

START TREATY RENEWAL AND AMERICA'S STRATEGIC POSTURE

(summarizing through excerpts the *Final Report of the Congressional Commission on the Strategic Posture of the United States*)

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INTRODUCTION

The U.S.-Russian Strategic Arms Reduction Treaty of 1991 (START) is set to expire in December 2009 and the Obama administration intends to negotiate a START renewal treaty before then. The administration wants to keep alive START's verification regime, achieve agreement with Russia on further nuclear arms reductions, and move further down the road toward President Barack Obama's declared goal of zero nuclear weapons in the world.

The U.S. Senate will be asked to approve ratification of the START renewal treaty. The purpose of this Hudson Institute paper is to help Senators and others understand the background of the START renewal negotiations and the criteria for judging the relevant U.S. national interests.

The bulk of this paper is a summary of the excellent work done by the bipartisan Congressional Commission on the Strategic Posture of the United States. The Commission's chairman was William J. Perry and vice-chairman was James R. Schlesinger, both former secretaries of defense. The other ten members are also eminent and politically diverse. They include former members of Congress, former executive branch officials, scientists, and technicians. In May 2009, the Commission published a Final Report entitled *America's Strategic Posture*, which is nearly 160 pages long and is available at http://www.usip.org/files/file/strat_posture_report_adv_copy.pdf. The Final Report is a consensus product endorsed unanimously by the bipartisan membership of the Commission, except for the section on the Comprehensive Test Ban Treaty.

This Hudson Institute paper summarizes the Commission's Final Report comprehensively in thirteen pages of excerpts of key points, formatted for easy review in bullet form with bolded topic headings (Section III, pp 6-18). All of the excerpts in this paper are from the consensus language of the Final Report.

Through this summary, we hope to make the Commission's work more readily accessible to Senators and others interested in the START renewal negotiations and in the integrity of the U.S. strategic posture.

I. OVERVIEW

Administration Aims for START Extension

The Obama administration aims to negotiate a strategic arms control treaty with Russia before START — the Strategic Arms Reduction Treaty of 1991 — expires in December 2009.

U.S. Goals and Considerations

This briefing paper sets out key U.S. strategic arms goals and considerations. These can guide Senators and other interested officials and analysts in evaluating any new U.S.-Russian treaty on strategic arms.

Main criteria for judging U.S. national interest in strategic arms negotiations:

- **Deterrence** – Preserve U.S. nuclear deterrent.
- **Extended deterrence** – Preserve U.S. nuclear “umbrella” — that is, ability to provide extended deterrence to U.S. allies and partners so they do not feel compelled to build their own nuclear arsenals.
- **Modernization** – Preserve the U.S. right to modernize its arsenal to keep its nuclear weapons safe, reliable, and under authorized control.
- **Missile defense** – Preserve the U.S. right to build and deploy defenses of whatever type may be necessary against missiles of all ranges.
- **Conventional strategic strike** – Preserve U.S. freedom to add capability to strike targets quickly over very long distances with non-nuclear weapons.
- **Asymmetries** – In pursuing the foregoing goals, any new treaty should take proper account of differences between the United States and Russia, especially regarding:
 - Tactical nuclear weapons.
 - The bipartisan Congressional Commission on the Strategic Posture of the United States notes that “the imbalance favoring Russia [in the number of non-strategic nuclear weapons] is worrisome, including for allies...”
 - According to senior Russian experts, Russia has 3,800 operational tactical nuclear warheads with a large additional number in reserve. According to Tom D’Agostino, administrator of the U.S. National Nuclear Security Administration, Russia has ten times the number of tactical nuclear warheads deployed by the United States.

- Infrastructure for production of nuclear weapons.
 - The Strategic Posture Commission notes that the U.S. has not adopted the approach of Russia and China to modernization of its nuclear arsenal, but has instead adopted a policy of not producing fissile materials, not conducting nuclear explosive tests, and not seeking new weapons with new military characteristics.

Bipartisan Congressional Commission

The Congressional Commission on the Strategic Posture of the United States, which produced the May 2009 Final Report excerpted in Section III below, comprised the following:

- **Chairman and Vice-Chairman** – The Commission was led by former secretaries of defense:
 - William J. Perry, Chairman
 - James R. Schlesinger, Vice-Chairman
- **Members** – The other members were:

▪ Harry Cartland	▪ Fred Iklé
▪ John Foster	▪ Keith Payne
▪ John Glenn	▪ Bruce Tarter
▪ Morton Halperin	▪ Ellen Williams
▪ Lee Hamilton	▪ James Woolsey

II. BACKGROUND

START's Key Provisions

- **Limitations on each side's arsenal**
 - 6,000 accountable nuclear warheads.
 - 4,900 ballistic missile warheads.
 - 1600 strategic nuclear delivery vehicles (ICBMs, SLBMs and heavy bombers).
 - 1,540 heavy ICBM warheads for the Soviets, zero for the United States.

- A variety of numerical limitations on mobile ICBMs.
 - The United States and Russia both are now, in 2009, far below the key START limitations, which have ceased to have any constraining effect.
 - Strategic vs. non-strategic limits
 - In general, START does not limit non-strategic (or, tactical) nuclear weapons.
 - START refers to “strategic” systems, defined by range (ICBMs with a range above 5500 kms; submarine-launched ballistic missiles with a range above 600 kms; and bombers whose range exceeds 8000 kms or which are equipped for air-launched cruise missiles with a range above 600 kms.) Systems of lesser range are considered tactical.
- **Counting rules**
- START has complex “counting rules” that attribute a number of warheads to each delivery vehicle (in some cases, the attributed number can be higher than the number of warheads actually deployed).
 - Under some circumstances, the counting rules require that conventionally-armed systems be counted as strategic nuclear delivery vehicles or warheads.
 - The counting rules tend to over-count ballistic missile warheads and discount bomber weapons.
 - Examples of the artificialities of the START counting rules:
 - U.S. bombers are counted even when they are mothballed.
 - Some U.S. submarines are counted as nuclear-weapons platforms even though they have been converted to strictly non-nuclear-weapons capability.

- All submarine-launched ballistic missiles are counted as having eight warheads even though many have fewer warheads.
- All in all, under START counting rules, the United States is deemed to have over 6,000 nuclear weapons when in fact the U.S. has fewer than 2,200 (2,200 being the upper limit set in the Strategic Offensive Reductions Treaty).
- All in all, START counting rules exaggerate the number of U.S. operationally deployed strategic nuclear warheads by a factor of three and Russian warheads by a factor of almost two.
- **Verification**
 - START has an extensive verification regime comprising on-site inspections, methods for providing telemetry, and transparency measures.
 - According to a 2005 State Department report, Russia is violating verification provisions on the counting of ballistic missile warheads, the monitoring of mobile ballistic missiles, and telemetry.

The Strategic Offensive Reduction Treaty

In 2002, the Strategic Offensive Reduction Treaty (SORT) incorporated unilateral statements by Presidents Bush and Putin and made them into a mutual treaty obligation for each side to reduce the number of its deployed nuclear warheads to within the range of 1700-2200.¹

¹ The key provision of SORT, Article 1 (in its entirety):

“Each Party shall reduce and limit strategic nuclear warheads, as stated by the President of the United States of America on November 13, 2001 and as stated by the President of the Russian Federation on November 13, 2001 and December 13, 2001 respectively, so that by December 31, 2012 the aggregate number of such warheads does not exceed 1700-2200 for each Party. Each Party shall determine for itself the composition and structure of its strategic offensive arms, based on the established aggregate limit for the number of such warheads.”

- SORT contained no “counting rules;” each side was free to determine how it would implement its commitment to reduce to the 1,700–2,200 level.
- Russia, which can readily produce new warheads, said it would reduce its arsenal by destroying warheads. In contrast, lacking warhead-production capability, the U.S. said it would make reductions by rendering warheads unusable in the short term (that is, not operationally deployed).
- By late 2008, the U.S. reduced below the SORT 2,200 limit. The U.S. has no official plans at present to reduce further.
- SORT contained no verification procedures; however, the START verification provisions remained in effect.

Administration’s key purposes – The Obama administration’s key purposes in negotiating a START follow-on treaty are:

1. To preserve the inspection and verification arrangements of START.
2. To win agreement on strategic arms reductions below the levels set in SORT.
3. To take steps toward President Obama’s declared goal of zero nuclear weapons in the world.

III. GOALS AND CONSIDERATIONS – FROM STRATEGIC POSTURE COMMISSION FINAL REPORT

NOTE: All language in this section III is quoted from the Strategic Posture Commission’s Final Report, except for the words that appear in brackets or in italics. Sometimes points are reformatted to bullet form. The numbers in brackets are page citations to the Final Report.

a. The Security Environment

- i. ***Proliferation tipping point.*** This is a moment ... of urgency [resulting] from the danger that we may be close to a tipping point in nuclear proliferation and, domestically, from an accumulation of delayed decisions about the nuclear weapon program. [xv]
- ii. ***Size of nuclear arsenals.*** At the height of the Cold War, the U.S. nuclear arsenal numbered over 32,000 weapons and the Soviet arsenal over 45,000; today, the United States has reduced its arsenal of operationally deployed strategic nuclear warheads to approximately 2,000 and Russia is not far behind. [xvi]

- iii. ***Russian tactical nuclear advantage.*** The imbalance in non-strategic nuclear weapons, which greatly favors Russia, is of rising concern and an illustration of the new challenges of strategic stability as reductions in strategic weapons proceed.
- The Commission's basic assessment is that the sizing of U.S. forces remains overwhelmingly driven by Russia. [24]
- iv. ***Uncertainty about Russia.*** [The US has] faced a continuing challenge [in the post-Cold-War period] of moving away from nuclear deterrence as the foundation of its relationship with Russia
- This effort has been complicated by continued uncertainty about whether Russia can or will become a stronger partner of the West in addressing common international security problems.
 - It is further complicated by a difference of views about whether formal arms control measures help accomplish the political objective of deeper partnership or are so cumbersome and adversarial in character as to prove counterproductive. [6]
- v. ***Three major new challenges since end of Cold War.***
- ***Proliferation.*** [P]roliferation has ... continued, as demonstrated by Iraq's nuclear weapons program and by nuclear tests by India and Pakistan in 1998 and North Korea in 2006. Today, Iran stands at the brink of nuclear weapons capability. [7]
 - ***Nuclear terrorism.*** The second important new challenge is nuclear terrorism.
 - [T]errorist use of a nuclear weapon against the United States or its friends and allies is more likely than deliberate use by a state.
 - Osama bin Laden clearly stated that he considered it a "holy duty" to acquire nuclear weapons. [7-8]
 - ***Unpredictability.*** The third important new challenge is the unpredictable nature of the security environment. [8]

- vi. ***Allies' worries about US deterrent.*** [Concerns of allies vulnerable to Russian military coercion, concerns about rising nuclear threats from the Middle East and concerns about growing Chinese power make it challenging for the US to keep its deterrent reliable in the eyes of its allies.] [10-11]
- vii. ***Risk of cascade of proliferation.*** If we are unsuccessful in dealing with current challenges [of proliferation and of ensuring a credible extended deterrent for our allies], we may find ourselves at a tipping point, where many additional states conclude that they require nuclear deterrents of their own. If this tipping point is itself mishandled, we may well find ourselves faced with a cascade of proliferation. [9-10]
- viii. ***Russian nuclear coercion.*** The risk of direct military confrontation between the United States and Russia is much lower than during the Cold War. But the risk of nuclear coercion is another matter.
- After all, Russia has used nuclear threats to attempt to coerce some of its neighbors, including U.S. allies, and this is a problem for which U.S. nuclear strategy and capabilities remain relevant.
 - It is also conceivable that these assessments might change for the worse at some future time, and the United States needs to hedge against that possibility. [12]
- ix. ***Other powers' deterrents.*** Russia, China, Britain, and France have comprehensive plans to ensure that their deterrents are viable for the challenges ahead as they perceive them. [14]
- x. ***Intelligence shortcomings.*** The United States does not know definitively the numbers of nuclear weapons in the Russian arsenal, especially of nonstrategic weapons. Knowledge of possible production rates is also incomplete. There is also less than complete understanding of the activities underway at nuclear test sites in Russia, China, and elsewhere. [14]
- xi. ***De-alerting.*** Some in the arms control community have pressed enthusiastically for new types of agreements that take U.S. and Russian forces off of so-called "hair trigger" alert.
- This is simply an erroneous characterization of the issue.
 - The alert postures of both countries are in fact highly stable.

- They are subject to multiple layers of control, ensuring clear civilian and indeed presidential decision-making.
- The proper focus really should be on increasing the decision time and information available to the U.S. president—and also to the Russian president—before he might authorize a retaliatory strike.
- The best approach to this problem has been and remains to improve Russian warning systems; the moribund effort to establish a joint U.S.-Russia warning center attempted to help fill this need and should be revived as part of a broader coordinated missile defense effort with Russia.
- Toward this end, steps should also be taken to revive the crisis hot line. [69]

b. Continuing Role of Nuclear Weapons in US Security

i. *Objectives of US nuclear posture.* The principal functions of the U.S. nuclear posture are:

- to create the conditions in which nuclear weapons are never used,
- to assure allies of the U.S. commitment to their security, and
- to discourage unwelcome competition while encouraging strategic cooperation. [xvi]
- [T]he U.S. nuclear posture must be designed to address a very broad set of U.S. objectives, including not just deterrence of enemies in time of crisis and war but also assurance of our allies and dissuasion of potential adversaries. Indeed, the assurance function of the force is as important as ever. [xvii]

ii. *Longstanding US nuclear guidelines.* Many of the concepts and criteria guiding the development and operation of the U.S. nuclear force can be traced back through the nuclear era. A short list of these includes the following:

- Nuclear weapons are special weapons and not just more powerful versions of high-explosive munitions.
- Nuclear weapons are for deterrence and would be used only as a last resort.

- U.S. nuclear forces must not be inferior to those of another power.
 - Nuclear forces support security commitments to key allies.
 - A triad of strategic nuclear forces [that is, land-based, sea-based and air-launched systems] is valuable for its resilience, survivability, and flexibility.
 - The safety, security, and authorized control of nuclear weapons are essential.
 - The tradition of non-use serves U.S. interests and should be reinforced by U.S. policy and capabilities. [20]
- iii. ***Extended deterrence.*** One crucial element [of deterrence] is extended deterrence and the assurance this provides to allies and partners of the United States. [20]
- iv. ***On moving to zero nuclear weapons in the world.*** The conditions that might make the elimination of nuclear weapons possible are not present today and establishing such conditions would require a fundamental transformation of the world political order. [17]
- v. ***Strategic equivalency with Russia.*** As part of its strategy to assure its allies, the United States should not abandon strategic equivalency with Russia. Overall equivalence is important to many U.S. allies in Europe.
- The United States should not cede to Russia a posture of superiority in the name of deemphasizing nuclear weapons in U.S. military strategy.
 - There seems no near-term prospect of such a result in the balance of operationally deployed strategic nuclear weapons.
 - But that balance does not exist in non-strategic nuclear forces, where Russia enjoys a sizeable numerical advantage. [21]
- vi. ***Damage limitation through strike capability.*** One additional design factor requires discussion here: given that deterrence is uncertain and may prove unreliable, the United States must also design its strategic forces with the objective of being able to limit damage from an attacker if a war begins.

- Such damage-limitation capabilities are important because of the possibility of accidental or unauthorized launches by a state or attacks by terrorists.
 - Damage limitation is achieved not only by active defenses, including missile defense, but also by the ability to attack forces that might yet be launched against the United States or its allies. [23]
- vii. **Triad.** The triad of strategic nuclear delivery systems should be maintained for the immediate future and this will require some difficult investment choices. The same is true for delivery systems of non-strategic nuclear weapons. [xvii]
- If one leg of the triad were to go out of service as a result of a technical problem in the delivery system or warhead, the other two legs could still provide credible deterrence. [26]
 - The Commission has reviewed arguments in favor of a dyad but recommends retention of the current triad. Each leg of the triad has its own value:
 - The bomber force is valuable particularly for extending deterrence in time of crisis, as their deployment is visible and signals U.S. commitment.
 - Bombers also impose a significant cost burden on potential adversaries in terms of the need to invest in advanced air defenses.
 - The Intercontinental Ballistic Missile (ICBM) force imposes on a prospective aggressor the need to contemplate attacking only with very large number of nuclear weapons, substantially depleting its forces while ensuring a devastating response by the United States.
 - The force is also immediately responsive in a highly controlled manner.
 - And for the foreseeable future, there is no prospect that a significant portion of the ICBM force can be destroyed by a preemptive strike on the United States by small nuclear powers, including China.

- The Submarine Launched Ballistic Missile (SLBM) force is currently the most survivable, meaning that no attacker could contemplate a nuclear attack on the United States without expecting U.S. retaliation. [25-26]

c. Modernization

- i. **Modernization by other nuclear powers.** For the indefinite future, the United States must maintain a viable nuclear deterrent. The other NPT-recognized nuclear-weapon states have put in place comprehensive programs to modernize their forces to meet new international circumstances. [17]
- ii. **US requirement.** [T]he United States requires a stockpile of nuclear weapons that are safe, secure, and reliable, and whose threatened use in military conflict would be credible. [xvii-xviii]
- iii. **Limits of current programs.** The Stockpile Stewardship Program and the Life Extension Program have been remarkably successful in refurbishing and modernizing the stockpile to [be safe, secure and reliable], but cannot be counted on for the indefinite future. [xviii]
- iv. **Modernization within limits.** As a matter of U.S. policy, the United States does not:
 - produce fissile materials
 - conduct nuclear explosive tests
 - currently seek new weapons with new military characteristics.

Within this framework, it should seek the possible benefits of improved safety, security, and reliability available to it. [xviii]

- Moreover, modernization is essential to the nonproliferation benefits derived from the extended deterrent. [44]
- v. **Reliable Replacement Warhead.** The Congress decided not to support RRW in part because of concerns that an untested design might lead to a future need for nuclear testing and that warhead modernization would undermine U.S. credibility on nonproliferation.
 - The term “RRW” is used in different ways by different people.
 - In some senses, it [RRW] would have been new. It would have incorporated some new design features to enhance safety and

security and to increase performance margins. But it would not have been new insofar as it would not have provided any new military capabilities. [41-42]

- [T]he debate over the proposed Reliable Replacement Warhead revealed a lot of confusion about what was intended, what is needed, and what constitutes “new” [xviii]
- vi. ***Need for transformation.*** [US] physical infrastructure is in serious need of transformation.
- (NNSA) has a reasonable plan but it lacks the needed funding.
 - The intellectual infrastructure is also in trouble. [xviii]
- vii. ***Tomahawk missiles.*** In Asia, extended deterrence relies heavily on the deployment of nuclear cruise missiles on some Los Angeles class attack submarines—the Tomahawk Land Attack Missile/Nuclear (TLAM/N).
- This capability will be retired in 2013 unless steps are taken to maintain it. U.S. allies in Asia are not integrated in the same way into nuclear planning and have not been asked to make commitments to delivery systems.
 - In our work as a Commission it has become clear to us that some U.S. allies in Asia would be very concerned by TLAM/N retirement. [26]
- viii. ***Contrasting approaches to modernization.*** The two basic approaches to refurbishment and modernization are, in fact, not stark alternatives. Rather, they are options along a spectrum.
- That spectrum is defined at its two ends by the pure remanufacturing of existing warheads with existing components at one end and complete redesign and new production of all system components at the other.
 - In between are various options to utilize existing components and design solutions while mixing in new components and solutions as needed.
 - Different warheads may lend themselves to different solutions along this spectrum. [42]

- ix. ***US lack of test readiness harms deterrence.*** The Commission has also received evidence that some allies interpret the apparent lack of test readiness as a symptom of reduced U.S. commitment to extended deterrence. [51]²

d. Missile defense

- i. **Develop and deploy.** The United States should develop and, where appropriate, deploy missile defenses against regional nuclear aggressors, including against limited long-range threats. [xvii]
- ii. **Complex missile threats.** [The U.S.] should also develop effective capabilities to defend against increasingly complex missile threats. [33]
- iii. **Missile defense integral to posture.** Missile defenses are an integral part of the strategic posture of the United States after the Cold War. [31]
- iv. **Cooperation with allies.** The Commission strongly supports continued missile defense cooperation with allies. [31]
- v. **Defending against missiles of various ranges.** The United States has fielded a ballistic missile defense system capable of defending against ... short- to medium-range missiles.
- U.S. missile defense systems in development and deployment, including
 - the Terminal High Altitude Area Defense (THAAD) system,
 - Patriot Advanced Capability (PAC) 3, and

² As Secretary Gates explained in his speech to the Carnegie Endowment on October 28, 2008:

At a certain point, it will become impossible to keep extending the life of our arsenal, especially in light of our testing moratorium. It also makes it harder to reduce existing stockpiles, because eventually we won't have as much confidence in the efficacy of the weapons we do have. Currently, the United States is the only declared nuclear power that is neither modernizing its nuclear arsenal nor has the capability to produce a new nuclear warhead. The United Kingdom and France have programs to maintain their deterrent capabilities. China and Russia have embarked on an ambitious path to design and field new weapons. To be blunt, there is absolutely no way we can maintain a credible deterrent and reduce the number of weapons in our stockpile without either resorting to testing our stockpile or pursuing a modernization program.

- the Aegis Combat System,

have had numerous successful flight tests.

- The United States has also fielded a ground-based system intended to defend against small numbers of long-range missiles.
 - This system has demonstrated some capability against unsophisticated threats and should undergo additional system testing to determine its effectiveness against more complex threats that include technologies intended to help in-coming missiles penetrate the defense (so-called penetration aids). [31-32]

vi. **Limits on missile defense.** For more than a decade the development of U.S. ballistic missile defenses has been guided by the principles of [1] protecting against limited strikes while [2] taking into account the legitimate concerns of Russia and China about strategic stability. These remain sound guiding principles.

- Current U.S. plans for missile defense should not call into question the viability of Russia's nuclear deterrent. [32]

e. **Non-Strategic (i.e., tactical) Nuclear Weapons**

i. **Russia's increasing emphasis.** As part of its effort to compensate for weaknesses in its conventional forces, Russia's military leaders are putting more emphasis on non-strategic nuclear forces (NSNF, particularly weapons intended for tactical use on the battlefield). [12]

- Senior Russian experts have reported that Russia has 3,800 operational tactical nuclear warheads with a large additional number in reserve. [13]

ii. **Principles.** U.S. policy [on non-strategic nuclear forces] should be guided by two principles.

- **Seek Russian reductions.** [T]he United States should seek substantial reductions in the large force of Russian [non-strategic nuclear forces].
- **Consult with allies.** [N]o changes to the U.S. force posture should be made without comprehensive consultations with all U.S. allies (and within NATO as such). [68]

- iii. ***Imbalance worrisome.*** The imbalance of non-strategic nuclear weapons will become more prominent and worrisome as strategic reductions continue and will require new arms control approaches that are also assuring to U.S. allies. [71]

f. US vs. Russian Production Capabilities

- i. ***US reliance on reserve warheads.*** The United States could reduce its reliance on, and thus supply of, reserve warheads if it were to refurbish the nuclear infrastructure. [25]
- ii. ***US infrastructure.*** The infrastructure that supports two thirds of the strategic deterrent triad—the SLBMs and ICBMs—is not being sustained.
 - Industry uniformly and understandably emphasizes that expertise can only be maintained with active programs. [27]
- iii. ***Reserve weapons.*** A geopolitical surprise, meaning, for example, a sudden change in leadership intent in some major country that could pose a threat to the United States, might drive the United States to reload reserve weapons on available delivery systems.
 - A technical surprise, meaning for example a sudden discovery of a technical problem that results in the decertification of an entire class of warheads, might drive the United States to replace one warhead type with another.
 - To hedge against technical surprise, the United States currently retains two warhead types for each major delivery system. [39]
- iv. ***Technical challenges of US stockpile.*** Maintaining a stockpile of nuclear weapons that are safe, secure, and reliable as they age beyond their intended design life is a significant technical challenge.
 - The challenge is magnified in a policy context that requires no nuclear yield from any weapon test.
 - When problems are identified, Significant Finding Investigations (SFI) are initiated.
 - Over the past 50 years, there have been 1,000 such findings.
 - Over 400 of these have required significant corrective action.

- The bulk of these have been in nonnuclear components of nuclear weapons.
 - Over time, the number of SFIs related to problems of warhead aging is expected to increase. [40]
- v. ***Russia and China use different approach to modernization.*** The United States has not adopted the approach of Russia or China to modernization of its arsenal. It has committed to extend the life of existing weapons by selective parts replacement and recertification.
- This Life Extension Program involves remanufacturing with rigid adherence to the original design. [40]
- vi. ***Risks of US remanufacturing process.*** The [US] process of remanufacturing now underway introduces some uncertainty about the expected operational reliability of the weapons.
- Indeed, laboratory directors have testified that uncertainties are increasing. [41]

g. Key Challenges of START Negotiations

- i. ***Tactical nuclear weapons.*** How should non-strategic nuclear weapons be accounted for?
- The imbalance favoring Russia is worrisome, including for allies, and it will become more worrisome as the number of strategic weapons is decreased.
 - Dealing with this imbalance is urgent and, indeed, some commissioners would give priority to this over taking further steps to reduce the number of operationally deployed strategic nuclear weapons. [67]
- ii. ***Conventional strategic weapons.*** How should the non-nuclear strike capabilities be accounted for?
- Under START counting rules, strategic systems are counted as nuclear, whether or not they carry nuclear payloads.
 - This approach could become less viable as nuclear numbers decline. [67]

- iii. ***Theater force balance.*** How will the theater force balances between Russia and China (and others, potentially) be accounted for?
- Russia is already seeking relief from the constraints of the INF treaty [Intermediate-range Nuclear Forces treaty of 1987] on the argument that it is unilaterally constrained from addressing the imbalance created by the build-ups of medium- and intermediate-range missiles in states around its periphery, but any renewed Russian deployment of such systems would alarm U.S. allies and friends in Europe and Asia. [67]
- iv. ***Varying capabilities of major powers.*** How will the different defensive capabilities of the United States, Russia, and China affect strategic balances and stability?
- The United States is pursuing a limited defense against limited missile attack and Russia retains an area missile defense system with nuclear armed interceptors ringing Moscow. [67]
- v. ***Verification re warheads.*** How will it be possible to verify compliance with warhead reductions? [67]
- vi. ***Hedges.*** What types of hedges will different nations consider necessary and how can they be balanced so that no one perceives a potential disadvantage if competition for strategic advantage should be renewed by another actor? [67]
- vii. ***Preserving resilience and survivability.*** The United States could maintain its security while reducing its reliance on nuclear weapons and making further reductions in the size of its stockpile, if this were done while also preserving the resilience and survivability of U.S. forces. [29]

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