

# SKIP THE GRID

## SOLAR POWERED REFRIGERATION IN THE NAVAJO NATION

### *Abstract*

The Skip the Grid project was a combined effort of California Polytechnic State University, San Luis Obispo (Cal Poly) students and company sponsors SOLV Energy, Dometic, and Goal Zero, facilitated through the non-profit, Heart of America. The interdisciplinary project team successfully installed photovoltaic energy systems with refrigerators and lights for families within the Navajo Nation. Skip the Grid's mission focuses on improving quality of life and providing access to clean, affordable off-grid energy. In the Navajo Nation, access to electricity and running water is not necessarily a given, with large disparities from family to family. This issue was exacerbated during the COVID-19 pandemic, when distance learning was implemented in schools and many students across the region lacked the basic resources to participate the way other school age children could. The Skip the Grid project helped remedy this issue for selected students and their households. When completed on March 24, 2022, eleven families, with students attending Red Mesa Unified School District in Arizona, received a system delivering power, refrigeration, and light, requiring limited maintenance at no cost to them. As a result, Cal Poly students have provided the roadmap for future installations, to provide power to every home in the region, including design and construction recommendations to streamline future installations.

Solar Energy | Energy Inequity | Off-Grid Construction | Native American Studies | Lean Construction | Interdisciplinary Projects | Integrated Project Delivery



### *Author's Information*

Sydney Sitton | ssitton@calpoly.edu | (714) 421-8365  
Connor Avrit | cavrit@calpoly.edu | (530) 801-1592  
Ryan Schacherbauer | rschache@calpoly.edu | (530) 304-4773  
Heather Sailor | hsailor@calpoly.edu | (408) 482-9305

