Investigating the viability of Nuclear power in the United States

Nuclear power is a compelling energy source due to its ability to produce large amounts of energy with high efficiency. Data analyzed from Ocean Washington (2005) revealed that one pound of Uranium contains about 1000 times more energy than a ton of coal. A pound of Uranium also contains about 33 million times more energy than a cubic foot of natural gas. Nuclear power is also a viable clean energy source that would help with climate change since, according to the World Nuclear Association (2024), Nuclear power emits comparatively less CO_2 compared to coal and natural gas. Nuclear power emits about 12 grams of CO_2 per kWh of energy produced, which is 68 times less CO_2 released from coal and 41 times less than natural gas. This environmental advantage has garnered increasing public support over recent years (Pew Research, 2023).

As illustrated by Ocean Washington(2005) and the World Nuclear Association(2024), nuclear power's capacity to deliver large-scale energy production while minimizing current greenhouse gas emissions makes it a viable option for reducing carbon footprints in electricity generation. With this, the author believes that in the future, nuclear power will be more widely used and will be the main source of power for the majority of the world. These benefits include its effect on climate change. The world-famous climate clock in New York states that we have about six years until our planet warms to the irreversible threshold of 1.5°C of global warming (Climate Clock, 2024). However, by increasing the use of nuclear power, we can slow down the rate at which our planet warms, and remain under that critical point. Currently, however, there are still some limitations when it comes to using Nuclear power. Specifically, these limitations are its safety and what to do with the waste produced by nuclear power. The safety of nuclear power is being addressed with new safety innovations that will decrease the chances of a malfunction happening. With nuclear waste, further research will be done in the future to address the best ways to handle this waste.

In summary, Nuclear power is one of the best options for powering the world. Its ability to produce tremendous amounts of energy while also producing little greenhouse gas emissions makes it a great option for a net-zero carbon emission world.