

TOPIC 6.11

Hydrogen Fuel Cell

Required Course Content

ENDURING UNDERSTANDING

ENG-3

Humans use energy from a variety of sources, resulting in positive and negative consequences.

LEARNING OBJECTIVE

ENG-3.P

Describe the use of hydrogen fuel cells in power generation.

ENG-3.Q

Describe the effects of the use of hydrogen fuel cells in power generation on the environment.

ESSENTIAL KNOWLEDGE

ENG-3.P.1

Hydrogen fuel cells are an alternate to non-renewable fuel sources. They use hydrogen as fuel, combining the hydrogen and oxygen in the air to form water and release energy (electricity) in the process. Water is the product (emission) of a fuel cell.

ENG-3.Q.1

Hydrogen fuel cells have low environmental impact and produce no carbon dioxide when the hydrogen is produced from water. However, the technology is expensive and energy is still needed to create the hydrogen gas used in the fuel cell.

SUGGESTED SKILL

 *Concept Explanation*

1.C

Explain environmental concepts, processes, or models in applied contexts.

**AVAILABLE RESOURCES**

- Classroom Resource > [AP Environmental Science Teacher's Guide](#)