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### Final Paper

There is scientific consensus regarding the fact of anthropogenic climate change due to fossil fuel consumption. According to report by the United Nations Intergovernmental Panel on Climate Change, there is growing evidence of climate action, but it is not enough to reduce global heating to the target of 1.5°C. To try and reach this decarbonization goal, there has been a renewed attention on nuclear fission and energy sources, which have a long history, dating back to the disaster that has been incurred in the 1980s to the meltdown of the Fukushima nuclear plant in the 2010s. The particular issue at hand, which regards the controlled removal of radioactive wastewater into the Japanese ocean, seems like a national issue, but in fact it is very international. This paper will start by examining the Fukushima waste water cases and then will explore the status of nuclear fission and energy on the global stage, particularly in Germany, which was undergoing a phase out of nuclear fission and energy before the Russian invasion of Ukraine, but defect that natural gas has been supplied by Russia, which was formerly seen as a transition fossil fuel. It is cleaner, but is no longer a viable source of energy, due to geopolitical ramifications. It will be argued though if there is a desire to reach the United Nations decarbonization goals, humanity must accept nuclear fission and energy as an essential part of the energy mix, as other renewable and energy sources become cheaper. The current issue in Japan regarding the waste water is not just a regional one, but it is rather important globally to, as being extremely net picky about how this waste water is removed, merely reinforces an attitude which is set against nuclear vision and energy among the public, which is dangerous as humanity grapples with fossil fuel given climate change.

First, I should address the criticism to Japan's plan to release the Fukushima wastewater into the ocean. On the right end of the spectrum, neighboring geopolitical rival China is accusing Japan of using their common ocean as its private sewer dump. On the other hand, and more reasonable part of the spectrum, human rights and environmental activists argue that not enough

research has been done to justify dumping the waste water into the ocean yet. It is true that water is treated like commodity that is taken for granted and when it is tainted, this has proven to have devastating consequences. A famous, domestic example of this was the recent water crisis in Flint, Michigan. In what was largely an economically motivated move, the mostly white municipality leaders decided to switch the water source from the Detroit water system to the Flint river, which was known to be contaminated with lead. However, the similarities between Flint and Japan are striking. The Flint river was known to be contaminated with lead, and white leaders overlooked this element at the expense of the largely black citizenry, in a common case of virtual injustice tied to environmental injustice. In the case of Japan, there is a third party watchdog involved, namely the International Atomic Energy Agency (IAEA) which has deemed the plan safe. More generally, however, this negative attitude of the global community towards nuclear fission energy is dangerous and will be explored in the following sections.

In particular, Germany, which had formerly used nuclear fission energy as a vital part of its energy mix, closed down most of its reactors. There was some debate about backing out of this action after the natural gas supplied by Russia was no longer available after its invasion of Ukraine, but nevertheless the German government has continued. The Green Party in Germany was a chief supporter of shutting down nuclear fission capacity since the twentieth century. Back then, the crisis was not so acute, and nuclear fission generation seemed like more of an environmental concern. However, things have changed since then. In the wake of shutting down its nuclear fission capacity, the German government must instead rely on a call for its electricity generation. However, it is ironic, because science has reached a consensus regarding the safety of nuclear fission generation versus coal. "Furthermore, There is large public concern about nuclear fission generation being attributed to cancer, but studies have repeatedly shown that this is false, with fossil fuels actually presenting a greater public health concern. Nuclear energy generation is something that humanity has shown a capacity to safely control, so it presents a practical source of energy generation, while other renewables will start to become more practical in the future. Additionally, there had been recent advances and actinide management for the efficient

processing of waste relating to nuclear fission generation. While the scientific community recognizes the suffering that the disasters in Tchernobyl and Fukushima have caused, there is a continued commitment to safe, civilian nuclear power. Instead, there has been significant interest in a technology called geo and gene ring, which involves purposely spraying chemicals into the atmosphere in order to cool and call it. However, there is not much evidence supporting the viability of this strategy, but there is a tactical solution right before our eyes in nuclear fission energy generation. Although, geo and gene ring is different from nuclear fission generation in that it does not propose to actually generate energy, it represents a scheme to actually do nothing about the climate crisis right now and instead delay it, one we have the tools in nuclear fission and energy generation available to us right now. Humanity has shown a willingness to try and escape the climate crisis by researching and renewing solutions and starting to accept equal socialism. However, these are long term solutions and they are not as practical as nuclear fission generation, which we know works, and should be instead focussed on.

There is an overview of Bill Gates' recent book on climate change, in which he talks a little bit about nuclear fission energy. The author takes issue with Bill Gates oversimplifying the issue of nuclear fission and energy by reducing issues with the dec analogy to demand of direct accidents it causes, and also the fact that Gates comments on this issue, as an owner of companies developing advanced nuclear fission reactors. While, it is true that nuclear fission and energy generation does have far reaching and volume mental impacts, the fact is that "The deaths from nuclear power (deaths per terawatt hour) are far eclipsed by its competitors with only 0.03 deaths per terawatt hour, compared to 32.72 for Brown Coal. Furthermore, it should be considered what nuclear fission generation has already done for us: "Over the past 50 years, nuclear energy reduced CO2 emissions by 60 gigatons- nearly two years' worth of global energy emissions." The scientific community is working hard to make nuclear power a safe reality and this technology must be leveraged in order to avert ecological collapse.