



4-H Renewable Energy Camp

June 27- July 1, 2016

Audience

This program is for youth ages 13 to 19. It was the seventh year of the program. 43 youth applied and 33 youth attended the program. Enrollment: 13 females and 20 males representing 15 counties. Ethnicity: 3 Asian, 1 Multiracial, 1 Native American, 20 Caucasian/white, and 8 Black/African American. Youth were accepted based on age, regional representation of the state and application question responses.

Funding

Sponsorship was provided from the Corn Marketing Program of Michigan (\$3,000), HomeWorks / Tri County Electric Coop. (\$2,500) and the Michigan Soybean Promotion Committee (\$1,500). There was also a \$190 participant fee for 4-H members and a \$200 fee for non-4-H members plus in-kind support provided by MSU Extension.

Objectives

This residential conference is designed to:

- Educate youth on current issues and technologies impacting energy and the environment within Michigan's agriculture sector.
- Develop problem solving and critical thinking skills through team work and hands-on-learning.
- Expose youth to degrees and jobs in these new and exciting fields.
- Develop and expand career and personal interests.
- Foster participants' ability to meet new people and make new friends from different places and backgrounds.
- Develop social and academic skills needed for a successful transition to college and life as an adult.

Description

Participants had 35 contact hours with 13 MSU faculty and educators along with 16 industry leaders. The students spent 5 days exploring ideas, research and hands-on opportunities in the field of energy as it relates to natural resources and agriculture. They worked with leading researchers at MSU who are developing the latest innovations in biofuel production and technology that offer alternatives to fossil-based fuels. The teens also visited companies that are taking the latest discoveries of science and turning them into real products that impact our local communities and the world. They toured and engaged in

hands-on activities at Carbon Green Bioenergy, Kellogg Biological Station, Portland HomeWorks, and a substation specialized in the transfer of wind energy. Youth chose a track that allowed them to go more in depth into either solar, wind or biofuel energy. They conducted experiments, made their own biofuel, designed and tested wind turbines, and built a solar powered model house they designed themselves. On the last day of camp each participant presented in a small team a project they had researched and designed during their track time.

Participants were also granted access to many of the resources that MSU campus has to offer, including many lab tours and faculty presentations. They stayed in an MSU residence hall.

Impacts

- 91% of the participants who responded to the evaluation reported that after completing this camp they are more knowledgeable about Bioenergy
- 87% of participants also indicated that they are more likely to pursue a degree or career in a Bioenergy related field following the completion of this camp.
- 75% indicated an anticipated change in personal energy use.
- 100% plan to apply the knowledge gained through the program.
- 72% plan to teach what they have learned to others.
- 93% feel that after completing the camp were better prepared to attend college.

Additional Significant Information

All lessons and activities are aligned with Michigan Education Standards. Youth participating in the Renewable Energy Camp earn a Silver Renewable Energy Camp Digital Badge and either a Solar, Wind or Biofuel Energy Open Digital Badge for their portfolio. Detroit Area Pre-College Engineering Program (DAPCEP) included the Renewable Energy Camp among their educational offerings for DAPCEP youth.

Contact

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