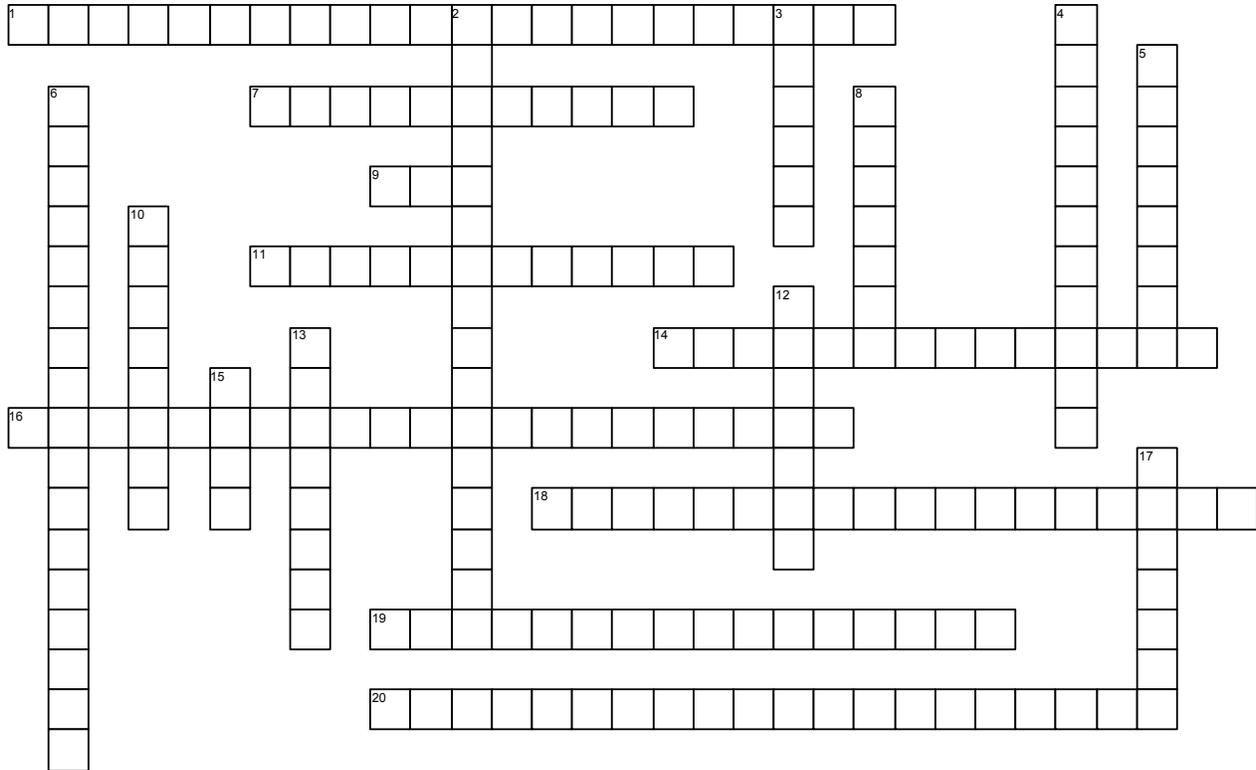


# Alternative Fuels

## Chapter 6



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### ACROSS

- 1 A \_\_\_\_\_ measures both the percentage of ethanol blend and the temperature of the fuel.
- 7 \_\_\_\_\_ can be used to make ethanol and is a summer perennial grass that is native to North America.
- 9 Diesel fuel created using the \_\_\_\_\_ process is often called GTL diesel.
- 11 Coal can be converted to a liquid fuel through a process called \_\_\_\_\_.
- 14 \_\_\_\_\_ can be made from a variety of products, using several different processes.
- 16 When sold as a fuel, propane is also known as \_\_\_\_\_ because the propane is

often mixed with about 10% of other gases to give the propane a smell.

- 18 Exxon Mobil has developed a process for converting methanol into gasoline in a process called \_\_\_\_\_.
- 19 \_\_\_\_\_ can be produced from a wide variety of cellulose biomass feedstock.
- 20 \_\_\_\_\_ is another alternative fuel that is often used in fleet vehicles.

### DOWN

- 2 Pure alcohol with no more than 0.5% water is called \_\_\_\_\_.
- 3 Using a simple reaction between coal and steam, a gas mixture called \_\_\_\_\_ is formed.
- 4 \_\_\_\_\_ technology

uses a catalyst, usually iron or cobalt, and incorporates steam re-forming to give off the by-products of carbon dioxide, hydrogen, and carbon monoxide.

- 5 \_\_\_\_\_ is a chemical compound formula that includes one carbon atom, four hydrogen atoms and one oxygen atom.
- 6 \_\_\_\_\_ is composed of cellulose and lignin, with smaller amounts of proteins, lipids, and ash.
- 8 \_\_\_\_\_ is the most widely used of all of the alternative fuels.
- 10 \_\_\_\_\_ is created from a process where coal is reacted with hydrogen at high temperatures and pressure with a catalyst.
- 12 \_\_\_\_\_ is usually made from grain and is the type of alcohol found in alcoholic drinks.

- 13 Using E85 in a \_\_\_\_\_ vehicle can result in a power increase of about 5%.
- 15 The \_\_\_\_\_ can operate on pure gasoline or blends up to 85% ethanol.
- 17 \_\_\_\_\_ can be converted to synthesis gas by a process called partial oxidation, and later converted to methanol.