



FACT SHEET

2010 Nuclear Security Summit & “Next Generation Nuclear Security” Parallel Summit

For years there has been near universal agreement among experts that nuclear terrorism is the greatest threat facing the U.S. and the world, yet efforts to secure vulnerable nuclear materials have not been commensurate with the threat. The Nuclear Security Summit is first step in overcoming the inertia that has inhibited dealing with this grave threat and ensuring that our actions match the threat. “Next Generation Nuclear Security: Meeting the Global Challenge,” a parallel summit of experts and non-governmental agencies from participating countries, will be key to fostering the transparency and accountability necessary if efforts to secure nuclear materials are to succeed.

Background

A bold piece of President Obama’s nuclear agenda is an initiative to secure all vulnerable nuclear material worldwide within four years. There is enough weapons-usable nuclear material spread across the globe to build more than 120,000 nuclear bombs. In some countries and regions, significant stockpiles are not adequately protected, and securing them is essential to prevent terrorists from acquiring or building nuclear weapons.

As proposed by President Obama in July 2009, more than 40 heads of state will convene for a global Nuclear Security Summit in Washington, DC, on April 12-13, 2010. Among the nations slated to attend are China, India, Pakistan, Israel, and Russia. The event will bring together world leaders to focus efforts on securing nuclear materials and keeping nuclear technology and know-how out of the hands of non-state actors seeking weapons of mass destruction.

The central purpose of the Nuclear Security Summit is to develop a plan of action to secure vulnerable nuclear materials, prevent nuclear material smuggling, and deter, detect and disrupt attempts at nuclear terrorism. The summit seeks to expand the current nuclear security landscape, encouraging more nations with the capacity to help other nations with nuclear materials security to do so. The summit will also strengthen existing international initiatives that curb the spread of nuclear materials like the Global Initiative to Combat Nuclear Terrorism, the G8 Global Partnership Against Weapons and Materials of Mass Destruction, and the Proliferation Security Initiative.

The two-day conference will conclude with an official statement that hopefully includes agreement to action and a pledge of dedication from all participating nations to strengthen global nuclear security. A successful summit will pave the way for longer-term goals such as the creation of a Fissile Material Cutoff Treaty, which would limit future production of the materials used to build nuclear weapons.

Basic Facts about Nuclear Security and Nuclear Terrorism

- There are two types of nuclear material that can be used in a nuclear weapon or device – highly enriched uranium (HEU) and plutonium, known as fissile materials. There is another category of material, radiological sources, that can be used in a dirty bomb but that will not create a nuclear explosion.
- The Nuclear Security Summit is going to primarily focus on the issue of nuclear security, and not radiological security and terrorism.
- On a global basis, there are roughly 1600 metric tons of HEU and 500 metric tons of plutonium stockpiled and in weapons. The majority of these materials is in weapons or intended to be used in weapons, but some is also used in civil applications.
- The largest stockpiles of these materials are in Russia and the second largest are in the U.S. The U.K., France, and China also have significant stockpiles of HEU, and the U.K., France, and Japan all have significant stockpiles of plutonium both for civil and military (excluding Japan) purposes.
- The most dangerous of the two nuclear weapons materials from a perspective of potential nuclear terrorism is HEU. The reason is that it only takes about 25 kilograms to make a nuclear weapon, which is essentially the size of a softball. And, if the material can be machined into the correct shape, it can potentially be detonated with devastating results.
- The security of potential nuclear explosive materials, are the responsibility of the nations that possesses them. The basic methods are physical protection (usually guards, guns, and gates), technological security, and accounting methods.
- The challenge is to make sure that nuclear materials, wherever they may reside, are subjected to the highest levels of protection, are eliminated if unneeded, or removed to safe storage.
- All countries could benefit from improving their nuclear security, but there are some stockpiles of nuclear material that are less secure than others. For example, the U.S. has been working with Russia and the former Soviet states since 1994 to improve the security of their nuclear materials. According to the NNSA, this job is about 92% completed.
- But outside of Russia and the former Soviet states, there are numerous other stockpiles, of HEU in particular, that are used in civil applications like research reactors and may not receive the same level of protection that the materials in military facilities receive.
- Among non-nuclear weapons states that are developing or transition countries, those that still have large stocks of HEU are Belarus, Kazakhstan, South Africa, and Ukraine.
- There are nearly 40 countries (this number changes continuously) with HEU or plutonium stocks. Of those, 11 have stocks that are relatively minimal.
- Ensuring the highest level of security for nuclear materials stockpiles in every country (or eliminating or removing the material) is one key objective of the Nuclear Security Summit. Another is to get agreement from the participating nations that nuclear terrorism is a real threat to every nation. A third is to get as many nations as possible to sign up or renew their commitments to the existing conventions and mechanisms that promote global nuclear security and prevent nuclear terrorism.
- Additional nuclear facts:
 - There are now some 436 commercial nuclear power reactors operating in 30 countries with 372,000 megawatts electrical (MWe) of total capacity.
 - They provide about 15% of the world's electricity as continuous, reliable base-load power and their efficiency is increasing.
 - 56 countries operate a total of about 250 research reactors and a further 220 nuclear reactors power ships and submarines.