

**Ohio Environmental Education Fund:
Fueling our Future
Project Summary**

Total: \$42,337

PI: Steve Levin

Project Dates: 07/01/2018 – 06/30/2019

Partners: Ohio State University, Ohio Fuel Cell Coalition, and the Stark Area Regional Transit Authority (SARTA)



Executive Summary

Ohio has significant air quality problems with several of its communities in non- attainment zones. Alternative sources of electrical energy production, such as solar photovoltaics, and wind energy, and the use of hydrogen fuel cells for energy conversion, can completely eliminate pollutant and carbon based emissions. But little is known by Ohioans about the details of these new forms of clean energy, or their emerging career opportunities. Because of Ohio's manufacturing base, it is the perfect place to develop jobs in clean energy. The purposes of this project are: introduce 7th grade students to solar PV, wind, and fuel cells; show students the career opportunities across the spectrum in clean energy; and, educate 7th grade science teachers about alternative energy and jobs in clean energy so they are better equipped to instruct students.

Project Description

The Ohio State University, Columbus State Community College, Ohio Fuel Cell Coalition, and the Stark Area Regional Transit Authority formed the Renewable Hydrogen Fuel Cell Collaborative (RHFCC), to make Ohio a US and global leader in renewable hydrogen in transportation. With a three step plan, the RHFCC will develop a program to interest and excite 7th graders about clean energy and related career opportunities. First, a lesson plan will be developed for 7th grade science teachers to deliver as pre-work. Secondly, the RHFCC will arrive at middle schools with our 30' hydrogen fuel cell bus, outfitted with hands-on learning experiences in alternative energy. And third, students will be given follow-up lessons in alternative energy and related careers. Initially, 7th grade science teachers will receive a half-day professional development course in alternative energy and careers in clean energy. Bus visits would coincide with school career fairs to maximize impact.

Project Objectives

1. Introduce 7th grade students to solar and wind power production and fuel cell energy conversion, along with the environmental benefits to those clean energy technologies.
2. To expose 7th graders to careers in manufacturing, maintenance, and research and development in clean energy production and conversion.
3. Provide professional development to 7th grade teachers in alternative energy and the emerging careers in clean energy.