

# Hydrogen will end our fossil fuel addiction essay

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In the universe as we know it, hydrogen is the most abundant element there is. For many years, hydrogen has been a common alternative in the fuel industry. However, over the last decade or so, recent technological breakthroughs in fuel cells have prodded a tremendous wave of interest in its potential as an energy alternative. Hydrogen's potential energy application that has gained much interest in the recent years has been in the transportation sector. This is because of the United States' virtually exclusive dependency on imported fossil fuels.

In theory, fuel cells can be produced in a variety of sizes. It can also be used for quite a lot of potential applications. In addition, it can cost-effectively convert hydrogen to electricity by the aid of "special membrane materials and an electrochemical" instead of the usual combustion process it undergoes (Herzog 5).

The transportation sector can use hydrogen to achieve sustainability relatively more cost-effective than traditional combustion-based technologies to its advantage. This characteristic unique to hydrogen could propel it to be even more competitive. It can even offer benefits that could make up for its higher costs compared to other alternatives. The success of fuel cell technology in terms of its growth and profitability is indeed an important requirement for launching the practicality of hydrogen as the primary fuel of the future (Herzog 5).

Theoretically, the prospective renewable resource ground for hydrogen production in the United States is quite huge. The amount of hydrogen that may be produced locally using renewable resources alone can already

counterbalance the prevailing fossil fuel consumption of the transportation sector. A huge amount of this potential may be attributed to the wind and solar resources that are implausibly be financially competitive unless we consider its impact in the long run. Renewable hydrogen sources of this kind include energy crops, domestic solid wastes, agrarian and farm animal residue and specific wind resources within the vicinity requiring centers to be comparatively appealing (Herzog 14).

We are living in an era when the very small fraction of history is completely addicted to fossil fuel and consumes them up accordingly. All the components of a true addiction can be found. Although we get the high, we suffer the enduring consequences of our actions. It poses serious health problems. The price we pay for this addiction can cause us our lives (Gram NP). The first half of the 21st century signals the end of the oil era. Oil prices in the global market continue to sky rocket. Simultaneously, the remarkable increase in carbon dioxide emissions from the blazing of fossil fuels is raising the earth's temperature.

It frightens an unprecedented variation in the chemistry of the earth and the global climate. It brings with it warning signs for the future of humanity and the earth's ecosystem (Rifkin NP). If the human life is a long – life light bulb, the flashbulb then is the fossil fuel era. Such era may be extended by imposing high taxes on these fuels. Also, taxing the measures that promote conservation may also prolong this era.

Nevertheless, our addiction to it is greater than any compassion we may have for the future of this planet and ourselves. As a result, it is certain that

fossil fuels will mostly be gone in next to no time. When we say “mostly all gone,” we mean that there is still abundance but it is already too costly to be practical.

A sensible guess is that at the middle of this century, fossil fuels, will be dismissed as a luxury – too costly for regular consumption (Gram NP). Our country is obsessed with oil and we pay a hefty price for it. Our reckless use of fossil fuels result in air pollution, urban smog and eventually global warming. This addiction keeps us reliant on the rather volatile overseas sources of supply. Further more, it heightens the pressure for oil and gas exploration in delicate regions like the Artic National Wildlife Refuge and the frontage of the Rockies (Dean NP). In principle, for as long as the sun rises and the earth rotates on its orbit, all the energy on this planet is renewable. But it takes a millennia to be able to renew some sources of energy like coal, oil and natural gas. The quest for new organic sources of energy goes on.

Researchers find out ways to shorten the time needed to transform sunlight into utilizable energy (Moore 207). The underlying principle in utilizing the sun’s energy remains the same. Light stimulates an excitation in the electrons in a pigment molecule. Sunlight does not come in a price tag.

Speaking in evolutionary terms, it did not take a long time for life on this planet to take advantage of solar energy. Perhaps more than 2. 5 billion years ago, our fossil fuel reserves have been constantly produced by atmospheric carbon plummeting into sedimentary rocks. In spite of this, as predictions would have it, 400 years from now, we will have released most of it again as carbon dioxide.

Apparently, this carbon dioxide can not be recycled into organic matter soon enough to avoid global warming. (Moore 207). No matter what source of carbon – based fuel is used, we will still cause an overload into the natural flow of recycling mechanisms if our requirement remains the same. Lowering global energy consumption while it rises in sync with emerging economies is clearly not viable. Searching for alternatives to carbon – based fuels has never been so important. We need to advocate systems that are not cost – biased in terms of the carbon cycle (Moore 207). It is about time to put an end to our fossil fuel addiction. There are quite a lot of possible alternatives for oil as a transportation fuel.

Considerably, the most fascinating alternative is the use of hydrogen to power vehicles. This is due to the fact that hydrogen, when combusted is non – polluting. Certainly, it is one of the most valuable investments we could secure for our country in order to create an improvement in our lives and in the environment where we live (Dean NP). Hydrogen is one of the most promising technologies in the future of energy. Continuous researches being made will make it possible to drive hydrogen – powered cars, reside in hydrogen – powered homes and cut our addiction to fossil fuels.

Hydrogen fuel cells are here to stay. We just have to ask ourselves, how soon will it grace our streets and the entire neighborhood? At present, ongoing projects are headed towards that direction. In these studies, hydrogen is created with the aid of the electricity generated by wind turbines, with no dangerous emissions. The energy generated by these wind turbines supplies the electricity needed for the hydrogen production process (Walters).

While the substantial supply of the global energy well would still come from oil, coal and natural gas, there is an emerging consensus that we are going through an era where the accumulated cost of our fossil fuel addiction is starting to create a haul on the global economy (Rifkin NP). We have to exert all possible efforts to make sure that our fossil fuel reserves are efficiently utilized. We must continue to find ways in developing alternative energies to control the carbon dioxide emissions generated by the combustion of conventional fuels (Rifkin NP). In the not so distant past, political leaders and the media, together with leading automobile manufacturers have espoused the probability of hydrogen as the source of hope in addressing the hastening threats of global warming and oil dependency in the country.

Due to the fact the hydrogen production is feasible in the United States, hopes are on high for its saving grace. Contemporary exuberance for hydrogen fuel products promising improved air quality and reduced global warming pollution than conventional fuels guarantees energy independence (Herzog 3). We cannot source and extract hydrogen from the earth's crust. Instead, hydrogen is made and the manner we employ to produce it matters the most. Wind, solar, biomass resources and even fossil – fuel sources under determinate conditions are the most environmentally friendly ways of producing hydrogen for tomorrow (Herzog 3). There are great barriers that block the way of commercializing clean and sustainable means of hydrogen production. In effect, it will take us another 20 years to be able to achieve a crucial contribution to our planet.

Global warming pollution may significantly register low, the quality of air we breathe may be improved and the United States may eventually be oil independent (Herzog 3). Any practical judgment of hydrogen as an alternative energy proposes that the transition to a hydrogen economy is inescapable. The United States is not wasting time to impede the pollution brought about by global warming. Moreover, it can not wait any longer to put an end to its oil dependency. This can only happen until such time when the hydrogen economy is in full swing (Herzog 4). Hydrogen as a cure to our fossil fuel addiction may be expensive.

Certainly, it will not be an immediate cure. However, it promises a healthier future for the planet. The time will come when fossil fuel addiction will just be a thing of the past but that is not as soon as now. The efforts we make today will surely be of great relevance in the years to come.