

## The Misconceptions of An Eco-Friendly Energy

By Jonathan Zhang

Many people believe we should not rely on nuclear energy because of the way we have used it and the many nuclear accidents in the past. This view is particularly strong towards countries with nuclear weapons. Recently, we witnessed the danger of potential disaster when Russian shelling ignited fires at the Ukrainian Zaporizhzhia nuclear power plant. If the radioactive spent-fuel pond were to be hit, a catastrophe larger than Chernobyl could occur. However, nuclear energy, when put in the right hands, provides benefits that enrich our lives and our future.

The first thing that comes to mind is nuclear reactors. These towering power factories produce 20% of the United States' energy. The cost of production is indeed extremely expensive, yet the amount of energy far exceeds what other renewable resources can produce. Although they have chemical by-products, nuclear reactors are carbon-free, which makes it more eco-friendly than diesel and gasoline. Fifty-six percent of our nation's carbon neutral electricity comes from nuclear energy. Elon Musk, a proponent of clean energy, has shown support for nuclear energy when Russia seized Chernobyl stating that "Hopefully, it is now extremely obvious that Europe should restart dormant nuclear power stations and increase power output of existing ones." In addition, these machines can operate in all types of weather conditions. Nuclear energy is environmentally friendly and provides efficient fuel sources that will be the heart of our future economy.

Not only does nuclear energy produce electricity, but it also has medical applications. Remember your childhood injuries? Fractured bones cannot be seen with the human eye without surgery. To make examinations clearer, more hygienic, and less painful, doctors use X-rays to view bones and internal organs. Nuclear energy also plays an important role in diagnosing and killing cancer. TerraPower, founded by Bill Gates, is a company researching nuclear energy's application in technology and medicine. Its CEO, Chris Levesque, said "Whether it's addressing climate change with carbon-free advanced nuclear energy, or fighting cancer with nuclear isotopes, our team is deploying technology solutions and investors around the world are taking notice. Thus, nuclear energy saves many lives in various disciplines.

The final and most unexpected way why nuclear energy is important lies in its ugly consequences. Although it rarely happens, radiation leaks result in genetic mutations. The outcomes may seem horrible, but it is all part of nature. If all species were healthy and close in variation, one small difference in their habitat would kill them all. To prevent this, animals must have biodiversity. Biodiversity increases the differences between species and individuals. It also improves the animal's chances of survival due to its adaptations.

Another important role nuclear energy has contributed to nature is how it frightens humans. For the most part, no one, not even Chernobyl power plant workers, have dared to enter the "Red Forest". The pines there turned red due to the high radiation levels. It is considered the most radioactive area in all of Chernobyl. Fortunately for nature, without human intervention and disturbance, plants and animals have recuperated and returned parts of the wasteland to the environment.

You can now see the vast application of nuclear energy in industrial and medical uses, as well as its role in nature. Despite the possibility of great calamities, when put into proper use, it is also the key that unlocks the destiny of our nation and the world.