Committee: Council of the European Union (EU)

Issue: Forming a common European policy on nuclear energy

Student Officer: Maro Tsoka

Position: Deputy President

PERSONAL INTRODUCTION

Dear delegates,

My name is Maro Tsoka and I will have the honor of serving as one of the Deputy Presidents of the Council of the European Union of the German School of Thessaloniki Model United Nations 2021. I am 16 years old and I will be attending the 11th Grade at Erasmios Greek-German School.

Moreover, I really enjoy taking part in MUN conferences because every conference is a unique experience for me. With each participation, I acquire knowledge regarding events currently taking place around the world. Additionally, I believe that MUN provides great opportunities for young people, as during conferences they create unforgettable memories, whilst cultivating their interest in politics! I am personally concerned regarding the matters within the EU and that was one of the reasons why I applied for a position in this committee. My excitement and enthusiasm for this conference are indescribable, as I am sure it will be a remarkable experience.

Through this Study Guide, I am to assist you towards gaining a better understanding of the matter at hand, while giving you important information about it. However, the Study Guide should be just the basis of your preparation as you will need to conduct further research of your own, regarding your countries' policies. Do not hesitate to contact me at maro.n.tsoka@gmail.com, should you have any questions.

Looking forward to meeting you all!

Best regards,

Maro Tsoka

TOPIC INTRODUCTION

It is commonly known that since the 20th-century nuclear energy has been at the forefront of energy production. On 27th June 1954, the Soviet Union was the first country to ever have own a nuclear power station, namely the "Obninsk Nuclear Power Plant", to generate electricity for the power grid.

The amount of nuclear energy produced within the E.U. reaches 26% of the total amount of energy. Today, France produces approximately half of the nuclear energy in the E.U. as 46%[1] of the total nuclear energy is produced there. Generally, the E.U. has over 300[2] nuclear power reactors and 14 out of the 27 countries own nuclear reactors. Nevertheless, the energy production policies differ tremendously on each member state. To be more specific, the countries with reactors are Belgium, Bulgaria, Czech Republic, Finland, France, Germany, Hungary, the Netherlands, Romania, Slovakia, Slovenia, Spain, and Sweden.

Figure 1: European Power Plant

From a general perspective, the European Union endorses the highest safety standards possible for every type of nuclear production and activity such as nuclear power generation.[3] Furthermore, the EU promotes nuclear safety and public protection by means of laws through a series of directives. Throughout the EU, radiation protection requirements are established in the Member States under the Basic Safety Standards Directive. The general goal of radiation protection is to prevent risks of ionizing radiation originating from practiced radiation or radioactive agents, including atomic fuel cycles, from the health of employees and public. Licensing

[1] "Nuclear Energy Statistics." *Nuclear Energy Statistics - Statistics Explained*, ec.europa.eu/eurostat/statistics-explained/index.php?title=Nuclear_energy_statistics.

[2] "EU Coal Phase Out." *EU Coal Phase Out / Climate Analytics*, climateanalytics.org/briefings/eu-coal-phase-out/.

[3] user_administrator. "Nuclear Safety - Energy European Commission." *Energy - European Commission*, European Commission, 7 June 2021, ec.europa.eu/energy/topics/nuclear-energy/nuclear-safety_en.

nuclear power plants, establishing national frameworks to safety requirements, enforcement, and supervision are some of the essential precautions that member-states are required to take. Hence, a common European policy on nuclear energy production should be formed.

DEFINITION OF KEY TERMS

Nuclear Energy

"Nuclear energy is a source of power which is created from energy released by a nuclear reaction. An example of nuclear energy is the electricity generated by a nuclear reactor, which is the major power source used in Japan." [4]

Nuclear Fission

"Nuclear fission is the process, during which the nucleus of an atom breaks up into two smaller, lighter fragments, during which a large amount of energy is released. There are two types of nuclear fission: controlled fission, which is used for the creation of nuclear energy and is beneficial to society, and uncontrolled fission -such as atomic bombs- which release an enormous amount of energy and are highly destructive."[5]

Nuclear Reactor

"Nuclear reactors are the heart of a nuclear power plant. They contain and control nuclear chain reactions that produce heat through a physical process called fission. That heat is used to make steam that spins a turbine to create electricity."[6]

Radiation

[4] "Nuclear-Energy Meaning." *Nuclear-Energy Meaning | Best 8 Definitions of Nuclear-Energy*, Your Dictionary, www.yourdictionary.com/nuclear-energy.

[5] Nuclear Fission" nuclear fission | Examples & Process | Brittanica, Encyclopedia Brittanica, https://www.britannica.com/science/nuclear-fission

[6] "NUCLEAR 101: How Does a Nuclear Reactor Work?" *Energy.gov*, www.energy.gov/ne/articles/nuclear-101-how-does-nuclear-reactor-work.

"Radiation is energy that comes from a source and travels through space and may be able to penetrate various materials. Light, radio, and microwaves are types of radiation that are called nonionizing. Gamma radiation and x rays are examples of electromagnetic radiation."[7]

Ionizing radiation

"A type of high-energy radiation that has enough energy to remove an electron (negative particle) from an atom or molecule, causing it to become ionized. Ionizing radiation can cause chemical changes in cells and damage DNA."[8]

Decommissioning

Decommissioning means to shut down a nuclear energy power plant.[9]

BACKGROUND INFORMATION

Historical Background

Nuclear energy is a low-carbon alternative to fossil fuels that is an important part of the energy mix in 13 of the EU's 27 member states, accounting for over 26% of the EU's power production. Nuclear energy has become very contentious in the light of the 1986 Chernobyl tragedy and the 2011 nuclear disaster in Fukushima, Japan.

The temporary closure of two Belgian reactors following the discovery of fractures in their vessels, as well as Germany's plan to phase out nuclear energy by 2020, has increased pressure on Europe to abandon the technology.

While the Member States decide whether or not to incorporate nuclear power in their energy mix, EU law strives to improve nuclear power plant safety standards and ensure that nuclear waste is securely disposed of and managed.

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[7] Baes, Fred. "Hps.org." *Health Physics Society*, HPS, hps.org/publicinformation/ate/faqs/whatisradiation.html.

[8] "NCI Dictionary of Cancer Terms." *National Cancer Institute*, National Cancer Institute, www.cancer.gov/publications/dictionaries/cancer-terms/def/ionizing-radiation.

[9] "Decommission." *Dictionary.com*, Dictionary.com, www.dictionary.com/browse/decommissioned.

Chernobyl disaster

The Chernobyl nuclear power plant accident in Ukraine in April 1986 was caused by a faulty Soviet reactor design combined with major errors committed by the facility managers. It was a direct effect of Cold War isolation and the absence of a safety culture. The disaster was caused by a faulty reactor design that was operated by people who were not properly educated.[10] The steam explosion and flames that followed discharged at least 5% of the nuclear reactor core into the environment, resulting in radioactive elements being deposited in various regions of Europe. Two Chernobyl plant workers died in the explosion on the night of the disaster, and another 28 people perished from acute radiation sickness within a few weeks.

Figure 2: Chernobyl power plant

Apart from 5000 thyroid tumors, the United Nations Scientific Committee on the Effects of Atomic Radiation has determined that there is no indication of a substantial public health impact related to radiation exposure 20 years after the disaster. The tragedy forced 350,000 people to leave their homes, but the process of resettling those who were moved is still on.

The Chernobyl tragedy was a one-of-a-kind occurrence, with radiation-related fatalities occurring for the first time in the history of commercial nuclear power. The reactor's construction is unique; thus the disaster had a minimal bearing on the rest of the nuclear industry outside of the Soviet Union at the time. However, it resulted in significant improvements in safety culture and industrial collaboration, especially between the East and the West, prior to the collapse of the Soviet Union.

Fukushima Daiichi Disaster

[10] "Javascript Required!" *Chernobyl | Chernobyl Accident | Chernobyl Disaster - World Nuclear Association*, world-nuclear.org/information-library/safety-and-security/safety-of-plants/chernobyl-accident.aspx.

On March 11, 2011, Japan was hit with a triple tragedy that had never been seen before. A 9.0 magnitude earthquake struck off Japan's northeastern coast, causing a huge tsunami that surged to nearly 30 meters in height and reached as far as 10 kilometers inland. The earthquake and tsunami wreaked havoc on Japan's oldest nuclear power plant, triggering a series of events that culminated in a catastrophic disaster.

Figure 3: Fukushima Daiici Disaster

Over 15,000 people were killed as a result of the triple tragedy, which included explosions at the Fukushima Daiichi Nuclear Power Station (NPS), the discharge of radioactive material into the air, and the flow of contaminated water into the sea. Regulatory failures, counterproductive decision-making structures, and a culture of complacency and collaboration were discovered in the investigations that followed.

The Fukushima Daiichi Nuclear Power Plant is located in the Fukushima Prefecture village of Okuma. It is located on the country's east coast, some 220 kilometers (137 miles) north of Tokyo.

The nuclear power plant's systems recognized the earthquake and automatically shut down the reactors. Emergency diesel generators were used to keep coolant circulating the cores, which remained very hot even after the reactions ceased. However, Fukushima was struck by a 14-meter-high (46-foot-high) tsunami not long after. The water flooded the facility and knocked out the emergency generators when the protective sea wall was breached.

The European parliament's role in decision-making

The Euratom Treaty limits the Parliament's participation in the decision-making process because it only has consultative rights and its view is not binding.

Nonetheless, it has consistently emphasized the importance of improving safety and environmental protection requirements in its various resolutions on the

subject, as well as the need to clarify the distribution of responsibilities between EU institutions and the Member States and strengthen the EU common framework on various aspects of nuclear installations.

Parliament firmly backed the Commission's decision to establish stress testing for European nuclear power reactors in its resolution on energy infrastructure objectives for 2020 and beyond from July 2011.

In March 2013, a supplementary resolution was adopted in plenary, highlighting the limitations of the Commission's 2012 "stress tests" exercise and calling for the inclusion of additional criteria in future tests, particularly concerning material deterioration, human error, and flaws in reactor vessels.

Benefits from nuclear energy production

First and foremost, nuclear energy is a clean energy source. In the United States, nuclear power is the most common form of clean energy. It creates over 800 billion kilowatt-hours of electricity each year, accounting for more than half of the country's emissions-free power. Each year, this saves more than 470 million metric tons of CO2, the equivalent of eliminating 100 million automobiles from the road. Nuclear reactors' thermal energy may be utilized to decarbonize other energy-intensive industries, such as transportation, which is the greatest source of carbon pollution.

Additionally, nuclear energy is the most reliable energy source. Nuclear power facilities operate seven days a week, 24 hours a day. They are meant to run for extended periods of time and require refueling every 1.5–2 years. Nuclear power plants ran at full capacity more than 92 percent of the time in 2019, making it the most reliable energy source available today.

One of the most important advantages is that is creates jobs, as well. The nuclear power sector in the United States sustains over half a million jobs and adds an estimated 60 billion US dollars to the country's gross domestic product each year. Nuclear power facilities in the United States may employ up to 700 people, with incomes that are 30 percent more than the national average. They also provide billions of dollars in federal and state tax income to local economies each year.

Moreover, nuclear energy supports national security. The United States' national security and energy diplomacy depend on a vibrant civilian nuclear sector. To influence the peaceful use of nuclear technology, the United States must retain its worldwide leadership in this field. In this role, the US government works with countries to strengthen connections and generate new possibilities for the country's nuclear technologies.

Challenges of nuclear energy

The general public sometimes perceives commercial nuclear power as a risky or unstable process. This view is frequently based on three worldwide nuclear catastrophes, a misleading connection with nuclear weapons, and how it is depicted in popular television series and films. The Department Of Energy (DOE) and its national labs are collaborating with industry to develop new reactors and fuels that will improve the overall performance of these technologies while also reducing the nuclear waste production. DOE's social media and STEM outreach initiatives to educate the public on the benefits of nuclear energy also strive to offer accurate, fact-based information on nuclear energy.

Many people see spent fuel as a rising problem and are concerned about how it will be transported, stored, and disposed of. All commercial spent fuel is presently securely kept in 76 reactor or storage facilities in 34 states, and DOE is responsible for its eventual disposal and related transportation. For the time being, nuclear fuel may be securely stored at these sites until Congress determines a permanent disposal option.

The Department of Energy is actively assessing nuclear power plant locations and adjacent transportation infrastructure in order to enable the eventual transfer of spent fuel away from these facilities. It's also working on new, particularly built railcars to handle future large-scale transportation of spent gasoline.

Stakeholders may be discouraged by the prospect of constructing a nuclear power plant. Multibillion-dollar infrastructure projects are multibillion-dollar reactor designs. Public interest has also been stifled by high capital expenditures, licensing and regulation approvals, as well as extended lead times and building delays.

The Department of Energy is financing the development of two additional reactors at Plant Vogtle near Waynesboro, Georgia, in order to replenish its nuclear workforce. The reactors will be the first nuclear reactors built in the United States in over 30 years. When the additional units start operating in 2021 and 2022, the expansion project will employ up to 9,000 people during peak construction and generate 800 permanent jobs at the plant.

DOE is also promoting the development of smaller reactor designs, such as microreactors and tiny modular reactors, which will provide customers with even greater size and power capacity options. These factory-built technologies are intended to cut construction time in half and make nuclear power more cost-effective to produce and operate.

The nuclear sector is struggling to compete due to difficult market circumstances. Strict restrictions on maintenance, personnel numbers, operator training, and plant inspections have cost the business a lot of money.

The Light Water Reactor Sustainability (LWRS) program of the Department of Energy is trying to address these financial issues by upgrading plant systems to lower operating and maintenance costs while enhancing performance. The program is also seeking to diversify plant products through non-electric uses like water desalination and hydrogen generation, in addition to materials research that supports the long-term operation of the nation's reactor fleet.

To reduce operational costs even further. DOE is also collaborating with the industry to develop accident-tolerant fuels and cladding. These new fuels have the potential to improve plant performance, allowing for longer reaction times and reduced waste. By 2025, accident-tolerant fuels might be widely used.

MAJOR COUNTRIES AND ORGANIZATIONS INVOLVED

Belgium

In Belgium, there are seven commercial nuclear power reactors, four in Doel and three in Tihange. They are 40 years old on average, having been linked to the grid between 1974 and 1985.

In 2003, the Belgian federal parliament enacted legislation forbidding the building of new nuclear reactors for the industrial generation of energy by nuclear fission, while allowing existing reactors to operate for another 40 years. Nuclear fission energy was supposed to be phased down between 2015 and 2025, according to this regulation. Nonetheless, successive administrations have modified the law to maintain the security of the energy supply, extending the operating licenses of the three oldest reactors by 10 years while reiterating the plan to phase down all nuclear power reactors by 2025.

These facilities can provide roughly 55% of the country's power needs when combined. They produced 43 524 GWh in 2019, accounting for 46.6 percent of total power output.[11]

France

Because of a long-standing strategy centered on energy security, France gets around 70% of its electricity from nuclear power. By 2035, the government intends to cut this to half. Due to its relatively cheap cost of generation, France is the world's greatest net exporter of electricity, generating over €3 billion in revenue each year. The country has invested much in nuclear technology development. Reactors, particularly fuel goods and services, have been major exports. Recycled nuclear fuel accounts for around 17% of France's power.[12]

Germany

Germany used 17 nuclear reactors to generate one-quarter of its power until March 2011. The ratio is presently about 10% from six reactors, with coal accounting for 35-40% of power, the majority of which being lignite. The phasing down of nuclear energy was a program of a coalition government established after the federal elections in 1998. The phase-out was halted in 2009 when a new administration took

[11]"1. COUNTRY ENERGY OVERVIEW." *Belgium 2020*, IAEA, cnpp.iaea.org/countryprofiles/Belgium/Belgium.htm.

[12]"Javascript Required!" *Nuclear Power in France | French Nuclear Energy - World Nuclear Association*, www.world-nuclear.org/information-library/country-profiles/countries-a-f/france.aspx.

office, but it was reinstated in 2011, with eight reactors shut down immediately. In Germany, public opinion is still overwhelmingly hostile to nuclear power, with little support for the construction of additional reactors. Germany's energy policy has resulted in some of the lowest wholesale power costs in Europe and some of the highest retail prices. More than half of the cost of household power is made up of taxes and surcharges.[13]

The Netherlands

The Netherlands only has one nuclear reactor, which supplies a minor portion of the country's power. In 1973, it began running its first commercial nuclear power plant. A decision to phase out nuclear power had been reversed previously. Around 60% of Europe's medicinal radioisotopes are produced at its primary research reactor.[14]

Ukraine

Ukraine's nuclear energy program began in the 1970s as part of the Soviet Union's nuclear energy program. Chernobyl was the site of the world's first nuclear reactor. Ukraine currently has 15 nuclear reactors, although only the VVER-type reactors are active. Following the disaster at Chernobyl NPP's 4th reactor unit on August 2, 1990, civil activities at Zaporozhye NPP's unit 6 were halted, as were plans to build four additional reactors. Nonetheless, Ukraine's Energy Strategy, titled "Safety, Energy Efficiency, Competitiveness" (ESU) for the period up to 2035, intends to grow the nuclear power sector.

[13]Information, Library. "Javascript Required!" *Nuclear Power in Germany - World Nuclear Association*, world-nuclear.org/information-library/country-profiles/countries-g-n/germany.aspx.

[14] "Javascript Required!" *Nuclear Power in the Netherlands | Dutch Nuclear Energy | Holland Nuclear Power - World Nuclear Association*, world-nuclear.org/information-library/country-profiles/countries-g-n/netherlands.aspx.

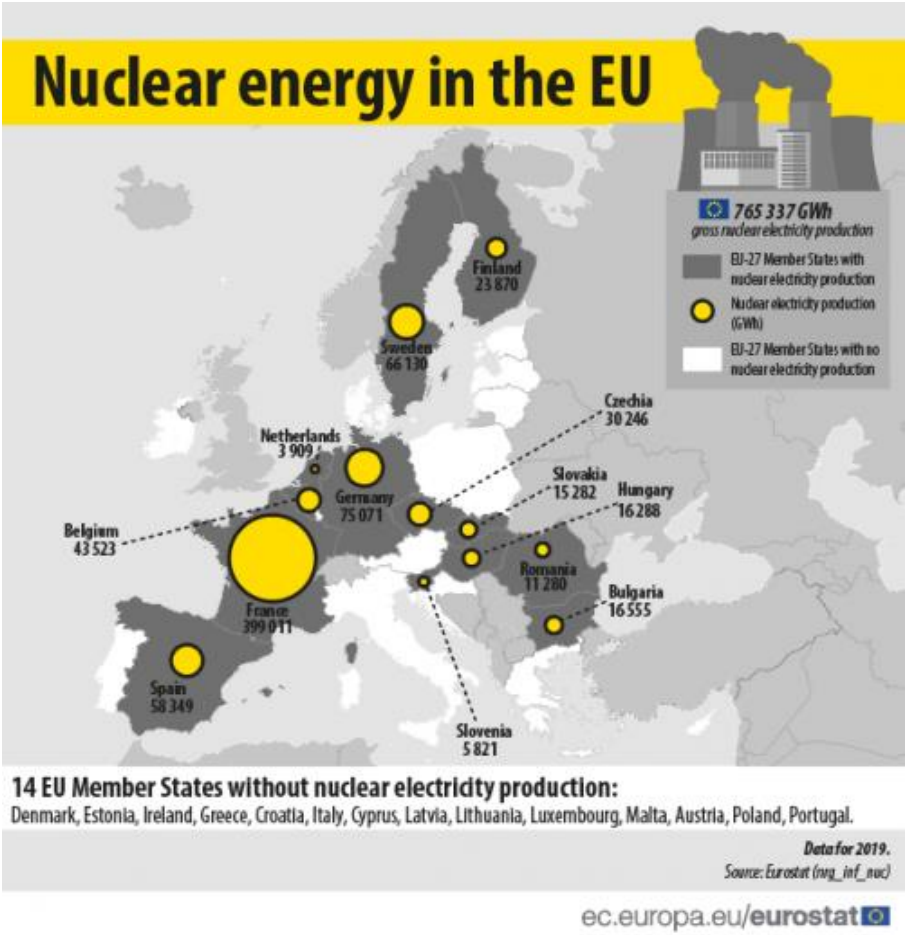

Figure 4: Nuclear energy in the EU (2019)

TIMELINE OF EVENTS

Date	Description of event
27th June 1954	The Soviet Union was the first country to ever have own a nuclear power station, namely the Obninsk Nuclear Power Plant
26th April 1986	Chernobyl disaster
8th June 1993	The Community system for declaring shipments of radioactive substances between the Member States was established by Regulation 1493/93/EC
1992	the EU developed a system of prior permission for transportation of

	radioactive waste, which was considerably changed in 2006
20th November 2006	The goal of Council Directive 2006/117/ Euratom on the monitoring and control of shipments of radioactive waste and spent fuel was adopted
2011	The Council Directive 2011/70/Euratom on the management of radioactive waste and spent fuel established an EU legislative framework for waste management in Europe
11th March 2011	Fukushima disaster
November 2013	The European Parliament approved a €631 million program from 2014 to 2020 to promote nuclear safety in EU candidate countries and EU neighbors. This is a continuation of a previous program that ran from 2007 to 2013.[15]
March 2013	a supplementary resolution was adopted in plenary, highlighting the limitations of the Commission's 2012 "stress tests"
June 2015	Westinghouse and eight European partners received €2 million from the Euratom research and training program, which is part of Horizon 2020, the EU's research and innovation initiative, to secure the security of supply of nuclear

[15] "Javascript Required!" *Nuclear Power in the European Union - World Nuclear Association*, www.world-nuclear.org/information-library/country-profiles/others/european-union.aspx.

	fuel for Russian-designed reactors in the EU.
May 2016	The European Commission has announced that regulations passed in 2008 mandating member states to utilize "at least 10%" renewable energy in transportation would be repealed after 2020, putting an end to a long-running debate about biofuels' environmental impact.

RELEVANT RESOLUTIONS, TREATIES AND EVENTS

Legal basis: The Euratom treaty

The European Atomic Energy Union, also known as Euratom treaty, was established in Rome, in 1957. The six founding Member States turned to nuclear energy as a method of achieving energy independence due to a general lack of "conventional" energy. Because individual nations could not afford to invest in nuclear energy, the founding Member States banded together to create the European Atomic Energy Community.

Figure 5: Euratom Treaty Logo

As well as contributing to the growth of nuclear power as an energy source in the Member States, the Euratom Treaty also strives to provide high levels of protection for employees and the general public via exchanging experience and knowledge and supporting research into nuclear safety.

Many EU measures relating to radiation protection, nuclear safety, and the safe management of radioactive waste and spent fuel, as well as other activities that employ radioactive sources for scientific, industrial, and medical reasons, are based on the Euratom Treaty. These activities include research, the development of safety standards, and the use of nuclear energy for peaceful purposes. Through the EU

Framework Programs for Research and Technological Development, EU Member States also cooperate with Euratom research activities.

The Euratom Treaty's overall goals are to help create and expand Europe's nuclear industry so that all Member States can profit from atomic energy development and to assure supply security. At the same time, the Treaty ensures public safety and forbids nuclear materials intended for civilian use from being diverted for military purposes. Euratom's authority is restricted to peaceful nuclear energy applications. The current law strives to ensure that high safety standards are maintained.

PREVIOUS ATTEMPTS TO SOLVE THE ISSUE

Nuclear Safety

Nuclear safety is concerned with the safe operation of nuclear power plants, as well as radiation protection and the handling of radioactive waste. For all forms of civilian nuclear activities, such as power production, research, and medicinal usage, the EU advocates for the strictest safety requirements. Nuclear safety regulations, nuclear power plant licensing, oversight, and enforcement are all subject to national frameworks established by member states.

Radiation exposure poses a substantial risk to human health and the environment (both for the general public and for employees in the medical, industrial, and nuclear sectors). The patchwork of EU law in the field of radiation protection has been revised and streamlined to reflect scientific progress, enhance legal consistency, and address concerns such as natural radiation sources and environmental protection.

Transport of radioactive substances and waste

The Community system for declaring shipments of radioactive substances between the Member States was established by Regulation 1493/93/EC on June 8, 1993, to ensure that the relevant authorities receive the same level of information about radiation protection as they did before 1993 when border controls were still in place.

In 1992, the EU developed a system of prior permission for transportation of radioactive waste, which was considerably changed in 2006. The goal of Council Directive 2006/117/ Euratom on the monitoring and control of shipments of radioactive waste and spent fuel, which was adopted on November 20, 2006, is to provide an acceptable degree of public safety from such shipments. It establishes and outlines a set of stringent standards, definitions, and procedures to be followed when transporting radioactive waste and spent fuel for intra- and extra-Community shipments.

Waste management

In 2011, the Council Directive 2011/70/Euratom on the management of radioactive waste and spent fuel established an EU legislative framework for waste management in Europe. It establishes strict oversight of national programs for the building and operation of ultimate repository sites, as well as legally obligatory safety requirements. Member states launched their first national programs in 2015, and they are required to provide national reports on the directive's implementation every three years.

Decommissioning

The final step of a nuclear facility's lifetime is decommissioning. It encompasses a wide range of operations, from nuclear material shutdown and removal through site restoration and complete eradication of radioactive risks, and it is ultimately the responsibility of Member States. Bulgaria, Lithuania, and Slovakia decided to shut down their first-generation, Soviet-designed nuclear reactors when they joined the EU.

Safeguarding nuclear materials

A variety of rules, such as Commission Regulation (Euratom) 302/2005, have been established and revised throughout time in order to provide a system of safeguards guaranteeing that nuclear materials are used exclusively for the reasons indicated by their users and that international responsibilities are met. These safeguards apply to the whole nuclear fuel cycle, from nuclear material extraction in

the Member States or imports from third countries to exports outside of the EU. The Commission is in charge of civil nuclear material control in the EU.

Nuclear research, training activities, information

Multiannual framework programs are used to support nuclear research in Europe. The Euratom nuclear research and training program supports, but is distinct from, Horizon 2020, the EU's research and innovation framework program. The Euratom budget for 2014-2018 is 1,6 billion Euros, divided among three specific programs: one for indirect actions in fusion energy research (728 million Euros), one for nuclear fission and radiation protection (315 million Euros), and one for direct actions carried out by the Commission's Joint Research Centre (JRC) (559 million Euros).

A Sustainable Nuclear Energy Technology Platform was developed in 2007 to better coordinate research and development, as well as demonstration and implementation in the field of nuclear fission energy. The EU is a founding member and major financial partner of ITER, an international nuclear fusion research and engineering project that is currently constructing the world's biggest experimental nuclear fusion reactor at Cadarache, France.

To encourage scientific research and technical progress in the field of fusion, a Joint Undertaking for ITER and Fusion Energy Development has been formed (Council Decision 2007/198/Euratom). Euratom (represented by the Commission), EU Member States, and select other nations that have signed Euratom cooperation agreements are all members.

POSSIBLE SOLUTIONS

It is a fact that forming a common European policy on nuclear energy is a challenging task for the council of the EU, as countries have different policies. Nevertheless, some measures are of great importance to be taken.

Coordination, cooperation, communication and transparency are vital to solve this issue. Therefore, the member states should prioritize the matter at hand in order

to have the appropriate time to find a solution that satisfies the majority of the member states and is according to almost each country's policy.

Another crucial solution is to enhance previous treaties and already existing programs. There have been a few such attempts in the past, but the fact that the problem persists indicates that they were ineffective. Hence, the member states need to correct previous mistakes in order to solve the matter.

A really important aspect of the topic is for the member states to ensure that they are fully aware of the subject. That includes the advantages, disadvantages of nuclear energy production as well as the consequences of its misuse. This could be achieved through seminars conducted by experts towards each state's parliament which could also be accessible to citizens, as well.

Due to the fact that there are different policies regarding the issue, a legal framework is necessary to be established. Particularly, the framework should adjust legislation that every member state will be obliged to follow, according to each country's policy. As a result, specific legislation, constitutions, and regulations will be formed to control the production of nuclear energy. It goes without saying that More Economically Developed countries (MEDCs), the Council of the European Union and the European Commission need to provide financial support to the developing countries to build nuclear power plants.

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Figure 2: *Google Search*, Google, www.google.com/search?q=chernobyl%2Bdisaster&sxsrf=ALeKk03ZcMPri62zJ

q4DljH0r7wcjFRYVQ%3A1625685796775&source=lnms&tbm=isch&sa=X&ved=2ahUKEwir-rrD19HxAhVD_rsIHY2FACoQ_AUoAXoECAEQAw&biw=1440&bih=636#:~:text=%CF%80%CE%B5%CF%81%CE%B9%CF%83%CF%83%CF%8C%CF%84%CE%B5%CF%81%CE%B1.-,The%20Independent,disaster%20detailed%20in%20newly%20released%20documents%20%7C%20The%20Independent%20%7C%20The%20Independent,-%CE%95%CF%80%CE%AF%CF%83%CE%BA%CE%B5%CF%88%CE%B7.

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