

IMUN Historical Security Council

Officer Report 2021

Research Report on the question of the use and development of nuclear technology/power

Introduction:

The Second World War ended with the first military use of nuclear technology with the bombing of Hiroshima and Nagasaki. This marked the beginning of the Atomic Era of human history (US Department of Energy). Nuclear energy was seen as a possible clean energy source and the future of power. There has been no active military use of nuclear energy since this point, but the investigation and development of nuclear energy and its infinite possibilities have been the focus of scientists' attention for decades.

Background information:

The study of atomic fission, atomic change, and radiation started in 1895 but blossomed in the six years up to the 1945 bombings. (World Nuclear Association) The atomic bomb was this driving factor, many nations from around the world chased the doomsday weapon. From the discovery of nuclear fission, scientists have explored its many possibilities.

The first people to calculate the potential of nuclear fission were Lise Meitner and Otto Frisch. They calculated that with the splitting of the nucleus into two parts, 200 million electric volts would be released. This was subsequently proven by Frisch in an experiment. This was the first experimental confirmation of nuclear fission and its possibilities. This cascaded into years of research, the discovery that in fission, not only is energy released but further particles to cause further fission. This is what developed into the idea that chain reactions of energy could be created.

This idea grew in the scientific community and around the world with the outbreak of WW2. The MAUD conference was held to discuss “Use of Uranium for a Bomb” and “Use of Uranium as a source of power.” Two reports were developed from this conference, the first went about actively declaring that the uranium bomb would be possible with the right investment and labour power. The second report concluded that uranium could be particularly useful in the creation of a power source in something it named a “uranium boiler” in which, during peacetime, the mass usage of this technology could be possible, and even the possible implementation of plutonium as a source instead of uranium. These reports shook the world, and many nations began redirecting their scientific efforts to trying to create the bomb and the boiler.

With the end of the second world war, research began to shift toward the more peaceful application with nuclear reactors and peaceful usage. However, this did not halt the development of more advanced nuclear weapons and more advanced nuclear usage. The first reactor was created by the United States of America in December of 1951 and in 1953 President Eisenhower proposed his “Atoms for Peace” which doubled down on the research and development for the future of nuclear power. Likewise, the Soviet Union made progress behind the iron curtain with the first nuclear reactor in a city in Obninsk in 1954. (National Geographic)

However, this did not come without a cost. The proliferation of both nuclear weapons and nuclear energy is an issue in our modern era. Also, considering that the continued development and progression of nuclear weapons is very complex and difficult the future of nuclear energy is uncertain.

Nuclear energy was just very new to everyone at the time. It wasn't known what the future would be. The risks and benefits weren't known. It was the discovery of new technology

that led nations all over the world to develop scientific, political, and social opinions on it and its usage and its prevention.

Focus of the debate:

Delegates should keep the 1946 perspectives in mind. The world of nuclear energy was very new and uncertain. The question of this debate is not just the control of nuclear weapons, but it is a discussion and planning of the future research and development of nuclear energy after WW2. Delegates should also consider the global circumstances, this is a world post-crisis, WW2 has just ended, and millions are dead. Nations do not want another war; they want to look ahead to the bright future. It is paramount that delegates keep this in mind. Moreover, delegates should be aware of the political aspects of the political situation such as the beginnings of the Iron Curtain and the Warsaw vs NATO alliances starting to form as this is very important to debate since it can influence the goals of each nation and what each nation's views on the issue. Delegates should try to always keep themselves in the mindset of 1946: focusing on the uncertainty of this technology and how it should or should not be used.

Research:

Per historical security council procedure, delegates must use sources that were available at the time set. This does not mean that they cannot investigate modern sources for ideas on how your nation might react based on their real-world reaction but information from these should not be used in the debate. Delegates are encouraged to know the basics of nuclear power, especially the known and unknown risks and benefits. Further, delegates should understand where their nation sits on a global scale, financially and politically, as some nations may not be able or willing to support nuclear energy. These could bring another perspective into the debate. Finally, as always, delegates need to keep in mind their nation's perspective and a great way to do this is to look at how they may have reacted to the development of nuclear power.

Some very useful sources for research are the US Department of Energy, especially for a more western view of nuclear energy. The World Nuclear Association is also a very in-depth and professionally researched source of information that delegates can use. Lastly, the International Atomic Agency is a United Nations organization that delegates may reference for some useful information.

Delegates should focus the debate on evaluating the benefits and risks (known and unknown) of nuclear technology while designing clauses which address its uses and development. Delegates are encouraged to keep an open mind and to think from the perspectives of their counterparts in 1946, carefully considering the political environment and the environment at that time while debating.

Works Cited:

"Atomic Energy." *United Nations*, www.un.org/en/global-issues/atomic-energy.

US Department of Energy. www.osti.gov/opennet/manhattan-project-history/Events/1945/1945.htm.

"What is nuclear energy and is it a viable resource?" *National Geographic*, www.nationalgeographic.com/environment/article/nuclear-energy. Accessed 7 Sept. 2021.

World Nuclear Association. world-nuclear.org/information-library/current-and-future-generation/outline-history-of-nuclear-energy.aspx.