

Fact Sheet Summary

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Fact Sheet Topic: Fracking

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Introduction

I chose this topic because I wanted to see what I could learn by studying it and see how much of it I can find and share. I will be provided this fact sheet with its history, how much we can or have gained from it, and public health problems it can cause. Although, I admit when I chose fracturing I thought it meant something different than drilling but I'm still eager to see what I find on this topic and share what I find.

Section 1: Background and Problem Statement

Fracking has provided global energy and made big business for fossil fuels in the United States but it also poses serious threats to our health, environment and climate. It goes back to 1862 and has been credited to a Colonel named Edward A. L. Roberts where in the midst of the battle of Fredericksburg he discovered narrow water-filled channels in the artillery. A few years later discovered oil as he put in an "exploding torpedo" down in the shattered rock. So others using similar methods discovered this eventually the term fracking and its use was born. Although there has been much money to gain since it's discovered there are still some concerns. For example, it consumes much water and risks contaminating the water as well. There are also risks of air pollution as natural gas and oil sludge into the air causes problems such as methane pollution and greenhouse effects which eventually could lead to lung disease and cancer when inhaled.

Section 2: Research

Once hydraulic fracturing drills are set up they turn communities into a term people call "sacrifice zones." Clearing land for access roads, drilling and encasing wells, and fracking the well all contribute to pollution. The fracking process involves injecting water, sand and 596 chemicals into hard shale rock under high pressure to break it up and extract the gas trapped within. Of course, some of the gas escapes into the surface which causes them to get into the atmosphere. The gas is obviously toxic to the air but the real problem is that it could take years for the gas to clear.

Section 3: Statistics

Fracking seems to have an important part in business. In the state of Oklahoma alone there are tens of thousands of oil and gas wells that have made fossil fuel companies in that area thrive and increase. Although there are still some health concerns that go along with it. Data from 1998-2017, researchers found higher death rates, lower life expectancies, diseases, cancer and cardiac arrests. It seems that at least a 1% increase in the number of fracking wells leads to a 4.2% reduction in life expectancy, 6.8% increase in mortality rate, a 7.9% increase in cancer diseases, a 7.3% increase in cardiac diseases, and a 5.9% increase in respiratory diseases.

Section 4: Consumer Information

There can be some benefits that can come with fracking as it allows us to tap into energy resources like natural gas. "Natural gas generates 25 percent of our electricity, and approximately two-thirds of the natural gas produced in the U.S. goes into making chemicals, pharmaceuticals and fertilizer, and is used for heating and cooling."

Section 5: Solutions to the Problem (or Issue)

There are at least 5 methods to make fracking cleaner. Those methods are: using waterless fracking systems that companies like Gasfrac are working on a new fluid that can gather the same results fracking has before using water. Also, replacing fresh water with recycled water or brine will help reduce the water pollution caused by traditional fracking systems. Next, replacing diesel powered

equipment with engines that use natural gas or solar panels will reduce the large amount of harmful gasses emitted and hopefully lower the damage done to the environment. Additionally, introducing wastewater purification could help reduce the pollution caused by wastewater. Finally, reducing methane leaks by replacing traditional pressure-monitoring pneumatic controllers to lower-bleed designs which can reduce the leaks and save companies money.

Conclusions

So in conclusion, I have to say fracking seems to have played an essential role in U.S. history. Hydraulic fracturing or “fracking” is the process of extracting natural gas or oil from subterranean rocks, boreholes, etc. Since the 1940s it has been used as a way to supply energy to many industries and companies in the U.S. and with it has gotten so many people jobs and careers. Although, there can be some risks that come to it like air pollution or water contamination. All in all it was a very interesting topic to study and research that I might be able to share with someday.