Navajo Transitional Energy: A Pathway to Sustainability

Presenters: Molly Baron & Lucila Dunnington  Advisor: Dr. Masami Nakagawa, CSM Mining Engineering

Introduction

- Sam Woods from NTEC (Navajo Transitional Energy Company) approaches Dr. Masami Nakagawa at CSM about a geothermal well in Navajo land.

Proposal

- Sam Woods presents GeoPark proposal to Navajo Transitional Energy Company’s Technology Board
- Project goals finalized

Geothermal Greenhouses

- Growing native plants
- Field trips, botany studies
- Job creation
- Food desert alleviation
- Geosciences & Engineering Lab for Navajo Technical University
- CSM participants assess resource and design greenhouse

GeoPark

- Showcase solar, wind and geothermal energy systems
- Renewables research center
- Tourism and education opportunity

First Visit

- Meet with Tohatchi Chapter Community about geothermal applications
- Navajo State of the Nation address
- Investigation of hot water wells
- Beautiful scenery & people

Field Work

- Trip to Navajo to conduct field survey
- Navajo traditional blessing for exploration
- High school class and community briefing
- Press conference
- Navajo Tech University partner: research, guest lectures, field courses

Tree Farms

- Extend native tree nursery of Navajo Forestry
- Use trees for mine reclamation projects
- Job and income generation for Tohatchi
- CSM members evaluate and assist development of a geothermal tree farm

Late 2015


May 2016


Future Work

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Lessons Learned

- Community engagement in a rural area is a long term process
- People at the community meeting were supportive of opportunity for local economic development
- Stakeholders translated the findings in terms of the Navajo culture
- Navajo ideals around sustainability varied

Navajo Transitional Energy Company (NTEC)

BHP Billiton decided to close a coal mine on the Navajo Nation, eliminating many Navajo jobs and revenues. Instead, the Navajo Nation through NTEC acquired the mine, saving the jobs and revenues. One of NTEC’s initiatives is to allocate 10% of net profits from the mine to renewable energy and alternative forms of energy.

Navajo Sustainability

The Navajo Nation is working to create clearer pathways towards sovereignty. By gaining control of their resources and directing them to sustainable goals, the Navajo Nation hopes to become more self-sufficient. The Colorado School of Mines is one of the partnerships NTEC is forming to advance this cause.