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**Issue:**

As our dependence on fossil-fuels increases each year, we grow increasingly reliant on foreign oil markets and damage the environment in the process.

**Necessary Background:**

New Jersey, a state with a large population density, consumes an extremely large amount of energy per year, ranking within the top 10 states in the US.<sup>[1]</sup> Of the non-renewable resources, we are most dependent on natural gas and nuclear power, which together constitute over 1,017 trillion BTU of our total energy consumption<sup>[2]</sup>- approximately 94%<sup>[4]</sup>. New Jersey has attempted to reduce its pollution output by financing offshore wind farm projects,<sup>[3]</sup> but unfortunately these have proven ineffective, failing to reduce our dependence on oil as a source of energy, primarily due to how few have been made. Additionally, due an extremely congested energy grid, New Jersey's energy efficiency is extremely low. This in turn causes spikes in prices for energy<sup>[1]</sup>, harming the average citizen.

According to a recent congressional mandate, emissions should be reduced by 80% by 2050. Although New Jersey has attempted to meet this goal, implementing projects such as the aforementioned wind farms, only minimal progress (<5%) has been made and at the current rate this goal will not be met within the expected timeframe.

**Evidence of Problem Existing:**

The state of New Jersey uses natural gas to heat more than 80% of its homes, and in overall household consumption New Jersey households rank third in the nation<sup>[6]</sup>. Despite the positive impact increased use of natural gas can have on our state, there are potential drawbacks. For example, a large amount of methane, a major greenhouse gas, leaks into the atmosphere each year from natural gas lines that have been laid throughout the state.<sup>[7]</sup> Although the New Jersey government has attempted to pass laws to severely limit our dependence on natural gas and protect the environment, they have either proven ineffective or been struck down. For example, laws that stopped New Jersey from accepting the waste created by fracking in Pennsylvania were vetoed, which could prove disastrous for the New Jersey environment.

We are also extremely dependent on nuclear power to power our state, to the point where nuclear energy alone is 52% of our overall consumption of energy<sup>[4]</sup>. Though nuclear power is cleaner than both natural gas and oil, it still produces nuclear waste, a potential pollutant of groundwater, lakes, and streams. Though it is possible to properly store in a sterile environment, these facilities are extremely hard to create and, if built poorly, can easily contaminate the surrounding areas very rapidly.

**Impact:**

Fossil fuels are damaging to the environment and are nonrenewable. Oftentimes pollutants can severely damage ecosystems beyond repair, leading to the extinction of various species of local flora and fauna. The process of harnessing green energy is thus a pressing issue for the state and the nation at large. From an economic standpoint, prices in New Jersey will continue to rise should nothing be done to limit our use of fossil fuels. The inefficiency of the NJ power grid leads to the waste of a large amount of resources due to misallocation, and also is a key cause of the extremely high prices mentioned above.

**Possible Solutions:**

Some possible solutions that are viable within New Jersey include the implementation of offshore wind power. Currently, the state's potential Master Energy plan mandates that 1,100 megawatts of offshore wind capacity should be usable by 2020. This alternative to the use of fossil will serve as an environmentally efficient plan, and should be passed. Additionally, many experts believe that New Jersey's coast could support a much higher capacity, so increasing the scope of the master energy plan by increasing the minimum capacity would be another step forward. Solar power, another viable source of green energy, would greatly decrease our dependence on fossil fuels. In regards to nuclear power, it would be a catastrophe of major proportions if radioactive material found its way into the surrounding environment. With this in mind, it is important to make sure that making the standards for nuclear power plants are restrictive enough to prevent disaster, such as by requiring that all nuclear plants be able to withstand a specific magnitude earthquake, and also implement policies that require major oversight in regards to how nuclear waste is stored and handled.

**Sources:**

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