to
20 provide STEM education and training to junior ROTC students
21 and it was signed into law as part of the NDAA.

22 So we hope that gives you a good pipeline.

23 But considering how important it is, and you spoke a
24 little bit about this, how are you going to do things like
25 the STEM to Space Initiative and other STEM outreach

1 programs to try to be sure that you are really reaching out
2 there and letting young folks or anyone, really, know what
3 an exciting career field this is?

4 General Saltzman: Yes, ma'am, and thank you for the
5 support.

6 I agree that attracting the right kind of professionals
7 with the right kind of acumen on this STEM field of play, if
8 you will, is critical to our success. And so, certainly, we
9 do outreach. We go to -- we start in grade schools. We
10 send people out into grade schools and high schools to talk
11 about the importance of space.

12 John Raymond is always famous for dragging our
13 astronauts that are Space Force Guardians along with him to
14 talk about how exciting the space domain is and I think
15 there is a lot of excitement, a lot of buzz, that that
16 creates.

17 We have established a university partner program
18 whereby we have 14 universities, maybe 15 now -- it is
19 expanding -- where we go out and try to leverage that
20 diverse, highly technical skill set that that people are
21 seeking in those universities and try to attract them into
22 the force.

23 We are establishing partnerships for research to stay
24 at the leading edge of cyber through that same partnership
25 program with the universities, and I think we are seeing the

1 benefits of that on a day to day basis.

2 I agree it is a critical mission. If confirmed as CSO,
3 I will continue to support that.

4 Senator Rosen: Thank you. I yield back.

5 Chairman Reed: Thank you, Senator Rosen.

6 Senator Scott, if you are ready you are next in order.

7 Senator Scott: Thank you.

8 First, thanks for being here -- I think this is working
9 -- and congratulations on your nomination.

10 General Saltzman: Thank you.

11 Senator Scott: Thanks for your service and thanks for
12 everybody who works with you.

13 Since the Space Force is relatively new and the
14 department is still working out its operations, can you
15 describe the role you have been nominated for in terms of
16 how the Space Force enhances the U.S. ability to deter and,
17 if necessary, defeat our enemies, especially Communist China
18 -- Communist China and Russia -- but also any aggressive
19 state that seeks to use Space Force against us or to use
20 space against us?

21 General Saltzman: Yes, sir. Thank you for that
22 question.

23 It is an important foundational piece for the reason
24 there is a Space Force and I take that very seriously.

25 Every American benefits from the capabilities that are

1 inherent in space and U.S. space capabilities. Whether it
2 is the navigation apps on their phones, solid
3 communications, weather reports, digital banking access, all
4 of these are critical things you may not see on a day-to-day
5 basis because you do not see the satellites. But that space
6 -- those space effects are critical to every American.

7 I think it drives the economy. It spurs technological
8 advancement. It, certainly, underpins the military
9 capabilities. We just could not live without our space
10 capabilities. The American way of life now is inextricably
11 linked to space capabilities.

12 So it is the Space Force that has to address the
13 emerging threats. China is that pacing challenge. Russia,
14 certainly, is a challenge. They have invested heavily in
15 the ability to destroy -- not just disrupt or degrade but to
16 destroy our space capabilities, and the Space Force wakes up
17 every single day dedicated to protecting our vital interest
18 in space but also protecting the Joint Force from the
19 adversaries' designs of space-enabled targeting, space-
20 enabled capabilities.

21 And so we are committed to developing the operational
22 concepts -- the on orbit assets, the tactics, the training
23 -- to make sure that we can protect that capability.

24 Senator Scott: Let me ask a question. So what you
25 just said is what I believe also. I believe Communist China

1 and Russia are out to defeat us. Their governments -- not
2 the people, but their governments actually do not like our
3 way of life.

4 Why does the public not know that and what can you do
5 in your role or what should -- I mean, what can you do to
6 get people to understand that they actually -- I mean, you
7 are trying to prevent bad acts. That is what you do for a
8 living.

9 General Saltzman: It is, certainly, a matter of scale.
10 When I talk to friends and family back home I think there
11 is a recognition that this -- the world is not safe. I
12 think there is recognition that there are countries out
13 there that do not have the same ideas we do and that they
14 are working actively to try to deny us those interests.

15 From a space perspective, it is a little bit harder to
16 get support around something you do not see on a day-to-day
17 basis, and with the satellites a little bit out of view
18 sometimes they always do not make the connection that, hey,
19 it is the satellites that they are trying to attack and that
20 prevents us from doing X, Y, and Z.

21 So it is education. It is us getting out. It is
22 connecting with the public. It is connecting through
23 speeches and academic interactions to make sure that those
24 connections are clear.

25 Senator Scott: Do you think that is part of your role?

1 General Saltzman: I do.

2 Senator Scott: Can I ask you another question?

3 I assume you are going to play an active role in
4 budgeting and the acquisition process. So can you talk
5 about how the department is going to use the most of any
6 readily available commercial technology or products so you
7 can be more -- with the money that we allocate to you, you
8 are going to be more efficient with this and get more things
9 accomplished?

10 General Saltzman: Yes, sir.

11 With the help of Congress, the Chief of Space
12 Operations has been designated as the Force Design
13 architect, have a further responsibility in the joint
14 requirements process to be the DOD integrator.

15 This gives us an important leadership role in setting
16 the requirements and then working with the acquisition
17 community to make sure that we meet those requirements based
18 on all the capabilities that are available to us.

19 And Space Systems Command is convinced that if we have
20 the ability to exploit existing capabilities that would be
21 great. But we also have to be able to then buy commercial
22 capabilities. It might be cheaper to procure what is
23 already available through the commercial sector and then
24 only build what we must.

25 Senator Scott: Do you feel comfortable that you are

1 doing that?

2 General Saltzman: I do.

3 Senator Scott: Okay. If you find problems, I think
4 everybody on this committee would like to make sure that we
5 are not creating roadblocks for your ability to use readily
6 available technology to make sure our tax dollars go further
7 so you can do more.

8 So if you would let me know and let this committee know
9 where we are creating any bottlenecks and what we could do
10 to make it easier for you to use commercially ready
11 available -- will you commit to doing that?

12 General Saltzman: If confirmed as CSO, it is a top
13 priority to make sure we get the most out of the commercial
14 private sector.

15 Senator Scott: Now, I am sure that senators from
16 Colorado and Alabama think they are probably the best state
17 for Space Force.

18 But, I mean, do you really believe that you are doing
19 enough in Florida? Do you think that if you had -- you can
20 wave a magic wand you would just do almost everything in
21 Florida?

22 General Saltzman: There is -- sir, there is no
23 question that Florida has an important --

24 Senator Scott: Easy answer.

25 [Laughter.]

1 General Saltzman: -- rich history of space support.
2 The Space Coast is vital to our success as a service. Now
3 even the Guard capability, the space electronic warfare
4 capability they have, vital. Florida remains an important
5 aspect of the Space Force capabilities.

6 Senator Scott: Can I ask you a question? I will ask
7 -- just be real quick.

8 How is the Space Force working with not just Florida?
9 I know we have a -- our National Guard has an interest in
10 the Space Force and we are doing a lot of stuff. Is that
11 working? Are you picking National Guards around the country
12 that -- I would like you to do everything in Florida but I
13 do not think that is necessarily realistic.

14 But are you doing that now?

15 General Saltzman: We work with the Guard very closely
16 on which mission sets, what we need. If confirmed, my
17 responsibility would be to define those operational
18 requirements.

19 I work very close with the Guard Bureau, with the Air
20 National Guard, to see if there are capabilities that make
21 sense to go to the Guard, especially where it is maybe surge
22 capability or something we do not need on a day-to-day
23 basis. We work very closely in collaboration with them to
24 get that right.

25 Senator Scott: Thanks.

1 General Saltzman: Yes, sir.

2 Chairman Reed: Thank you, Senator Scott.

3 Senator Hawley, please?

4 Senator Hawley: There we go. Thank you, Mr. Chairman.

5 General, thanks for being here.

6 That is enough talk about Florida. Let us talk about
7 Missouri.

8 [Laughter.]

9 Senator Hawley: Did I hear you say an answer or two
10 ago that your children were graduates of the University of
11 Missouri?

12 General Saltzman: Can I get an M-I-Z back there? I do
13 not know.

14 [Laughter.]

15 Senator Hawley: All right. Awesome. There you go. I
16 am feeling a lot better now, Mr. Chairman.

17 Let me ask you about the pacing threat. You mentioned
18 just a second ago the pacing threat -- the pacing scenario.
19 So the Secretary of Defense has designated China as the
20 department's pacing threat, PACOM as the pacing theater --
21 the priority theater -- and then the Taiwan contingency as
22 the pacing contingency.

23 Let me just ask you, first off, do you agree with those
24 designations?

25 General Saltzman: I do not see anybody more dangerous,

1 more committed to attacking U.S. interests in those areas
2 than the President has defined.

3 Senator Hawley: Very good.

4 And do you agree that the threat of a potential Chinese
5 invasion of Taiwan is something that we need to be concerned
6 about this decade in the 2020s, not just 2030 and beyond?

7 General Saltzman: I think the observables show that
8 there is a clear indication that they are moving in that
9 direction very rapidly.

10 Senator Hawley: So let me ask you this then.

11 Would you commit to making it your top priority to
12 ensure that the Space Force is ready to help deter China
13 from aggression in PACOM, generally, and then specifically
14 with regard to the pacing scenario in Taiwan?

15 Would Space Force be ready? Would you help them get
16 ready to make sure we are able to deter a Chinese invasion
17 of Taiwan?

18 General Saltzman: If confirmed as the Chief of Space
19 Operations, there will be no higher priority than maintain
20 the readiness of our force to meet all of those
21 contingencies, the Chinese threat first amongst them.

22 Senator Hawley: Very good. Thank you for that.

23 Let me ask you a bit more specifically, what kind of
24 space capabilities do you think would need to be prioritized
25 in order to deter a potential Chinese invasion of Taiwan? I

1 mean, walk us through your thinking there.

2 General Saltzman: I look at this, sir, from a two-
3 pronged approach.

4 We have to be able to protect the capabilities that are
5 enabling our Joint Force today whether it is navigation and
6 timing, whether it is satellite communications, the missile
7 warning architectures that provide indications and warning
8 of attack.

9 The structure of our Joint Force is built presuming we
10 have access to those space capabilities. We must preserve
11 them. That requires a shift to a more resilient, defensible
12 architecture to provide that level of mission resiliency
13 that we need.

14 But it is also important to realize that the Joint
15 Force is under a threat umbrella by space-enabled
16 capabilities of our adversaries and they will not be able to
17 meet their military objectives if we allow the Chinese in
18 particular to use the space-enabled targeting capabilities
19 that they have at their disposal.

20 So in order to be a deterrent, to prevent this from
21 going into a war that extends into space, we will have to be
22 resilient and we will have to have the offense and defensive
23 capability necessary to create a credible deterrent force.

24 Senator Hawley: You mentioned resiliency several times
25 now. So let me just ask you, do you think that we are

1 currently resilient enough in space and, in particular,
2 resilient enough to absorb losses from China or Russia in a
3 conflict with either?

4 General Saltzman: I think the best way to state that
5 is the current attacks that we are seeing are not sufficient
6 to take out our capabilities. We are resilient today.

7 As soon as we go into a crisis contingency, I do not
8 believe we have designed our systems to operate in that
9 level of contested environment and so we need to change to a
10 more defensible architecture to account for the fact that
11 space has shifted from a benign environment to a more
12 contested warfighting domain.

13 Senator Hawley: What does a more defensible
14 architecture look like?

15 General Saltzman: I think we can look at some of the
16 observations we are seeing in Ukraine, that a distributed
17 architecture where there are more satellites with
18 proliferated missions that is harder to attack. Big single
19 satellites are much easier to attack than a distributed
20 proliferated constellation of capabilities. It becomes a
21 tougher targeting problem.

22 Senator Hawley: Let me ask you this.

23 In your personal opinion, does the United States have
24 the anti-satellite weapons that we need, whether that is to
25 deter China or Russia or, if necessary, to defeat them

1 should deterrence fail?

2 General Saltzman: I think the best way to answer that
3 is for the current conditions I think we have suitable
4 capabilities. But I think the security situation is
5 changing dynamically and I would really appreciate the
6 opportunity to talk with you in a classified environment on
7 the specific details.

8 Senator Hawley: Let me ask you, just more broadly, if
9 you are confirmed what steps would you take to ensure that
10 we are doing everything that we have got to do in order to
11 improve our counter space capabilities?

12 General Saltzman: If confirmed as CSO, I will lean on
13 the Force Design architecture role that Congress has given
14 to the Chief of Space Operations. We are doing Force Design
15 analysis.

16 This is rigorous data analytics that show what one
17 constellation against a modeled threat would do and we run
18 thousands of permutations to really see what the optimal
19 configuration is.

20 I am committed to continue doing that so that we can,
21 one, buy the systems we need and not be overly redundant or
22 have too little resilience in the face of the adversary.

23 Senator Hawley: Very good. General, thanks for being
24 here.

25 General Saltzman: Thank you.

1 Senator Hawley: Thank you, Mr. Chairman.

2 Chairman Reed: Thank you, Senator Hawley.

3 General, thank you for your testimony.

4 Senator Sullivan, I have been told, is trying to get
5 here but -- and that will give me an opportunity to ask one
6 more question, and if he is not here by the end of my
7 question then I will call the hearing to a close.

8 But this question has been sort of alluded to and, in
9 some cases, directly posed to you throughout the hearing.
10 What are the critical hardware and software gaps you see on
11 the ground to effectively -- or in the air to effectively
12 inhibit your mission?

13 General Saltzman: Yes, sir.

14 That analysis is ongoing. But there is some initial
15 thoughts in terms of how do we build an architecture on the
16 ground that is resilient to attacks from Russia, from China,
17 from other malicious cyber actors, and we have not had the
18 need to build quite the level of resiliency or redundancy on
19 the ground in the past as we see necessary today.

20 And so when I look at the software, the monitoring of
21 those networks, I think there are still some gaps that we
22 need to fill. When I think about space domain awareness and
23 the number of sensors worldwide that we are going to need in
24 order to effectively evaluate and determine what is on orbit
25 and where it is and what it is doing and then have the tools

1 -- the software tools -- on the ground to take all that data
2 in and turn that data into information and decision-quality
3 information, those are some near-term issues that I think we
4 are going to have to address from a software and a hardware
5 standpoint.

6 Chairman Reed: Well, thank you very much, General.
7 Thank you for your service. Thank you for your very
8 compelling testimony today.

9 We look forward to your confirmation in the next -- as
10 soon as possible. And thank your family again for the
11 support they have given and the service they have also
12 given.

13 With that, and an indication that Senator Sullivan will
14 not be joining us, I will adjourn the hearing. Thank you.

15 [Whereupon, at 11:07 a.m., the hearing was adjourned.]

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