

Example of argumentative essay on how will america generate electricity in the fu...

[Environment](#), [Electricity](#)



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Introduction

Electricity remains one of the energies source that has played an integral role in transforming peoples' lifestyle, facilitated economic development, improved the living standards and promoted industrialization. Over the years, America has heavily relayed on the electrical power as the main source of power because electrical power is convenient, cost effective, and reliable. As a result of its versatility, electrical power is used for various purposes and in different environments. In most cases, it is used in learning institutions, factories, government corporations, and at homes for distinctive purposes. Normally, electricity is used to operate and run machines in the industries, for heating and drying, lighting, and a reactor or catalyst in chemical reactions. It is also useful in the home setting because it is used for cooking, heating, lighting, warming, and operating electrical appliances, to mention, but a few. In essence, the role of electricity in life cannot be ignored because nearly ninety-five of the human activities require the use of electricity or are interlinked with other activities, which are directly and

indirectly interconnected with electricity.

As a developed nation, America generates its electrical power from nonrenewable and renewable sources of energy coupled with other primary sources. Coal, nuclear reactors, carbon fuel, water, wind, solar, and natural gas are some of the resources, which are used to produce electric power. Coal-fired plants, hydro electrical power plants, and nuclear reactors plants are the main source of electric power, but they have detrimental impacts on the environment as they contribute in global warming and climate through emission of greenhouse gases (Robert 250). As a result of increasing demand for electricity, depletion of nonrenewable sources of power, and global warming, there is need to devise effective means of generating electricity in the future. The paper explores the use of renewable sources and natural gas to generate electricity in America.

Background

Historically, it is arguable that the era of massive distribution and generation of electrical power emerged in 1895, when horse power generators and turbines generated 2200 Watts along the Niagara Falls, America. Initially, electricity was used in aluminum and carbon industries, but it was later distributed to the nearby cities and used for heating. Invention, innovation and technological advancement enhanced massive production and efficiency supply of electric power in the region. This significant growth and development was as a result of numerous invention and studies done by different scientists including Michael Faraday, Hans Christian, and Zenode Gramme. Since 1895, America has devised cost effective and convenient

means of generating and distributing electricity; an idea that facilitated economic, political, social, and cultural prosperity.

Although America has depended mainly on coal and other nonrenewable sources to generate electricity, there is need for the state to devise others means of generating clean and environmental friendly energy. Currently, nonrenewable sources of energy are under a threat of depletion and emit greenhouses gases, which pollute the environment and contribute in global warming and climate change. According to a report released by Energy Information Administration (2010) indicated that with introduction of energy efficiency measures coupled with enhancement of grid infrastructure, the American government should increase the use of renewable sources of energy to generate electricity and cater for the increasing demand. The report further indicated the electricity demand has increased by 10% in the last ten years, and it is anticipated to increase by 25% by the end of 2050 (U. S Energy Information Administration 1). Based on these assertions, there is a great threat and danger when the American government fails to generate electricity using other means.

Discussion

However, it is important at this juncture to pose the question what alternative means and resources should American use to generate its electricity in the future. In the same breath, one should question the effectiveness of these alternative sources of energy in comparison to those being used to generate electricity today. According to a survey done by the Energy Information Administration (2011) indicated that cleaner coal,

nuclear, and solar are some of the viable alternatives that the American government should use to generate electricity in the future. Solar energy is a renewable source of energy and has minimal impact on the environment whereas cleaner coal and nuclear energy have relatively lesser impact of the environment compared to carbon fuels, and produce large quantities of electricity (Spangler 254).

Coal-fired plants form and continue to be the leading electricity generating sources in the country. Coal accounts for more than 85% of the electricity generated, but its capacity utility continues to decrease with time. In 2011, coal capacity utility and demand decreased from 42% to 38%, and it is projected to decrease to 35% by the end of 2050. Analysts project that less than 15% of the coal-fired plants would be operational and would account less than 4% of the national grid in 2050. Although coal has remained the main source of electricity in America, it a nonrenewable source of energy that emits large volumes of greenhouse gases, which pollute the environment and contribute in global warning. Coal is a carbon compound that produces carbon dioxide gas and carbon monoxide gas when it reacts with air, water, and other elements (Robert 15). These greenhouse gases deplete the ozone layer, form acidic rain, and lead to global warming and climate change. In 2004, the House of Representative and the Congress passed a bill of America Clean Energy and Security Act that intend to reduce global warming and climate change and encourage generation of environmental friendly electricity through replacement of coal-fired plants with cleaner coal. Environmentalists argue that cleaner coal remain a viable means of generating electricity because it emits less amount of greenhouses

and it is cost effective. In the future, coal plants would use pulverized coal and ultra-supercritical coal to produce electricity and promote sustainable economic development. Although it is expensive to establish cleaner coal plants, it is advantages and beneficial to prevent the risk associated with global warming and climate change.

Nuclear energy forms another viable source of energy that the American government can use to generate electricity in the future. Currently, nuclear energy represents a relative smaller percentage of the electrical energy generated compared to coal, but there is a gradual demand for nuclear power. In 2011, U. S nuclear generation plant recorded 0. 8% growth rate in the electricity generation, but it is projected that it would increase by 25% by the end of 2040 (American Coalition for Clean Coal Electricity 89). This trend clearly affirms that nuclear energy provides reliable, cost effective and efficiency form of energy because it is the one of the energy source that emits minimal amount of harmful gases. Nuclear energy account for approximately 20% of the American electricity power and more than 100 nuclear power generating plants have been established.

Although nuclear power has minimal impacts on the environment in terms of pollution, it does not mean that it does not endanger human, plant and animal life in different aspects. In most cases, radioactivity elements are used to generate the nuclear power in nuclear reactors plants, and these elements emit harmful infrared radiations, which are dangerous to human, animal, and plant life. It has been established that radioactive elements emit radiations, which cause cancer and kill people, if the radiations are not controlled and maintained to manageable levels (Timothy 325). Additionally,

nuclear power plants are established near water bodies because they require large amounts of water for cooling and to generate steam that runs the turbines. In the same breath, they discharge heavy metals and compounds into the water bodies thus destabilizing the ecosystem balance in the environment. Despite, this shortfall, nuclear energy is cost effective, relatively environmental friendly, clean, and reliable compared to coal energy.

Solar energy is another form of renewable energy that is clean, reliable, affordable, and effective and can be useful to generate electrical power in America. Solar energy is generated through the installation of solar panels, which have the potential to generate large amount of electricity yearly. Currently, America has an effective solar system that has the capacity to generate more than 31 Megawatts and this amount of electricity can be used to meet the increasing demand for electricity in the country and be used in more than 630, 000 households. Solar energy is generated when concentrated solar panels store thermal energy that is used to produce electricity when the through heating a turbine or a generator. Similarly, photovoltaic cells are used to convert the thermal energy into electrical energy that is used in industries and at home (Furkan, 718). Although this is the case, what are the benefits associated with solar energy. First, solar energy is environmental friendly and the cleanest form of energy because it does not emit harmful gases, and contribute in global warming and climate change. Second, it is affordable, cost effective, and less expensive because it depends on natural sunlight to operate. Although it does not generate large amount of electricity as nuclear and coal energies, it is the most convenient,

environmental friendly and sustainable energy source for America. Based on this assertion, America should use nuclear power, cleaner coal, and solar energy to generate electricity and meet the increasing demand for electricity and reduce global warming and climate change.

Conclusion

Electricity remains one of the main sources of energy that has played a pivotal role in promoting industrialization, enhancing the living standards, and facilitated economic development. America heavily depends on nonrenewable and renewable sources including coal, nuclear energy, biofuels, and natural gas to generate electricity that is used in factories, industries, and homes. Nuclear power, coal, hydroelectric power, and biofuels have negative impacts on the environment as they emit greenhouse gases, which pollute the environment and influence global warming and climate change.

As a result of the increasing demand for electricity, depletion of nonrenewable deposits, and global warming and climate, America needs to devise new alternative and means of generating it electricity in the near future. The alternative sources, which should be used to generate electricity, should be cost effective, reliable, and environmental friendly. However, cleaner coal, nuclear energy, and solar are the alternative sources of energy that American should use to generate electricity and the future. Although these alternative sources of energy are reliable, affordable, and convenient, they impact the environment differently. Cleaner coal has the capacity to generate large amount of electricity and at the same time emit low amount

of greenhouse gases compared to coal-fired plants, used today. Nuclear power is reliable, efficient, and cost effective, but is expensive to establish and maintain and regulate radiations emitted by radioactive elements. Despite this variance, nuclear power has relatively lower negative impact on the environment, when handled carefully. America has a potential of generate approximately 31megawatts that can be used in more than 630, 000 households. Solar energy is renewable source of energy, cost effective, reliable, and environmental friendly because it does not pollute the environment.

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