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SAFETY OF PEACEFUL ATOM

Nuclear energy is the most powerful source of energy. The peaceful atom is very cheap and can give a lot of power compared to other sources of energy. Despite their safety, some people think that nuclear power plants are very dangerous and always mention catastrophic incidents like Chernobyl and Fukushima. However, even if take them into account, nuclear energy is the safest source of energy.

Nowadays the most popular sources of energy are thermal power plants burns coal, oil or gas, but they are extremely dangerous compared to other sources. When

the human and environmental costs are added up, the coal is the biggest killer of energy source by far.

Our choice around energy can have significant consequences. In general, coal as an energy source causes around 100 000 deaths per 1000 TW·h. Oil is very dangerous too but it causes three times less deaths. Gas is safer and it causes significantly less damage: around 4000 deaths per 1000 TW·h. Hydro power plants are normally very safe but sometimes can be harmful to people. They can cause up to 1500 deaths per 1000 TW·h. Today, renewable sources have some advantages. Solar and wind are very safe but there are some deaths too: 450 deaths from solar panel (rooftop solar only) and 150 from windmills. And nuclear energy is safest: there are only 90 deaths per 1000 TW·h.

Gamma rays never penetrate nuclear power plants, unless depleted radioactive fuel is replaced or used incorrectly. If utilize them properly they almost don't leave harmful garbage. Even if it isn't possible to utilize them without any leftovers yet, this is less harmful compared to harmful effects from thermal power plants, such as air, water and soil pollution that causes climate change because of global warming. Moreover, coal and oil provides 30 % of total world's energy each, 21 % comes from coal, and only 5 % from the peaceful atom, 3 % from water and only 1 % from sun and wind.

In our opinion, people should rethink their attitude to energy sources and, in particular, to nuclear. Unfortunately, humanity takes into account large and loud events like Chernobyl, rather than slow, consecutive deaths that occur over time from other energy sources. In this regard, nuclear power plants and renewable energy sources are more preferred. The development of modern technologies will significantly improve the safety of nuclear power plants and increase their contribution to the production of electricity.