

**Center for Non-Proliferation Studies
Critical Issues Forum**

**Nuclear Renaissance:
Benefits versus Risks**

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Any country is entitled to pursue the development of nuclear energy under current international agreements.

Nowadays nearly 40 countries own nuclear power plants and infrastructure, which can be used to make nuclear weapon. In 71 countries there are nearly 900 laboratories and plants, using radioactive materials, which can be used for military purposes. 43 countries (including 28 developing countries) own highly-enriched uranium and 12 countries own plutonium. And only 250 international experts control these objects.

Non-Proliferation Treaty is the fundamental international treaty, which controls usage of nuclear power. It was open for signing in 1968 and divided all countries into 2 groups: those, who own nuclear weapons and non-nuclear countries.

Those days only USA (from 1945), USSR (from 1949), Great Britain (from 1952), France (from 1960) and China (from 1964) had nuclear weapon. Nowadays these countries are permanent members of Security Council of United Nations Organization. Some of the countries, which have tried to acquire nuclear weapons, motivated their attempts saying, that this treaty legalized supremacy of nuclear weapon states. So, it was said, that having nuclear weapon is just an instrument to keep back ambitions of nuclear weapon states and serious argument in different international negotiations. But nuclear weapon states consider their nuclear arsenals mostly like as an instrument of protection of autonomy and security of nations, not like a real weapon.

This treaty obliged non-nuclear states to refrain from producing and buying nuclear weapon and to recognize that all their nuclear plants should be under International Atomic Energy Agency's control. Nuclear weapon countries obliged, that they wouldn't transfer nuclear weapon and other kinds of nuclear explosive devices to any recipient whatsoever, except those deals, which would pass under control of IAEA. Firstly, this treaty had period of validity for 25 years, but in 1995 it was decided to make the treaty termless. By July, 1 2000 it had been signed by 187 countries. Israel, India and Pakistan and Cuba haven't signed this treaty. Cuba has signed international treaty, which declared South and Central America and Caribbean Sea basin nuclear weapon-free zone. Pakistan and India officially declared that they had nuclear weapon in 1998. Israel doesn't admit and doesn't deny owning nuclear weapon. As for countries, which have signed this treaty, there is ability

for giving up Non-Proliferation treaty. Every country could drop out of this treaty under some extraordinary circumstances, which would threaten country supreme interests. North Korea has twice given up Non-Proliferation Treaty.

But despite this treaty, international society has been rejecting some states' efforts to acquire nuclear weapon for several last decades. In some cases it was done, and it was done without usage of military forces. As a result, Argentine, South African Republic, Brazil, Egypt and Libya haven't become nuclear weapon states. But now new problem has appeared. Iran is developing nuclear power engineering. There are no proofs of a fact that Iran is trying to produce a nuclear bomb. Iran claims, that uranium enrichment was started just to provide nuclear reactors (constructing of them was already started) with necessary fuel. But many people think that Security Council of United Nations Organization should make a resolution, which will urge Iran to give up its nuclear program. Why?

All these problems are the consequences of duality of nuclear technology: sometimes military plants can't be distinguished from the civil ones. Technology and knowledge can be used both in military and civil purposes. Every country, even regularly checked by the IAEA and the European Atomic Energy Agency, owning civil nuclear technologies can create nuclear weapon. The secret made of using little amounts of nuclear fuel to military purposes can pass unnoticed by inspecting IAEA's commission. There also can be cases of theft of sensitive information and technologies. Even without special secret military programs, civil usage of nuclear power has a lot of possibilities for military developments.

- The enrichment and fuel fabrication plants can be used for fabrication of highly-enriched uranium, which are used for making nuclear bombs, like the one, that was dropped on Hiroshima.
- The experimental and civil reactors can be used for producing plutonium which is used for making nuclear bombs, like the one, that was dropped on Nagasaki.
- The reprocessing plants can be used for producing Pu_{239}^{94} , which can also be a material for making weapons.
- Fuel storages can be used as a storage for nuclear weapon materials.

- Nuclear facilities, which are used for civil aims, can be also used for making military developments.

So that, every country, which develops nuclear power engineering someday may become able to make nuclear weapon.

And faster development of nuclear technologies leads to the increasing of the ability of military use. Nowadays, nearly 30 countries own technologies for making nuclear weapons. If the number of such countries increases (to 50-60) it will lead to the lack of control from the IAEA.

So, if we allow any country to develop nuclear power engineering, international security will be endangered. Such decision requires widening of IAEA's powers, extended developing of international cooperation and, surely, complete transparency of nuclear programs. But what does State's complete transparency of nuclear programs mean for it?

First of all, security of the state becomes endangered, because such data as amount and quality of equipment, battle readiness, and economical issues become clear. Also secrecy of scientific researches becomes impossible. So that, country becomes vulnerable to attack. In other words, if we are trying to strength world security, we will weaken security of single country. Moreover, threat of nuclear terrorism becomes more serious. Terror acts usually aim the achievement of dramatic effects, which can be simply achieved by using of nuclear materials. So if terrorists occupy nuclear plant or declare of owning nuclear weapon, there can not be serious damage, but psychological effect will be awful. According to that, the efforts (or declaring about of these efforts) of terror groups to get nuclear materials or damage nuclear plants will increase. We can't accept the possibility of painstakingly prepared terror acts, aimed usurpation of nuclear power stations.

Also, probability of accident increases with the number of nuclear power plants.

To sum it up, today this problem seems to be difficult to solve. To do this step, we should widen international economical and scientific cooperation. But international development of nuclear power engineering is not only aggregate of developments in every country. It is possible to buy electric energy, which is produced on nuclear plants, like it does Denmark. It is possible to provide third world countries with uranium fuel and equipment. So, such decision can be never made.

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