

# Why We Should Stop Using Nuclear Energy?

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**Abstract**— Nuclear energy is the energy that is released during a nuclear reaction, either through nuclear fission or nuclear fusion. In nuclear fission, the nucleus of an atom is split into two smaller nuclei, releasing a large amount of energy in the process. This process is typically achieved by bombarding the nucleus with neutrons, causing it to split and release energy. Nuclear fusion, on the other hand, is the process of combining two smaller nuclei to form a larger nucleus, again releasing a large amount of energy. In the context of power generation, nuclear energy is typically harnessed through nuclear fission. Nuclear power plants use a controlled nuclear chain reaction to heat water and produce steam, which drives turbines and generates electricity. The process of generating electricity from nuclear energy is a complex one that involves careful management of the nuclear reaction, as well as the safe handling and disposal of nuclear waste. Nuclear energy has the potential to provide large amounts of energy with low greenhouse gas emissions, making it an attractive option for some countries looking to reduce their carbon footprint. However, there are also concerns about the safety, security, and cost of nuclear energy, as well as the long-term management of nuclear waste.

**Keywords**— Nuclear energy – Energy – Generating Electricity – Nuclear waste.

## I. WHAT IS NANOTECHNOLOGY?

The question of whether or not to continue using nuclear energy is a controversial one that is subject to debate. Here are some reasons why some people argue that we should stop using nuclear energy:

**Safety concerns:** Nuclear accidents, such as Chernobyl and Fukushima, have highlighted the potential risks associated with nuclear power plants. These accidents can have severe environmental and health consequences, and the threat of nuclear accidents remains a major concern.

**Nuclear waste:** Nuclear energy produces radioactive waste that can remain dangerous for thousands of years. This waste needs to be carefully stored and disposed of, and the cost of doing so can be significant. There is also the risk of accidental release of nuclear waste into the environment.

**Security concerns:** Nuclear power plants can be vulnerable to attacks by terrorists or other groups, which could result in significant damage or the theft of nuclear materials.

**Cost:** Nuclear power plants are expensive to build and maintain, and the cost of nuclear energy can be higher than other forms of energy, such as solar or wind.

**Non-renewable:** Nuclear energy relies on uranium, which is a non-renewable resource. As reserves of uranium are depleted, the cost of nuclear energy could rise, making it less sustainable in the long term.

**Alternatives:** There are many alternatives to nuclear energy, such as solar, wind, and hydroelectric power, which are becoming more cost-effective and efficient.

It is important to note that there are also arguments in favor of nuclear energy, such as its ability to provide large amounts of energy with low greenhouse gas emissions. Ultimately, the decision to continue using nuclear energy should be based on a careful consideration of its benefits and risks, as well as an evaluation of alternative energy sources.

## II. WHY WE SHOULD STOP USING NUCLEAR ENERGY?

Nuclear energy has been a topic of debate for decades. Proponents argue that it is a reliable and efficient source of clean energy that can reduce reliance on fossil fuels and combat climate change. However, opponents argue that the risks associated with nuclear energy are simply too great to justify its use. In this blog post, we'll explore some of the reasons why some people believe that we should stop using nuclear energy.

First and foremost, one of the most significant concerns with nuclear energy is the risk of a nuclear accident. The most well-known example of this is the Chernobyl disaster in 1986, which resulted in the release of radioactive materials into the environment and caused numerous deaths and illnesses. While significant improvements have been made to nuclear safety since then, accidents can still happen, and they can have devastating consequences. The Fukushima disaster in 2011, for example, resulted in the release of radioactive materials and forced the evacuation of thousands of people. Even with the best safety protocols in place, the risk of human error or technical malfunction cannot be completely eliminated.

Another issue with nuclear energy is the problem of nuclear waste. Nuclear power plants produce radioactive waste that can remain dangerous for thousands of years. Currently, there is no permanent solution for storing this waste, which creates a significant environmental and public health risk. In many countries, this waste is stored in temporary storage facilities, but these are often overcrowded and located close to population centers. There is a risk that these facilities could fail, which would result in a catastrophic release of radioactive materials.

In addition to the risks associated with nuclear accidents and waste, there is also the issue of nuclear weapons proliferation. The same technology that is used to generate nuclear energy can also be used to create nuclear weapons. In fact, many countries that have nuclear power plants also have nuclear weapons programs. While there are international agreements in place to prevent the spread of nuclear weapons, there is always a risk that a country could violate these agreements or that nuclear materials could fall into the wrong hands.

Furthermore, nuclear energy is not as cost-effective as some proponents claim. The construction and maintenance of nuclear power plants are expensive, and the cost of nuclear energy has been shown to be higher than other forms of renewable energy, such as wind and solar. Additionally, the cost of decommissioning nuclear power plants and disposing of nuclear waste is also significant.

Finally, some people argue that there are better alternatives to nuclear energy that can be used to combat climate change. For example, renewable energy sources such as wind and solar are becoming increasingly popular and cost-effective. These sources of energy do not carry the same risks as nuclear energy and do not produce radioactive waste. Furthermore, energy efficiency and conservation can reduce energy demand, thereby reducing the need for any type of energy production.

In conclusion, there are numerous reasons why some people believe that we should stop using nuclear energy. The risks associated with nuclear accidents, nuclear waste, and nuclear weapons proliferation are simply too great to justify

its use, particularly when there are better alternatives available. While nuclear energy has been an important source of energy for many years, it is important to consider the long-term risks and costs associated with its use. As we continue to combat climate change, we must ensure that we are using the safest and most cost-effective sources of energy available to us.

### III. NEGATIVE IMPACT OF USING NUCLEAR ENERGY

Nuclear energy has long been hailed as a reliable and efficient source of energy. It is widely used around the world and is viewed as a practical alternative to fossil fuels. However, as with any other form of energy production, there are negative impacts of using nuclear energy that cannot be ignored. In this blog post, we will explore some of the negative impacts of using nuclear energy.

One of the most pressing concerns associated with nuclear energy is the risk of accidents. Nuclear power plants are complex facilities that require precise control to ensure that the nuclear material is kept stable. However, in the event of an accident, the results can be catastrophic. The most notable example of this is the Chernobyl disaster in 1986, which resulted in the death of over 30 people and the displacement of over 100,000. Another example is the Fukushima disaster in 2011, which was caused by a massive earthquake and tsunami that damaged the cooling systems of the reactors. These accidents serve as a reminder of the devastating consequences that can occur when things go wrong with nuclear power plants.

Another negative impact of using nuclear energy is the issue of nuclear waste. The by-products of nuclear energy production are highly radioactive and can remain dangerous for hundreds of thousands of years. This means that they must be stored securely and isolated from the environment to avoid the risk of contamination. The safe disposal of nuclear waste is a major challenge, and there is still no universally agreed-upon solution for its storage. Some countries store nuclear waste in deep geological repositories, while others reprocess it, which creates its own set of problems. There is also the risk of nuclear waste being used for nefarious purposes, such as nuclear terrorism or the creation of nuclear weapons.

Nuclear energy also has a negative impact on the environment. While nuclear energy does not produce carbon emissions like fossil fuels, it still has a significant carbon footprint. The mining and processing of uranium, which is the fuel used in nuclear reactors, is a highly energy-intensive process that releases greenhouse gases. Additionally, nuclear power plants require large amounts of water to cool the reactors, which can have a negative impact on aquatic ecosystems. Furthermore, the transport of nuclear waste and the risk of accidents can also have an adverse effect on the environment.

Another concern associated with nuclear energy is its potential use in nuclear weapons. The technology used to

generate nuclear energy is the same as that used in nuclear weapons. This means that countries with nuclear power plants also have the capability to produce nuclear weapons. The proliferation of nuclear weapons is a major international security concern, and nuclear energy can contribute to this risk.

Lastly, the cost of nuclear energy is a significant concern. Nuclear power plants are expensive to build and maintain, and the cost of nuclear energy is often higher than that of other forms of energy production. The decommissioning of nuclear power plants is also costly and time-consuming, and this cost must be factored into the overall cost of nuclear energy. Additionally, the risk of accidents and the safe disposal of nuclear waste also add to the cost of nuclear energy.

#### **IV. CONCLUSION**

In conclusion, while nuclear energy is a reliable and efficient source of energy, it is not without its negative impacts. The risk of accidents, the issue of nuclear waste, the negative impact on the environment, the potential for use in nuclear weapons, and the high cost of nuclear energy are all concerns that must be taken into account. As we continue to search for sustainable and efficient sources of energy, it is essential that we consider the negative impacts of each option and work to minimize them. While there are no perfect solutions, it is important that we weigh the pros and cons of each option and work to find the best balance between efficiency, cost, and environmental impact. Only by doing so can we ensure a sustainable future for ourselves and for generations to come.