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**Essay#2**

**Global Warming**

Climate Change is mainly caused by greenhouse gases that alter the Earth’s energy balance leading to fluctuations in natural processes such as ocean currents and seasonality. The main causes of greenhouse gases are the burning of coil. These resources, since the industrial revolution, have been the major contributors of CO2 to the atmosphere. The relationship between this Co2 fluctuations and global warming was discovered more than 150 years ago, but several years later scientists found that humans were responsible for global warming. The increased production of C02 coupled with the higher frequency of extreme weather events has made scientists think about new ways of getting energy, that won't run out, won't pollute our environment and won't harm our environment. The employment of this kind of energy instead of Coil and petroleum-based energy is the only solution to mitigate the natural disaster that are caused by global warming.

One of the main factors that contribute/contribute global warming is coal-based power plants. Electricity is an important resource and is employed for business, communication, and healthy depends entirely on electricity. The high demand of electric energy has made governments focus on natural resources such as coal. This energy is characterized by the huge amounts of CO2 that it produces. China alone has produced more than a billion tons of CO2 to generate electricic power. This massive quantity of CO2 accumulates into the atmosphere preventing radiation of the planetary surface from escaping into outer space. Consequently, the world temperature has risen (in the last fourty years the temperature in the world has risen one degree Fahrenheit), causing more moisture to evaporates from ocean and increasing the probability of thunderstorms and other natural phenomena.

One alternative to coal-based energy could be wind energy. The idea of catching wind as a resource to produce energy was developed many years ago. Farmers, constructed windmills to transport water and grind grains to produce flour. Nowadays, instead of windmills we have gigantic turbines that are moved by the wind to produce kinetic energy which is later converted into electricity by a device called “generator”. This kind of energy only needs wind to work, thus reducing CO2 emissions. Also, unlike Coal-base energy power plants, wind power electricity can last forever. This clean energy doesn't come cheap, though. In fact, a wind turbine with enough energy to sustain an average house could cost up to 50, 000 USD to install. Nevertheless, the price of wind turbines is just a tiny fraction against those millions of dollars that the Chinese government invest on Coal-based energy.

Another important factor that release more greenhouse gases into the atmosphere is fossil fuel-based transportation. Transportation has played a key factor on human development. However, burning fossil fuels to keep cars, planes and trains moving had brought severe consequences to the environment. Fossil fuel transportation represents a big proportion of CO2 emissions; the burning of fossil fuels in USA and China account for 32% of the total CO2 emissions. Therefore, the problem is focused only among few countries with a high transportation energy demand.

One solution to this problem could be catching the sun as an alternative energy source. The sun is the biggest energy resource in our planet. In principle, coal and petroleum originally come from solar power. For instance, dinosaurs that later died and became fossil fuel, once feed on plants that caught the solar energy by photosynthesis. This energy could potentially replace fossil fuel for transportation. In theory, 12 kilo-watts could replace one liter of gasoline, and solar panels are being improved every day to transform better solar energy into electricity. Therefore, with a little bit of more money investment and scientific research, there will be a good change to develop devices that can generate enough energy to sustain bigger means of transportations, such as plains and boats. This will significantly reduce the amount of CO2 that is produced by burning fossil fuels, and mitigate natural phenomenon cause by global warming.

Besides fossil fuel-based transportation, another factor to be considered in order to mitigate the effects of global warming is to slow down deforestation, which is the process whereby natural forests are cleared through logging. Trees are basically the lungs of the world; one hundred metric tons of CO2 can accumulate in one acre of forest over time. Therefore, fewer trees on the surface of the earth represent a larger amount of CO2 entering the atmosphere. This problem could be solved by employing recycle wood waste. This is a very lucrative alternative to replace deforestation. First, it is easy to collect because most of the wood waste can be found in construction waste, old furniture and urban tree trimming. Furthermore, the equipment necessary to process this waste material is becoming cheaper. Therefore, furniture and other articles made of recycle wood are growing in demand.

One of the most difficult challenges to quit coal and petroleum as principal energy resource, is that they represent a significant income to governments and companies. For instance, countries such as Venezuela represents about 80% of the country's total export revenue. In other countries like Ecuador, oil accounts for more that 40% of the total revenue. Therefore, shifting the productivity matrix from petroleum to clean energy is a big risk that no government wants to take. One solution to this problem could be to develop small-scale and community-based renewable energy projects to demonstrate that clean energy can be profitable.

Since the industrial revolution began in the 18th century, coal and petroleum have been used to drive the progress of humankind. These resources seemed to be an infinite supply easily exploited. However, after a long history of exploration we have encountered with an scenario where natural resources are limited. In fact, some of them are almost finished. Therefore, we have to start to think about future generations and be more responsible with the environment. At the end, mitigate the effects of global warming is not about saving our world, it is about saving our species. During its 6.1 billion years history, the earth has survive countless of significant climate fluctuations, and will also survive this climate change. Unlike other climate fluctuations, this is the first time a species has caused worldwide climate change, but at the same time is the first time that the same species has the power to do something about it and survive.