



EUROPEAN COUNCIL FOR NUCLEAR RESEARCH(CERN)

Reducing CERN's environment impact

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Description of Committee

CERN, also known as the European Organization for Nuclear Research, is the intergovernmental organization that operates the world's largest particle physics laboratory. It is established in 1954, the main company is located in Geneva, Switzerland, it has 23 member states. CERN researches about what the universe is made of, and advances the people's knowledge about the universe. In CERN, there are 2500 international people, working in every important subjects. CERN takes responsibility of performing world-class in basic physics, enhancing the unique facility technology that enables people to reach more truth about universe, sustaining the environment, gathering the people that is ready to be the outstanding researcher and training that generation to physicist, or engineers and technicians. CERN is looking forward to discover the new sight of science through research, make a technological innovation in people's society, and deliver the scientific knowledge to diverse nations in order to inspire every people and inform people the importance about physics and maintain the investment of physic.

The CERN Convention was drafted over the course of 18 months by CERN, which stands for Conseil Européen pour la Recherche Nucléaire. It was approved and signed by twelve new members in June 1953, and it went into effect on September 29 of the same year. The basic research and technological advances achieved by scientists who aspired to create a worldwide laboratory have contributed to the continued realization of those scientists' ambitions. Significant technical developments produced by CERN are useful in day-to-day life. Following World War II, Europe lacked fundamental scientific resources and a significant portion of its experts had fled the continent due to the conflict. The remaining scientists were forced to set aside their rivalry and create a team effort.

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Introduction to the Topic

Reducing CERN's environment impact refers to, the quality of CERN's water effluents before discharge, as well as emissions into the atmosphere, including ionizing radiation. These are regularly monitored by more than 100 stations. (WHAT ARE THE MONITORING STATIONS) WHEN DID IT START Agricultural goods, soil, and nearby rivers' quality are all inspected and tested. CERN frequently analyzes atmospheric emissions, effluent water, ionizing radiation, consumption of water and electricity, production of waste, because these elements are the elements that allow people to know the impact of the environment.

Background information of the topic

CERN strongly aims to maintain the environmental impact as little as possible to keep the principle of CERN Safety Policy. And these analyzes are regularly reported to the Host states, France and Switzerland. Over the years, CERN has been recognized for its research excellence, and now it is also CERN's responsibility to preserve nature. CERN's most focused research is particle physics, but also researches nuclear and high-energy physics. CERN uses nuclear energy in order to do nuclear research, and if nuclear energy were to leak, it would cause enormous environmental destruction. CERN also sometimes uses fluorinated gas, which can emit greenhouse gasses. So CERN tried several methods to prevent the possibility of greenhouse gas leaks. CERN has pledged to reduce greenhouse gas emissions by 28% by 2024, and the measures it has tried have worked. For example, energy consumption in 2017-2018 was 1251 GWh, but in 2019-2020 it decreased to 428 GWh. In addition, greenhouse gas emissions in 2017-2018 were 223 800 tCO₂e, but in 2019-2020, greenhouse gas emissions decreased to 78 169 tCO₂e. Moreover, recycling of waste increased by 1% in 2019-2020 compared to 2017-2018, and water consumption decreased from 3477 megalitres to 2006 megalitres.

Current situation with the topic

Today, CERN is still struggling to improve the environment. The CERN environmental laboratory collects about 2000 samples and performs 7000 laboratory analyses annually.

Today, CERN is still working to improve the environment. In April 2023, CERN collaborated with an Irish company called SuperNode to develop a new type of insulation for superconducting cables, a solution for renewable energy transmission. On 27 June of the same year, the CIPEA (CERN Innovation Program on Environmental Applications) Innovation Day welcomed 15 innovative project proposals reflecting the The CERN community's commitment to tackling environmental challenges, and brought students and experts together around environmental applications of accelerators. CERN is also trying to protect natural resources, air, water, soil,

energy, and even environmental noise. In saving energy, in light of the current global energy supply and cost crisis, and as part of its social responsibility, CERN will be implementing measures that will significantly reduce the Laboratory's energy consumption in 2022 and 2023.

International Action to the topic

A heat recovery project is being prepared by CERN. The company was given a contract by French authorities to supply residential areas in Fernie-Voltaire, France, with heating and heat collection. In an effort to address supply problems, France has also started a nationwide strategy to cut energy use over the coming years. By 2030, Switzerland promises to cut greenhouse gas emissions by 50%.

Recommendations for creating the resolutions

Your position paper is for the debate, position paper represents your opinion. And the most important part is the third paragraph that contains your opinion. Your solutions must have at least 3 solutions in order to avoid unexpected situations. Here are some recommendations to write the solutions, or brace some flaws in your solutions.

- Remember what CERN can do, and the permission of something that is necessary to our topic.
- As CERN handles nuclear energy for the experiments, you can make many solutions about nuclear energy.
- Emphasize the accomplishments in the reducing environmental impact of CERN to prevent the other delegates' rejection of your solution.
- Provide a solution that is fully feasible. If your solution costs too much money and some countries cannot implement it due to their constraints, you will receive a lot of objections and questions.
- CERN is an organization that primarily researches physics, so writing down solutions using physics is a good option. However, physics is a difficult subject, so write your solutions based on your understanding. This is to prevent situations that you are unable to explain questions about your solution.

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