

## **Committee: IAEA**

### **Topic: Access to Nuclear Power**

#### **Background of Committee:**

The discovery of uranium in 1789 by German chemist Martin Klaproth helped open the field of nuclear power. Since the discovery of uranium, scientists have struggled with developing safe methods to harness the potential energy of this powerful element. It was not until 1935 that scientists developed the first methods of using nuclear power and, during World War II, nuclear energy was used for war-related purposes. The evolution of nuclear energy has led to thousands of possibilities and numerous potential benefits for development, productivity, and more. The advantages of nuclear energy include lower greenhouse gases emissions, electricity costs, and fuel costs, among others. However, it has also inspired a strong and deep-rooted fear of how nuclear technology could harm the world. It was both the prospect of potential benefits and rising fear of potential disaster that prompted the United Nations (UN) to create the International Atomic Energy Agency (IAEA) and approve its Statute on 23 October 1956. The IAEA was established as an independent international organization, although it is closely related to the UN. The relation between the IAEA and the UN is guided by an agreement signed by both parties: “The Agency undertakes to conduct its activities in accordance with the Purposes and Principles of the United Nations Charter to promote peace and international co-operation, and in conformity with policies of the United Nations furthering the establishment of safeguarded worldwide disarmament and in conformity with any international agreements entered into pursuant to such policies.” The UN and the IAEA work closely together on issues concerning nuclear technology, informing each other of developments and actions concerning nuclear energy. When the IAEA Statute entered into force on 29 July 1957, the agency could not implement any sanctions among countries, and with limited powers, it soon became clear that the political climate of the time was going to limit the agency’s ability to act on a global scale. It was not until after the Cuban Missile Crisis in 1962, which drew international attention to the proliferation of nuclear weapons, that the IAEA truly began to execute its duties as outlined in its Statute. This increase in productivity was furthered by the 1968 passage of the Treaty on the Non-Proliferation of Nuclear Weapons (NPT). Today the IAEA is fully operational and works towards fulfilling all of its goals as outlined in the Statute, working with programs related to nuclear safety, nuclear medical technology, and nuclear science for food security, as well as focusing on preventing nuclear disasters like Chernobyl or Fukushima. The main goal of the IAEA is to help promote “safe, secure and peaceful uses of nuclear science and technology” through means such as inspections as well as to ensure that states are complying with commitments and safety standards. These operational goals are carried out with the support of the 159 member states under three main pillars: promoting safeguards and verification, safety and security, and science and technology. The first

pillar is fulfilled by the IAEA's inspectorate team, which verifies that safeguarded materials are not being used for military purposes. Also, it is responsible for monitoring all nuclear activities in countries that the UN Security Council deems in need of further investigation. The second pillar, safety and security, conveys a responsibility for the IAEA's work to help protect people and the environment from nuclear radiation as well as to provide assistance to countries to prevent nuclear accidents. This is done by assisting with nuclear installations and the transportation and securing of waste. This branch of the IAEA also helps prevent terrorist attacks or attacks by those with malicious intent by helping to update security systems. Finally, the IAEA fulfills the third pillar's goals of promoting science and technology by encouraging technical cooperation between countries in order to safely develop ways to use nuclear technology to combat global problems like poverty and disease. It also helps countries by planning and outlining ways to meet their energy needs. Today, the IAEA is active around the world promoting safe use of nuclear power and technology and helping to ensure the safe storage and containment of all of the world's nuclear resources and waste. It is guided by the "interests and needs of member states" and reports regularly to the UN General Assembly and Security Council when necessary.

### **Goals of the Committee:**

As climate change continues to degrade the environment, the international community is increasingly pressed to find a politically and economically sound solution to increasing global energy dependence. Consequently, nuclear energy has become an attractive option over the past couple of decades. Some studies suggest that the international community could run out of fossil fuels by 2088, making it especially critical for countries to develop an expedient and sustainable solution. Nevertheless, fears associated with nuclear accidents and nuclear proliferation pose as obstacles to increasing the global use of nuclear energy. In this context, the International Atomic Energy Agency (IAEA) has the task of ensuring that nuclear energy is as safe as possible. Specifically, the IAEA acts as an integral link between countries around the world in promoting international nuclear safety. The IAEA's action plan, research publications, and safeguards help countries around the world implement safe practices when using nuclear energy. Moving forward, the IAEA's goal is to continue developing and implementing these safety standards. The committee is tasked with minimizing the potential environmental, health, and political hazards of nuclear energy. While safety standards will be a critical tool in limiting health and environmental problems, members of the IAEA must come together to address the social, cultural, and political barriers to the peaceful use of nuclear energy, including building trust amongst the international community and ensuring global nuclear peace. However, there remain outstanding problems with nuclear safety. With the looming fear of another nuclear accident, some countries have phased out their nuclear energy programs, having decommissioned their

nuclear facilities and no longer using nuclear energy. This is especially concerning for the international community because nuclear energy can serve as an efficient form of environmentally friendly energy, which is increasingly being viewed as the solution to global warming. By some estimates, the international production of nuclear energy eliminates the emissions of about 2.5 billion metric tons of carbon dioxide per year. For this reason, it is imperative that the IAEA continue to improve its work in nuclear safety.

### **Background of the Topic:**

Nuclear energy, though potentially useful to society (when used in medicine or as a power source), has always been problematic as nuclear energy may be a potential gateway towards the development of nuclear weapons. The first nuclear weapon was tested on July 16th, 1945 in New Mexico. With a payload of 20,000 times the power of TNT, the United States now had access to a weapon that would put a decisive end to World War 2. Since the detonation of the nuclear bomb in Hiroshima on August 6th, 1945, politics from then on have been dictated by the ever present threat of the atomic bomb. Launched into fear of being nuked by the West, the Soviet Union began deploying spheres of influence in surrounding countries, only to be met at every turn with the United States' anti-communist fervor. The resulting era was known as the Cold War, a time when science leaped exponentially forward and peaceful uses for nuclear technology began to spring forth. However, the nuclear bombs remained. The Hydrogen bomb and other weapons of mass destruction were being stockpiled in masses by a few technologically superior countries. Nations which lacked such means to defend themselves feared an impending nuclear war in where they would be caught in the crosshairs. Therefore, the Non-Proliferation Treaty was created. The intent of the Non-Proliferation Treaty is to promote non-proliferation, disarmament, and "the right to peacefully use nuclear technology". The NPT, considered by many to be fallible and insufficient, is in dire need of reformation. Gaping loopholes, unenforced rules, and hidden motives are in need of revision. The IAEA sends investigators to NPT signatory nations regularly to observe any nuclear activity and to verify that it is not harmful. In the past, many nations have successfully evaded IAEA observers by merely putting off their nuclear work until investigators left. To combat this, in 1997 the IAEA passed the "Additional Protocol", a new set of regulations and powers that IAEA inspectors would now have. The Additional Protocol managed to solve the above stated problem, but unfortunately not all states have signed on it. It is critical that all signatories of the NPT also adopt the Additional Protocol. According to the International Campaign to Abolish Nuclear Weapons, at around 2014, the countries of the world collectively owned 16,400 nuclear warheads. 1800 of these warheads were prepared to launch at any given time. Other treaties such as the Nuclear Test Ban Treaty and Intermediate-Range Nuclear Forces Treaty (1987) have, alongside the Non-Proliferation Treaty, tried to prevent the continued spread of nuclear weapons around the world.

There are certain countries, such as North Korea, that demonstrate just how important it is for us as the global community to be monitoring access to nuclear energy. North Korea withdrew from the Non-Proliferation Treaty on January 10<sup>th</sup>, 2003, in order to duck IAEA nuclear inspectors. According to Article 10 of the NPT signatories may choose to withdraw from the NPT “if it decides that extraordinary events, . . . have jeopardized the supreme interests of this country”. Evidently the article not only gives the withdrawing nation the ability to determine what constitutes as an “extraordinary event”, but it doesn’t even verify whether the “event” even exists. Therefore, North Korea, declaring the US made a “hostile move” against DPRK, managed to legally ditch the NPT. Even with the IAEA “Additional Protocol” in full swing, North Korea still has no real obligation to fulfill any commitments to the IAEA. This sets the precedent for nations in the future to follow; DPRK has essentially paved a road for other “developing nuclear nations” to follow for their path to obtaining nuclear capability. Iran similarly withdrew from the Non-Proliferation Treaty in 1984 during the Iran-Iraq war to begin developing a nuclear program, prompting the US to impose sanctions upon them in 2013. It was only until recently that Iran agreed to UN inspections of its nuclear facilities. It is important that we show nations such as Iran the importance of these safety inspections, not only to reduce proliferation, but also to protect their own citizens and the surrounding community’s well being.

### **UN Involvement:**

The United Nations has taken a several measures against the fallacies of the NPT. The IAEA sends investigators to NPT signatory nations regularly to observe any nuclear activity and to verify that it is not harmful. In the past, many nations have successfully evaded IAEA observers by merely putting off their nuclear work until investigators left. To combat this, in 1997 the IAEA passed the “IAEA Additional Protocol”, a new set of regulations and powers that IAEA inspectors would now have. The Additional Protocol managed to solve the above stated problem, but unfortunately not all IAEA states have signed on with it. Though somewhat controversially, most IAEA states believe the Additional Protocol should be forced upon all nations of the world. This produces even more problems that the UN still needs to deal with.

### **Bloc Positions:**

Traditional regional blocs do not have too much of a bearing on a country’s nuclear policy. The nuclear policy of most countries is shaped by public opinion on the safety of nuclear power. The Fukushima nuclear disaster, for example, prompted many countries around the world to start limiting their dependence on nuclear energy.

### **Questions to Consider:**

1. Does your country already have nuclear power plants? If so, what safety measures are in place already?
2. If your country doesn't have nuclear power plants, is it looking to acquire nuclear energy?
3. How will Middle Eastern nations and others who produce oil for international export be affected by the spread of nuclear energy?
4. What safeguards are in place to prevent the weaponization of the reactors in developing nuclear weapons?
5. How dependent (if at all) is your country on nuclear energy? Does your country currently have the funds and infrastructure in place to build a nuclear power plant?

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