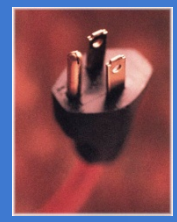
New Mexico Energy, Minerals and Natural Resources Department



By: Joanna Prukop, Cabinet Secretary

Brown to Green
Make the Connection for Renewable Energy

New Mexico Clean Energy Initiatives

Wednesday, December 10, 2008

New Mexico

- Rich in natural resources with long history of development
- An energy provider/exporter
- Oil, natural gas, and electricity
- Strong & balanced regulation of extractive industries
- Extractive industries are important to New Mexico's economy
- Environmental impacts must be contained

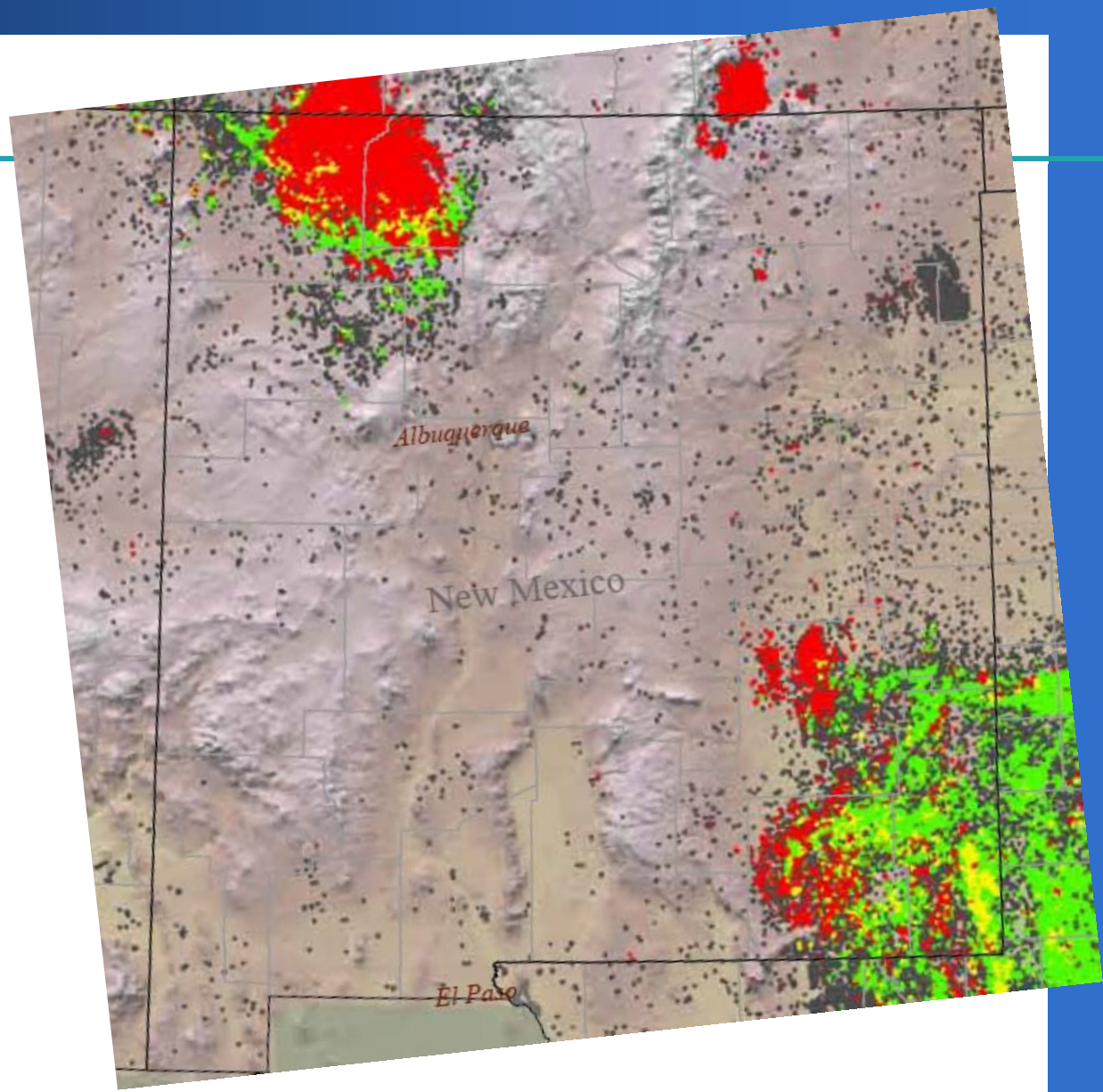
New Mexico

Oil & Gas Development

Green is oil

Red is gas

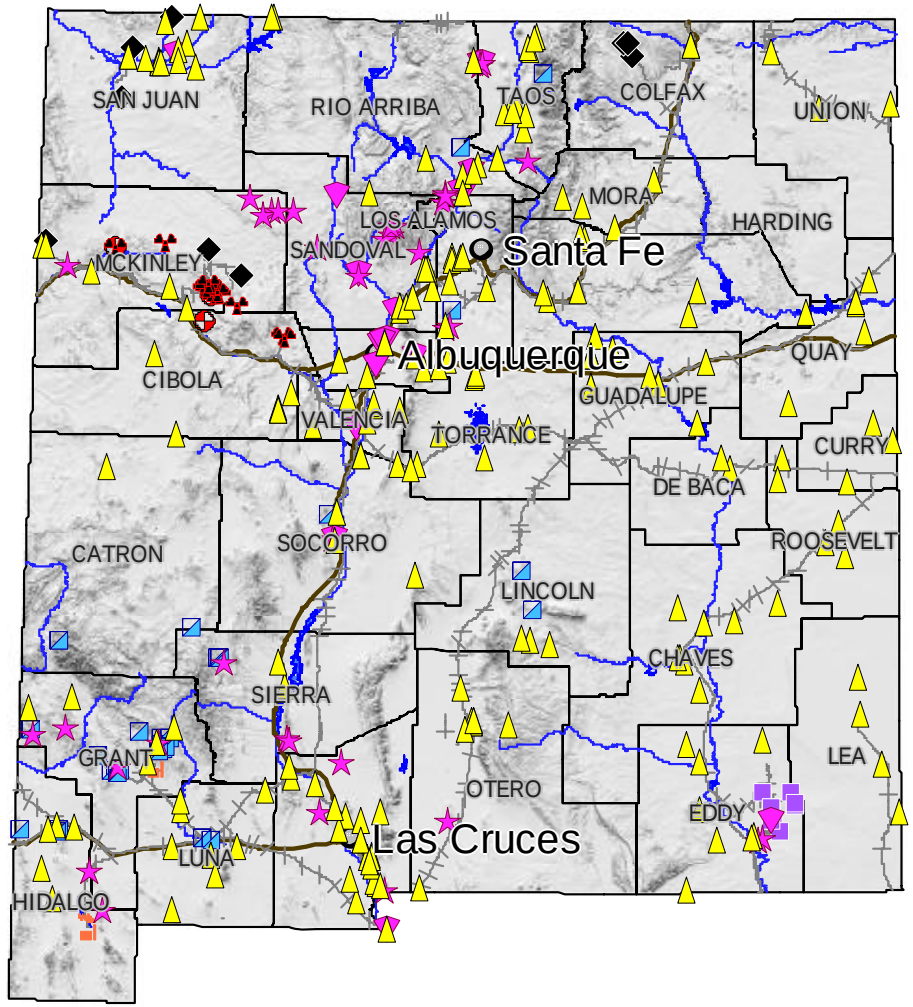
Yellow is oil & gas



New Mexico—Oil & Gas "Brownfields"

New Mexico

Mining
Development



Black is coal mines

Blue is metal mines

Purple is industrial minerals

Yellow is aggregate & stone

New Mexico—Mine "Brownfields"

Before (2003)

Reclamation of coal mine, near Raton

After (2008)

Brown to Green

- New Mexico = Clean Energy State
- Excellent renewable resources
- Governor Richardson's clean energy policies
- Renewable Portfolio Standard
- Production Tax Credit
- Renewable Energy Transmission Authority

Brown to Green

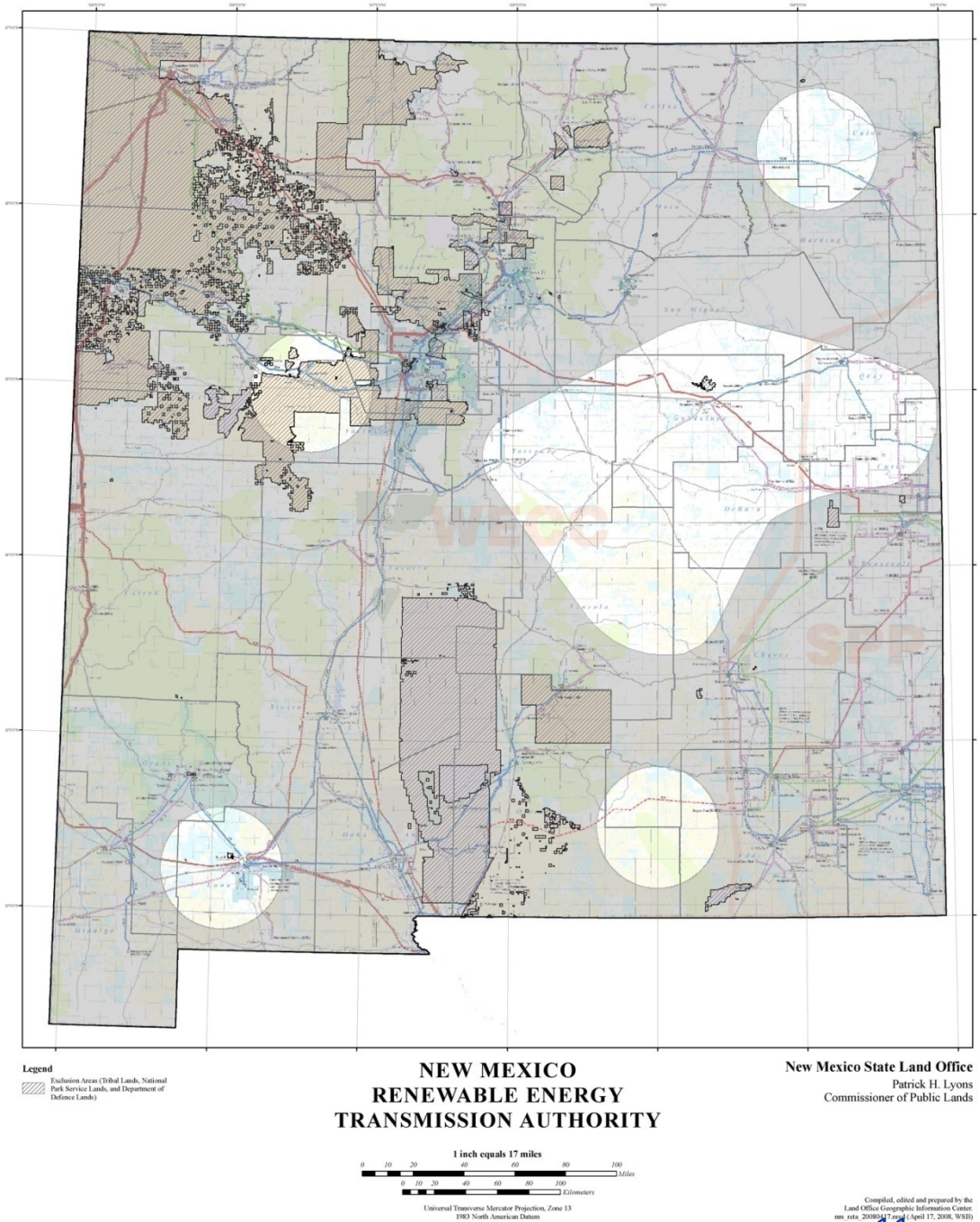
- Experience in redeveloping brownfields
- Avoid energy development on sensitive lands
- Avoid environmental & wildlife impacts
- Transmission corridor development is key area

Responsible Energy Development

Renewable Energy/Clean Fuels

Renewable Resources

New Mexico



New Mexico Renewable Energy Resources

- Solar: 2nd in potential
- “World Class” wind on NM’s Eastern Plains
- Geothermal: 7th in potential
- Biomass (forest material and dairy/feedlot wastes)
- New Mexico has in excess of 10,000 MW of renewable energy generation resources

Renewable Portfolio Standards

- New Mexico today has stronger Renewable Portfolio Standards—requiring major utilities to produce 15 percent of their power from renewable resources by 2015 and 20 percent by 2020.
- The Public Regulation Commission established, by rule, a “solar carve-out” as part of a utility’s Renewable Portfolio Standard requirement. The carve-out requires that a minimum of 20% of a utility’s renewable energy supply mix be solar.

The New Mexico Wind Energy Center

Located near Fort Sumner; built by Florida Power & Light.

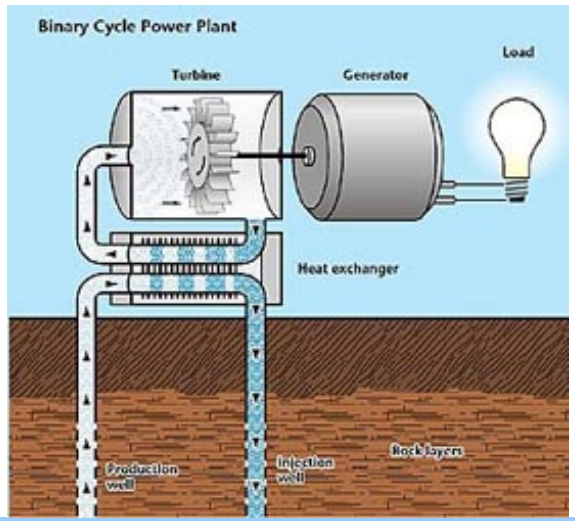
Solar Opportunities

Solar PV Power Plant in Southern Colorado

Solar Thermal Power Plant in southern California

Geothermal

Geothermal Plant in California

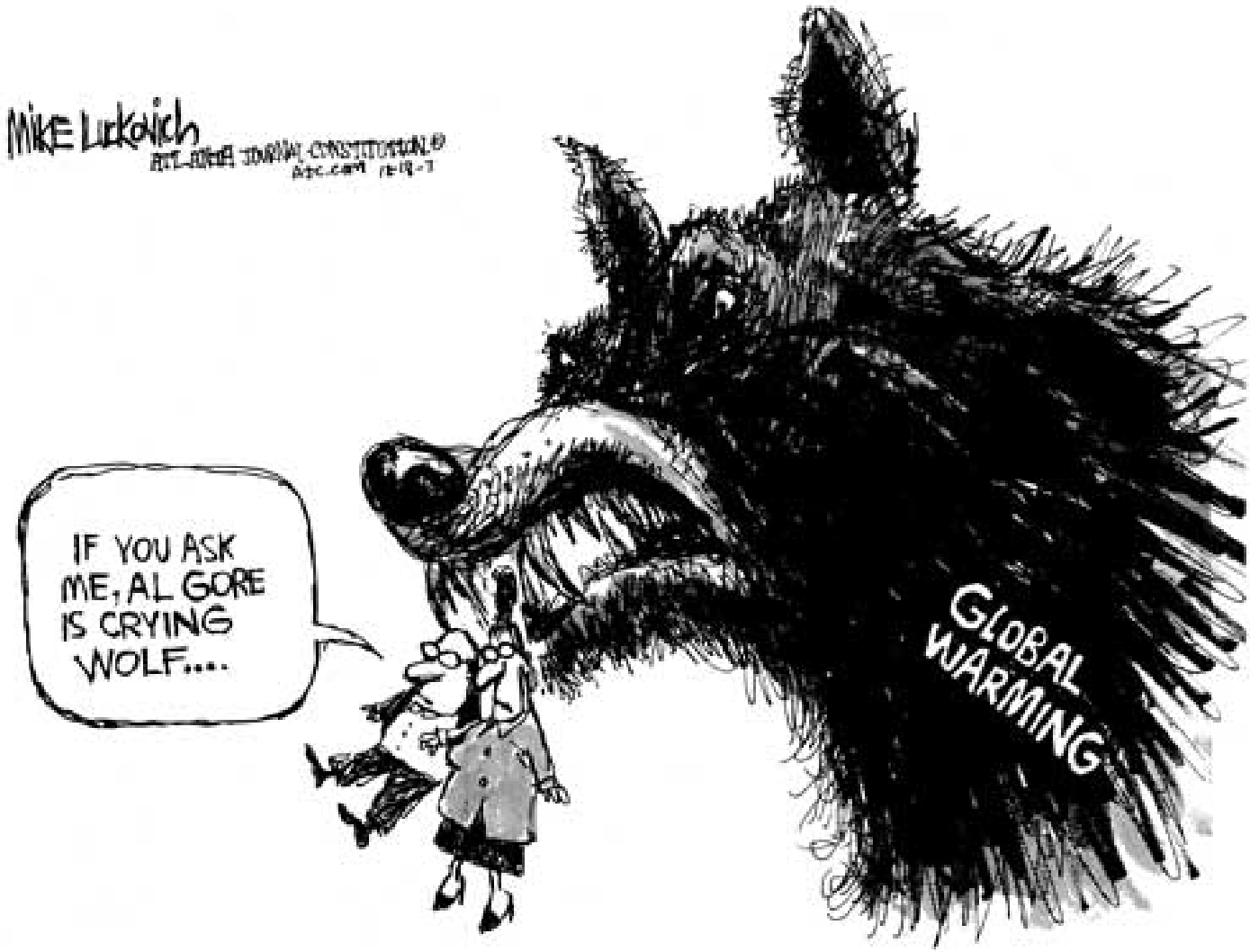


- Potential may be huge
- Relatively small "footprint"
- Water impacts and siting in sensitive areas is an issue → Valles Caldera in NM
- Do it in brownfields!
- ;-)

New Mexico Renewable Energy Transmission Authority (RETA)

- RETA—focusing on developing new transmission projects to promote renewable energy
- First of its kind in the nation to require 30% in renewable energy
- Dedicated to developing the infrastructure for transmission and storage of renewable electricity

Climate Change



Climate Change Impacts

- Fewer cold and more hot days and nights, more heat waves
- More heavy precipitation events, larger land area in drought
- More severe hurricanes, and increased incidence of extreme high sea level.

GHG Emissions

The Four Corners Power Plant, a 2,000-megawatt plant co-owned and operated by Arizona Public Service, located on Navajo land in Fruitland, now routinely ranks No. 1 on dirty-power lists compiled by watchdog groups from emissions reports to the EPA.

Brown to Green

- Energy Efficiency
- Critical component
- Complements green power production

Energy Efficiency is for Everyone!

Where do we go from here?

- Issues are complex
- Need balance to address important issues
- Land use, water, community needs, wildlife, and energy development
- Our challenge is to utilize brownfields for green power production
- Calls for new roles and strategies

Brown to Green

- Brownfields to Green Power Production can meet the challenge quite well
- Complexity
- Collaboration
- Opportunities
- Energy Security
- Protect our sensitive lands

Ways to Collaborate

- Partnerships
  - Financiers/renewable energy developers/land owners
  - Utilities/renewable energy developers/government agencies

BROWNFIELDS REDEVELOPMENT

Climate change, energy needs, and land use priorities guide us to consider brownfields redevelopment

These new opportunities will provide:

- green jobs
- economic development
- manufacturing opportunities
- and green power production

New Mexico—"Brownfields" Re-use

Coal mine shop facility, near Raton

Brown to Green

- New Mexico has great renewable energy resources
- We want to redevelop more of our Brownfields
- New Mexico Energy, Minerals and Natural Resources Department is ready to collaborate
- We're developing guidelines for brown to green development starting with this workshop

Brown to Green

Thanks for your attention!