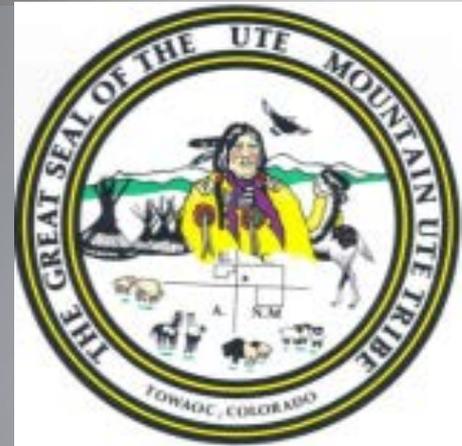


Ute Mountain Ute Tribe Local Scale Solar Energy Development

Ute Mountain Ute Tribe
Renewable Energy Committee

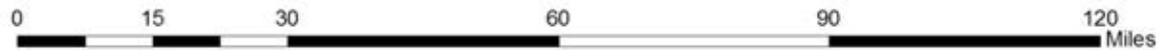
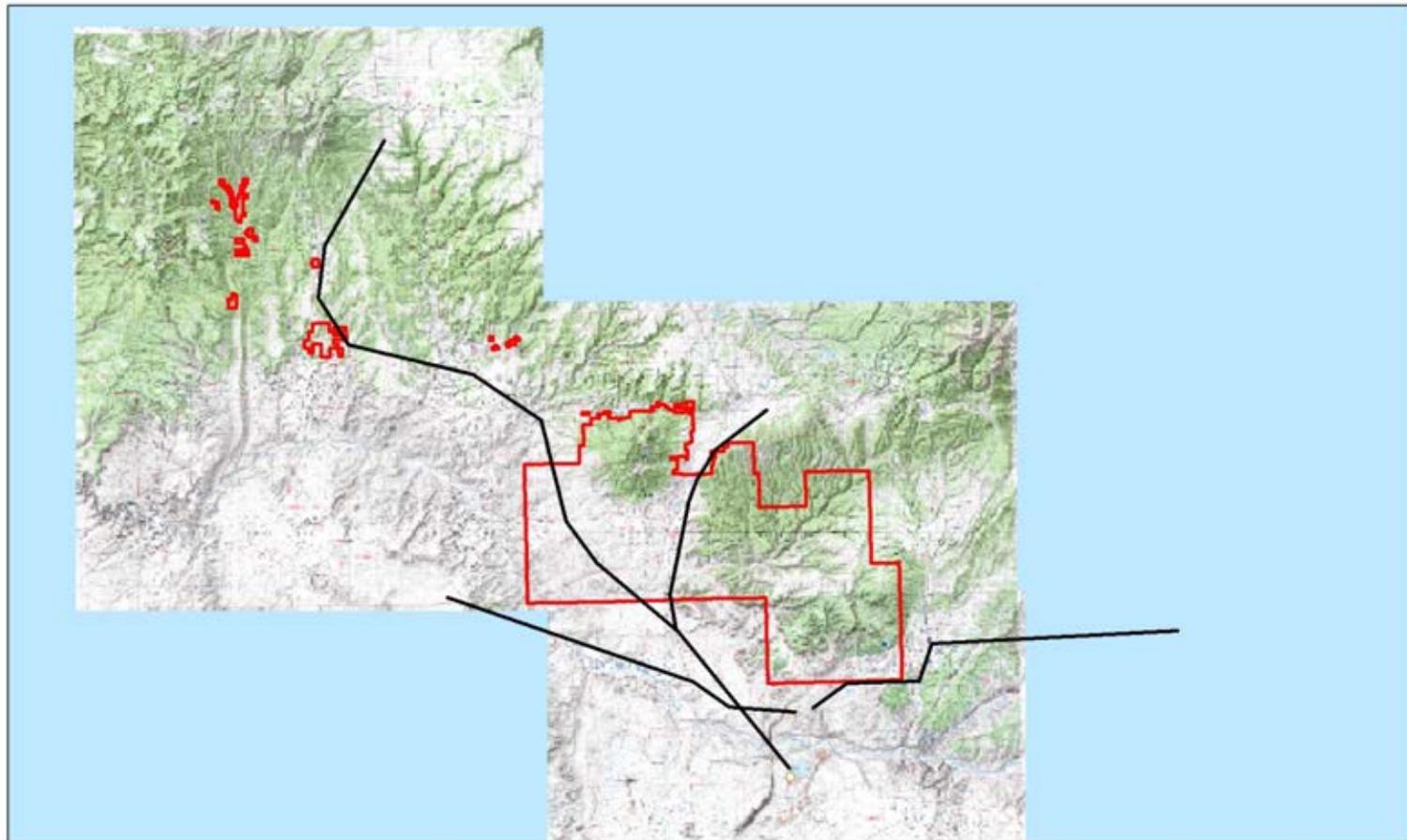


Agenda

- Introduction to the Tribe and Tribal Natural Resources
- Looking to the Future, Expanding the Portfolio of Natural Resource Development
- Focus on solar energy development
- The DOE-funded feasibility study

Introduction to the Tribe and Tribal Natural Resources

Ute Mountain Ute Reservation and Major Transmission Corridors



Quick Description

Ute Mountain Ute Tribe and Reservation

- Reservation of approximately 600,000 acres, with lands located in Colorado, Utah, and New Mexico
- Tribal communities in Towaoc (southwestern Colorado) and White Mesa (Southeastern Utah)
- Approximately 2,300 enrolled Tribal members (but non-members live in Tribal communities)

Current Uses of Tribal Natural Resources

- Oil and gas development
- Gravel and mineral development
- Farm & Ranch Enterprise
- Ute Mountain Tribal Park
- Ranching/livestock grazing uses
- Traditional/cultural uses
- Hunting/gathering
- Firewood cutting and gathering
- Easements for roads/energy infrastructure



**Looking to the Future,
Expanding the Portfolio
of Resource
Development**

Looking to the Future

- Creating sustainable and profitable economic development ventures
- Providing employment for Tribal members (includes education and building knowledge and capacity in Tribal members)
- Providing stable income for Tribal governments (includes building institutions to properly balance resource development with culturally appropriate regulation)
- Implementing programs to reduce waste and promote efficient use of resources
- Making the best long-term use of Tribal natural resources and lands

Reviewing the Tribal Energy Portfolio



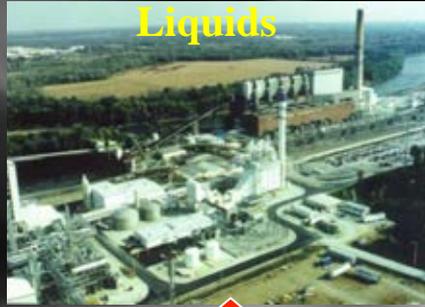
Uranium

?
Waiting development



Wind Energy

YES
Future tech



Coal/Coal to Liquids



Biofuels



MAYBE
More Research



YES
Red Hot Spot



Solar Photovoltaic



Hydro Power

YES



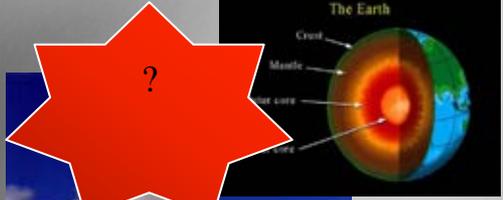
Woody Biomass

NO
Local scale only



Oil & Gas

YES
Exploiting



?



Geothermal

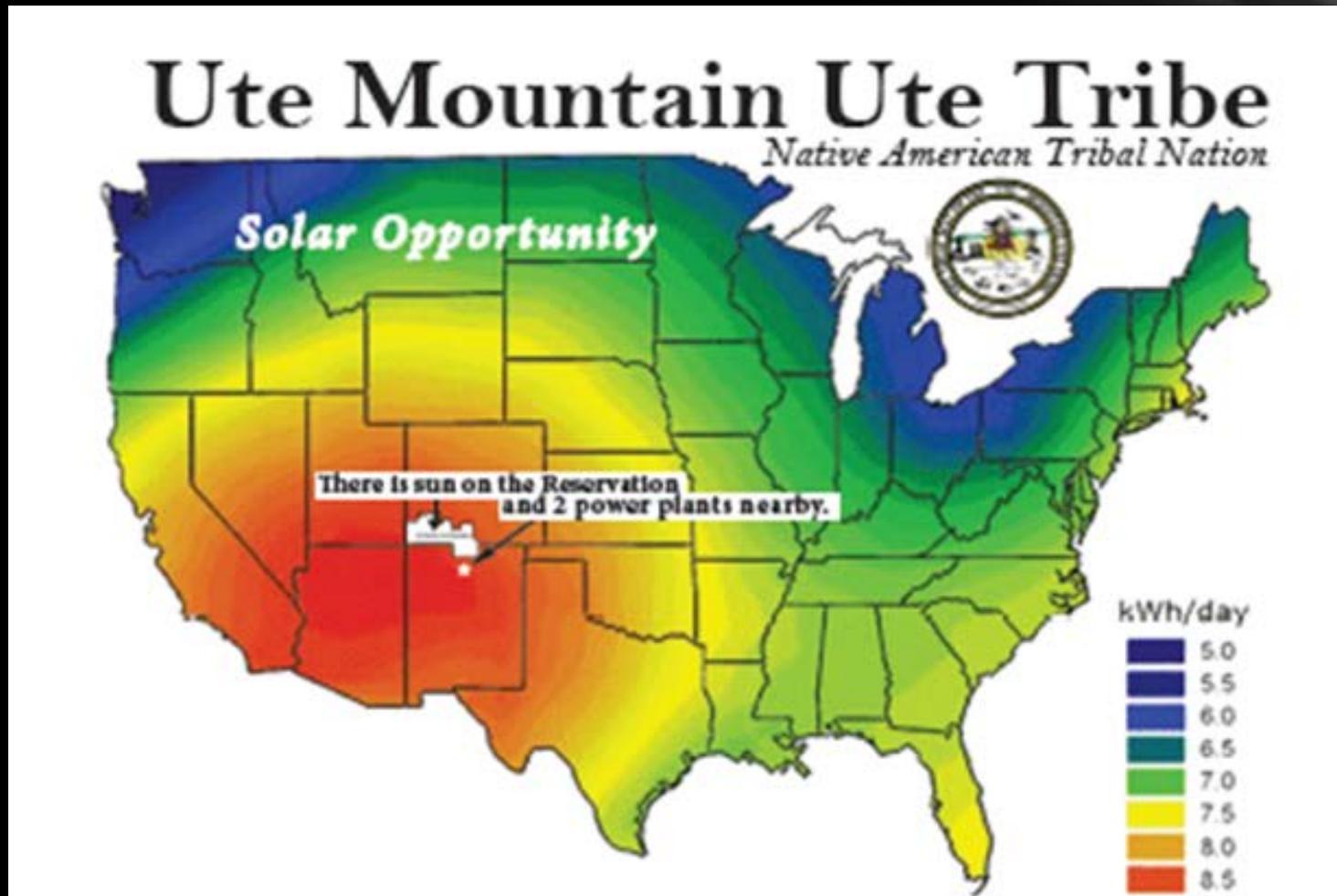
Creation of the Tribal Renewable Energy Committee, 2008

- Economic Development
- Energy
- Environmental Programs
- Justice (Legal)
- Planning/Land-Use Planning
- Tribal Historic Preservation (Cultural Resources)
- Executive Director
- Tribal Council
- Bureau of Indian Affairs



Focus on Solar Energy Development

Focus on Solar Energy Development



Focus on Solar Energy Development

- Initial work on commercial-scale (>25 MW) began in 2008
- Initial feasibility studies indicate good solar resources, adequate land space, and multiple options for transmission interconnection
- **External Obstacles**
 - Financing
 - Power Purchase Agreements
 - Development Plans
 - Transmission Access
- **Internal Discussions**
 - Culturally appropriate land use designations for development
 - Allocation of income to benefit membership

Focus on Local-Scale Solar Development

- Early development of solar-powered livestock wells
- Newer building-scale installations
- Solar air heater demonstration (Lakota Solar Enterprises/
TreesWaterPeople)

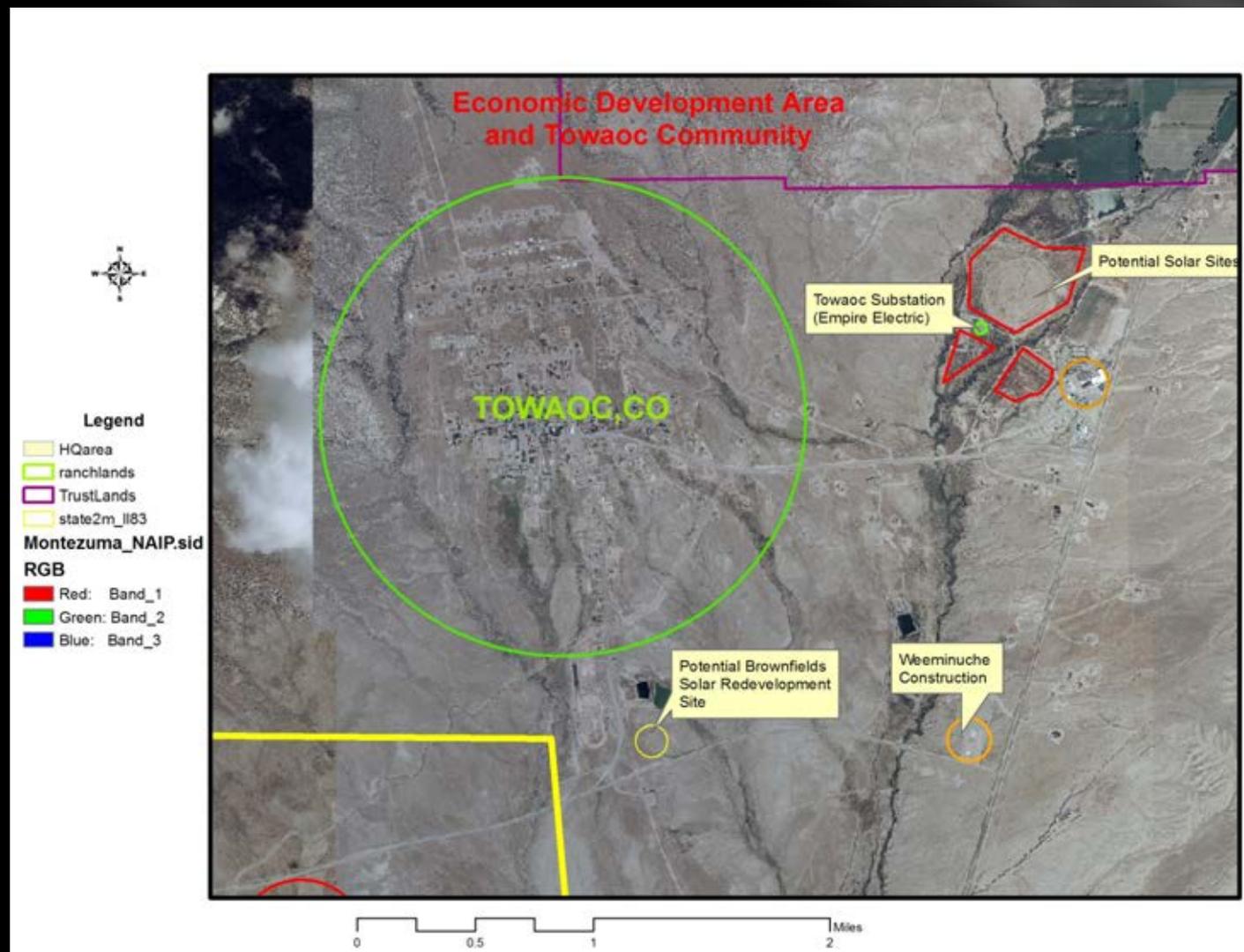


Focus on Local-Scale Solar Development

- On-Reservation demonstration project
- Tribal ownership
- Energy independence, reliance on environmentally friendly and sustainable energy resources produced on-reservation
- Developing expertise and capacity in the Tribally-owned construction enterprise (Weeminuche Construction Authority), with an eye towards commercial-scale development work
- Educating the Tribal membership on solar energy technologies
 - Demonstrating cost savings to community and government
 - Building capacity in tribal employees and members in solar energy installation work

The DOE-Funded Feasibility Study

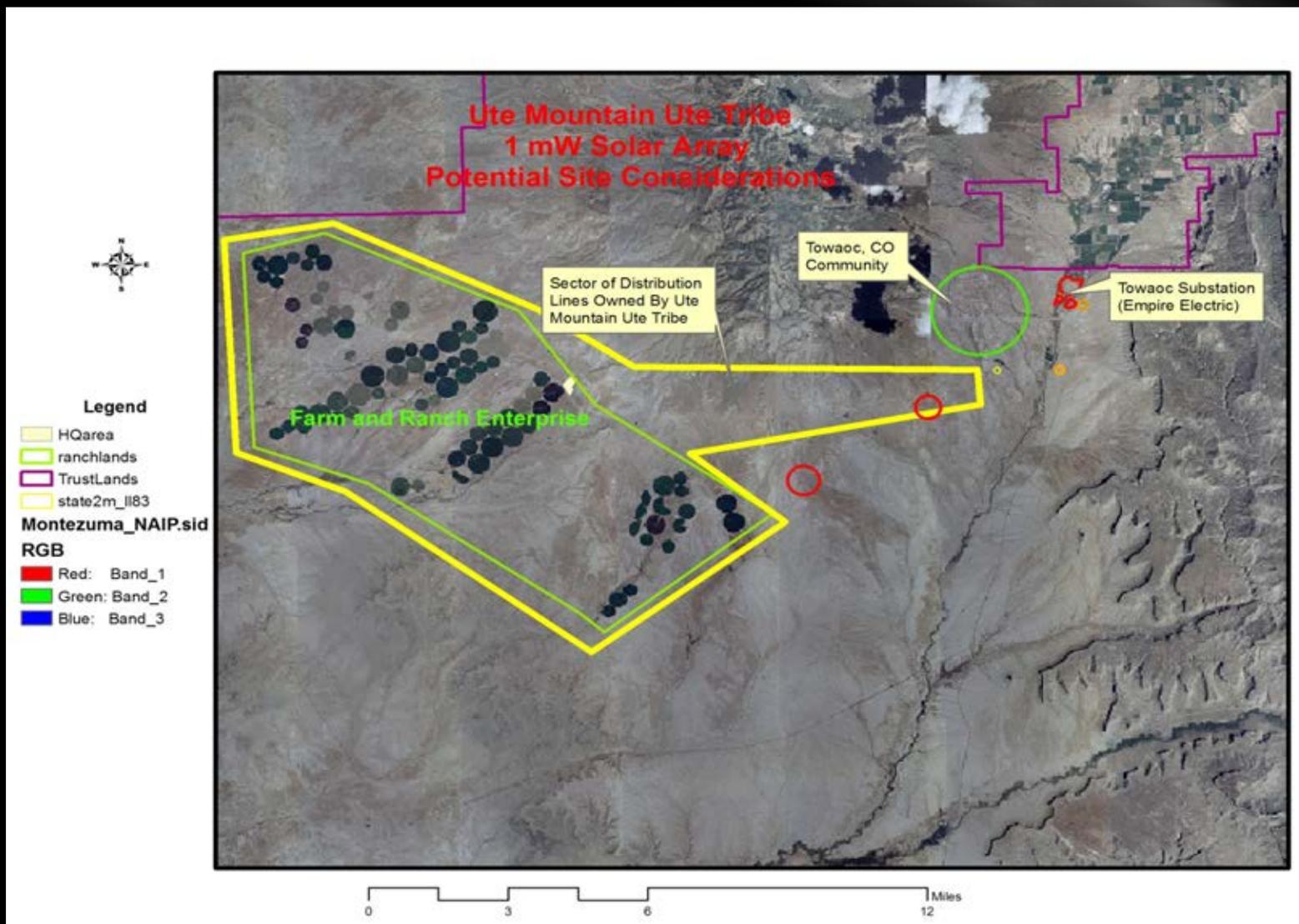
The DOE-Funded Feasibility Project



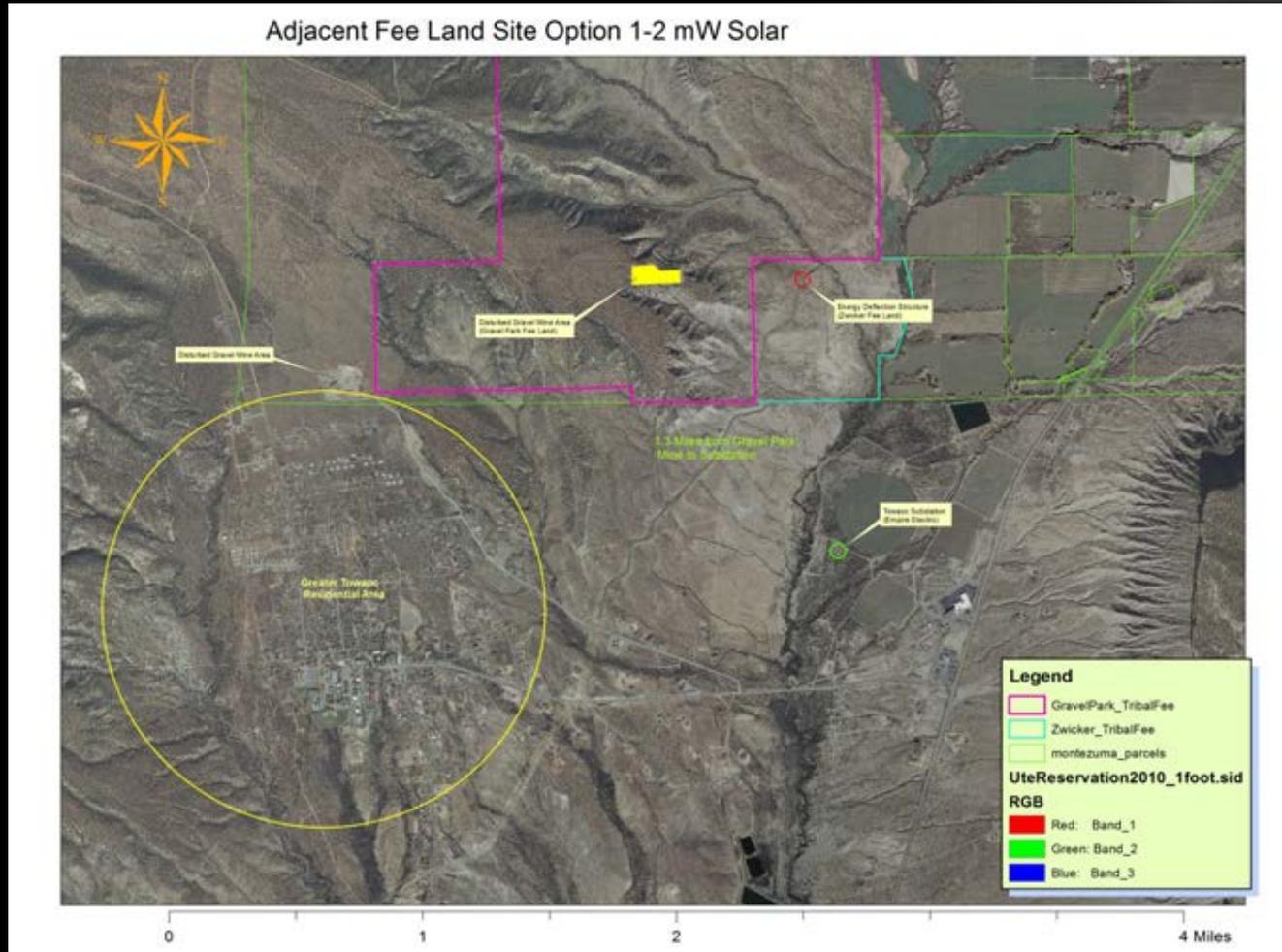
The DOE-Funded Feasibility Study

- Community-scaled project (1-2 MW, net metering capped at 120% of use)
- Located near Towaoc, CO
- Potential for companion project in White Mesa Community
- Large known loads at Tribal enterprises (casino, hotel, travel center, construction company)
- Focus on benefits for Tribal members
- Focus on building Tribal capacity (in anticipation of commercial-scale project development)

DOE Potential Sites



DOE Potential Sites



The DOE-Funded Feasibility Study Project Objectives

- Determine location, connectivity, deal structure with rural electric coop and power provider
- Identify practical and cost-effective ways to offset on-Reservation energy demands
- Determine how to best benefit Tribal members
- Gain experience to help embrace clean energy
- Education for Tribal members, exposure to technology

Current Project Status

- DOE funds received at end of fiscal year 2012
- Committee is in the process of retaining subcontractors for specific work tasks under the grant
- Committee is excited to undertake work in fiscal year 2013 and to report results next year!

Towaoc!

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