



AISES Energy Challenge

DIVISION OF ENERGY & MINERAL DEVELOPMENT

January 31, 2017

AISES Energy Challenge Website

- <http://www.aises.org/ec>
- <https://www.bia.gov/as-ia/ieed>

AISES

Energy Challenge



For American Indian/Alaskan Native Youth



- The assistant secretary of Indian Affairs (AS-IA), IEED, DEMD has partnered with AISES
- American Indian/Alaskan Native youth grades 7-12
- ENERGY SPECIFIC science fair for STEM
- May compete as individuals, or as teams
- Must have an adult sponsor
- 2- phases

Phase 1

- Fall semester
 1. Identify an energy-related problem
 2. Assess the problem and identify possible solutions
 3. Research and develop a demonstrable solution
 4. Present solution and budget (up to \$2,000)

Phase 2

- Spring semester
 1. If selected, build project/demonstration prototype, within a requested budget (not to exceed \$2,000)
 2. Communicate experience in building and solution implementation process
 3. Present solution results

Grand Prize Winner(s)

- Winner (s) will be selected to travel to Washington D.C.
- Tour national monuments, meet State Senate and Representatives, and visit other gov't agencies
- Student(s) will present their project to staff/leadership of DOI and AS-IA

Previous Winning Projects

- **2015-2016**
 - 1) Peltier Energy Harvesting
 - 2) An Integrated Device for Monitoring Water Quality of Streams Used for Hydroelectric Power
- **2016-2017**
 - 1) Microbial Fuel Cell Energy Generation
 - 2) Utilizing Solar Technologies to Heat a Traditional (Navajo) Home



2017 AISES EC winner Jake Keli'L Uyechi

Analyzing Bacteria in Microbial Fuel Cell Energy Generation



2017 AISES EC winner Kelly Charley

Utilizing Solar Technologies to Heat a Traditional Home