



U.S. Department of Energy
Energy Efficiency and Renewable Energy

Why It's Cool to be "Green" & Native TEP Internship Program

Sandra Begay-Campbell
Principal Member of the Technical Staff

Sandia is a multiprogram laboratory operated by Sandia Corporation, a Lockheed Martin Company,
for the United States Department of Energy under contract DE-AC04-94AL85000.





College Student Internship Program

DOE's Tribal Energy Program offers student internships at Sandia National Laboratories since 2003.

Eligibility: Current college upper-classmen and graduate students, who are familiar with Native American culture and tribal issues, support the Tribal Energy Program efforts with technical project tasks

- Assist a cross-disciplinary team to perform specific tasks at Sandia National Laboratories.
- Interact with Sandia's renewable energy staff, Native American tribes interested in renewable systems and Sandia's American Indian Outreach Committee.
- Immerse in activities to work directly with experienced and internationally recognized peers
- Visit current renewable energy projects

Required: As authorized by the TEP, the student applicant must

- be a US Citizen
- be a Native American as defined as
 - a member of a recognized Federally-recognized Tribe, Alaska Village or Alaska Corporation
 - not state-recognized, not bands or groups, or first peoples of Guam or Hawaii
- Be specifically interested in renewable energy



2003 DOE Office of Science Interns



Pictured left to right at Navajo - Monument Valley:
Keith Candelaria, Velissa Sandoval & Shawn
Tsabetsaye.

Keith Candelaria (San Felipe/Jemez), BS - Environmental/Earth Science, Dartmouth College
His paper entitled, *"Native American Renewable Energy Approaches: Navajo Tribal Utility Authority and NativeSun."*

Velissa Sandoval (Navajo/Zuni), BS - Electrical Engineering
Her paper entitled, *"Women Champions in Solar Energy."*

Shaun Tsabetsaye (Zuni) is a graduate student in electrical engineering, University of New Mexico, BS - Electrical Engineering.
His paper entitled, *"Navajo Tribal Utility Authority: Electrification Demonstration Program - Developing a Sustainable Tribal and Rural Co-operative Solar Program"*.



2004 TEP/Sandia College Interns



Pictured left to right at Hopi Tribe
Petroglyph: Benjamin Mar, Jennifer
Coots, Colin Ben, Deborah Tewa, &
Sandra Begay-Campbell.

Benjamin Mar (Cherokee), BS – Electrical Engineering, Worcester Polytechnic Institute
His paper entitled "*Navajo Tribal Utility Authority: Photovoltaic Hybrid Operation and Maintenance Process for a Sustainable Program*"

Jennifer Coots (Navajo), MBA – Finance, University of New Mexico
Her paper entitled "*A Decade Of Changes To An Alternative Power Source For A Rural Utility.*"

Colin Ben (Navajo), MA – American Indian Studies, University of Arizona. His paper entitled "*Researching Renewable Energy Systems Available to Indian Country*"

Deborah Tewa (Hopi), BS - Indigenous Studies, Northern Arizona University.
Her research focused on DOE's Reliability Database for Off-grid PV systems.



2005 TEP/ Sandia College Interns



Pictured left to right at Hopi Old Oraibi Village:
Tanya Martinez, Deborah Tewa, Sandra Begay-
Campbell, and Jennifer Coots.

Tanya Martinez (Mi'KMaq) Power Engineering graduate student, University of Massachusetts – Lowell, BS - Electrical Engineering.
Her paper "*Remote Monitoring System Design - Sustainable Systems For The Navajo Tribal Utility Authority*".

Deborah Tewa (Hopi) BS - Indigenous Studies, Northern Arizona University.
Her paper "*NativeSUN: A Model for Sustainable Solar Electric Systems on Indian Lands*".

Jennifer Coots (Navajo) MBA - Finance, University of New Mexico.
Her research focused on the tribal housing mortgage finance for renewable energy systems.



2006 TEP/ Sandia College Interns



Terry Battiest (Choctaw)
MS – Telecommunications
University of Colorado – Boulder

**Jonathan Biron (Sault Ste. Marie
Tribe of Chippewa)**
BS – Biosystems Engineering
Michigan State University

**Lani Tsinnajinnie
(Navajo/Filipino)**
BS – Environmental Science
University of New Mexico.

Pictured left to right at Navajo Nation -
Monument Valley, UT:

Thom Sacco, Terry Battiest, Jonathan Biron,
Sandra Begay-Campbell, Lani Tsinnajinnie &
Debby Tewa



2007 TEP/ Sandia College Interns



Terry Battiast (Choctaw)
MS – Telecommunications
University of Colorado – Boulder

Nick Johnson (Three Affiliated Tribes)
BS – Mechanical Engineering
University of Colorado - Denver

Cherylin Wilson (Navajo)
BS – Biology
Oklahoma Panhandle University
AS - Environmental Science

Pictured left to right:
Debby Tewa, Thom Sacco
Cherylin Wilson, Nick Johnson & Terry Battiast



Immersion of future leaders into renewable energy



Sandia/TEP interns on Navajo Nation

Pictured left in the following order:

Gepetta Billie (Navajo)

MS – Regional & Community Planning, BA –
Environmental Planning & Design

University of New Mexico

AS – Civil Engineering Technology, SIPI

Amanda Montoya (Taos, San Juan & Isleta)

MS – Regional & Community Planning, University of
New Mexico

BA – Business Administration, NM State University

Carson Pete (Navajo)

MS – Mechanical Engineering, BS – Mechanical
Engineering

Northern Arizona University

Suzanne Singer (Navajo)

PhD – Mechanical Engineering, MS – Mechanical
Engineering

University of CA - Berkeley

BS – Mechanical Engineering, University of AZ