

## Natural Resources Line of Inquiry

### Lesson 4

#### Biofuels Articles

#### Writing Prompt

Analyze both sides of the biofuels arguments. In your response, develop an argument in which you explain how one position is better supported than the other. Incorporate relevant and specific evidence from both sources to support your argument.

Remember, the better-argued position is not necessarily the position with which you agree. This task should take approximately 45 minutes to complete

#### How Biofuels Can Support Economies

Edna Smith, Ph.D. in Energy Policy

Statement to the US House of Representatives Energy and Commerce Committee

How can investing in biofuels help reduce our dependence on fossil fuels in the United States? Fossil fuels might run out by 2060, but we can continue to produce and use biofuels (Kuo, 2019, Stanford University MAHB). In 2013, a study conducted by the US Environmental Protection Agency discovered that we can produce biofuels in an environmentally friendly way, without needing to import them from other countries. Some states that already produce a lot of corn can utilize the extra corn to make biofuels like ethanol. Some people argue that making ethanol from corn is not a good idea because it consumes more energy and increases the price of corn, which affects the cost of our food. However, scientists are researching the use of algae to produce biofuels instead. Algae can be cultivated in water that is not suitable for drinking or in areas where we cannot grow crops, making it a good source of biofuel. Initial research indicates that algae could generate more biofuel per area compared to other sources. By investing in research and technology to improve biofuel production, the United States can take significant steps towards reducing our reliance on fossil fuels that will eventually deplete.

Using biofuels means we won't have to depend on importing large amounts of fossil fuels from Canada, Mexico, and Saudi Arabia (data from EIA.gov). Some major car companies already manufacture vehicles that can run on fuel containing up to 85% ethanol. However, currently, there are only 4,200 gas stations out of approximately 168,000 across the entire country that offer ethanol for cars, according to the US Department of Energy Alternative Fuels Data Center. Additionally, biofuels have less energy per gallon compared to gasoline

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derived from fossil fuels, as stated in the US Department of Energy's 2023 report. If the United States aims to have a more sustainable fuel source, we need to improve the effectiveness of biofuels and make them more widely accessible in the coming years.

As the world gradually depletes its fossil fuel reserves, countries with strong economies will be the ones capable of producing biofuels in an environmentally friendly manner. If the United States wishes to maintain a strong economy, it is crucial to discover the best sources of biofuels and utilize them in innovative ways to power our vehicles and homes.

### Biofuels are Harmful to the Local Economy

Carl Edgar, Owner of ShurPump Gas Stations  
Letter to the Editor

Dear Editor,

I own five gas stations in a small farming town in Pennsylvania. This letter is a response to a proposal by Edna Smith, who thinks we should start using biofuels instead of fossil fuels in the U.S. She does not realize that fossil fuels are better for our economy.

Edna talks about "flexible fuel" cars that use ethanol (corn-based fuel). My friends who have these cars must drive more than 30 minutes to fill up their tanks. At least five people have asked me to get an ethanol fuel pump at my station, but it would cost over \$70,000. Most small business owners cannot afford this. Small businesses are important for our economy, and pushing more people to use flexible fuel cars could hurt us.

Next, using food for fuel limits our food supply. When ethanol started to become more popular a few years ago, I noticed that the farmers in my town started planting more corn to keep up with the demand. Before long, I noticed that there was less at the farmers' market because everyone was planting corn. Also, since corn was being used for fuel, the price of all corn-based products went up at the grocery store. How long until people are going hungry because we are making all our fruits and vegetables into biofuels?

Something Edna did not consider was how the US switching to biofuels would impact the economies of other countries like Canada, Mexico, and Saudi Arabia. These countries might

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not have the resources to make biofuels. If we stop buying their oil, it could cause trouble for them. The United States could end up hurting its relationships with these countries and its own economy.

Edna had good intentions, but she did not consider all the facts. It is important to think about all sides before we make big changes from fossil fuels to biofuels. I hope our leaders in D.C. find ways to improve both types of fuel for our economy.

Sincerely,

Carl Edgar, Owner of ShurPump Gas Stations