

IGCC: Policy Implications in New Mexico



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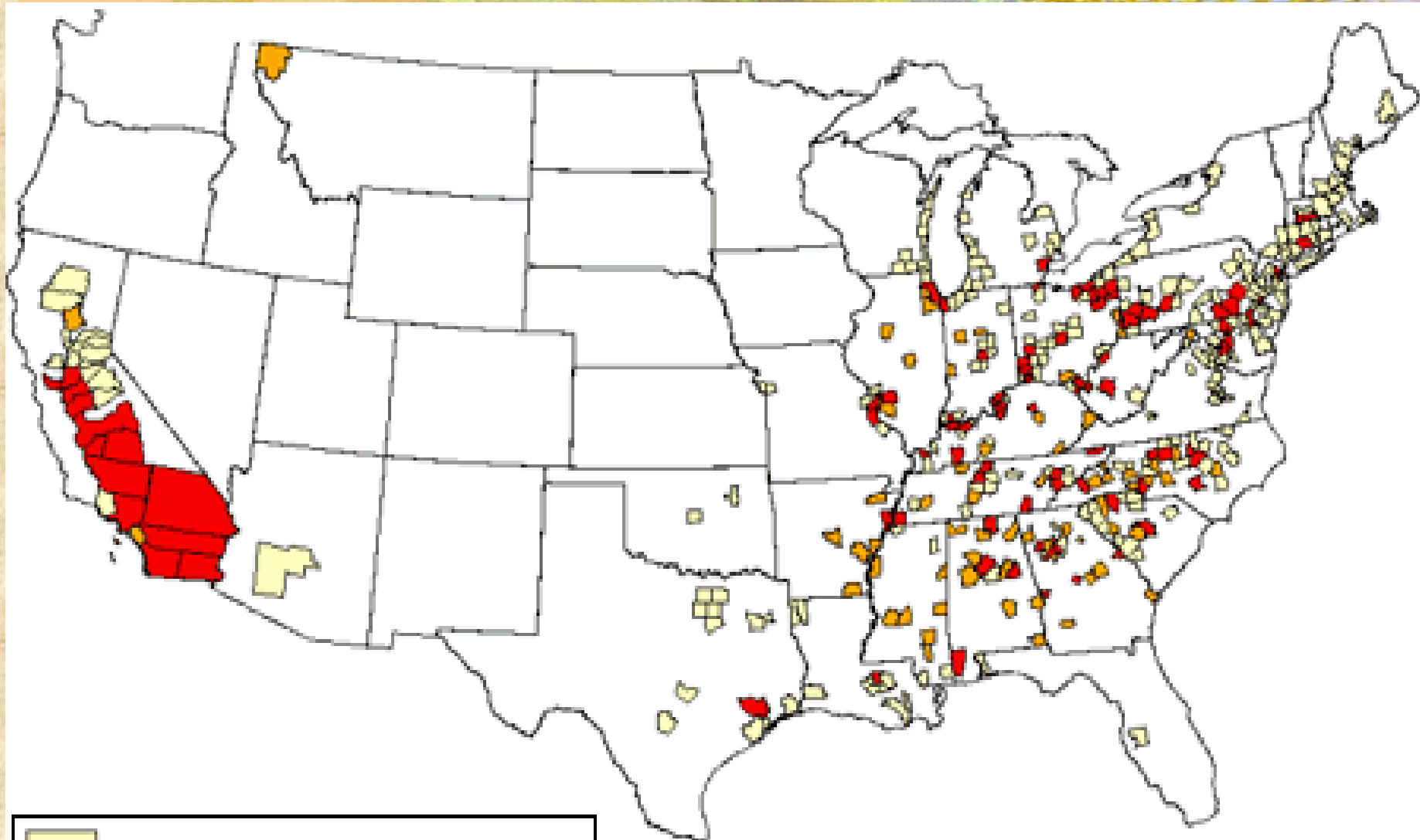
New Mexico Environment
Department



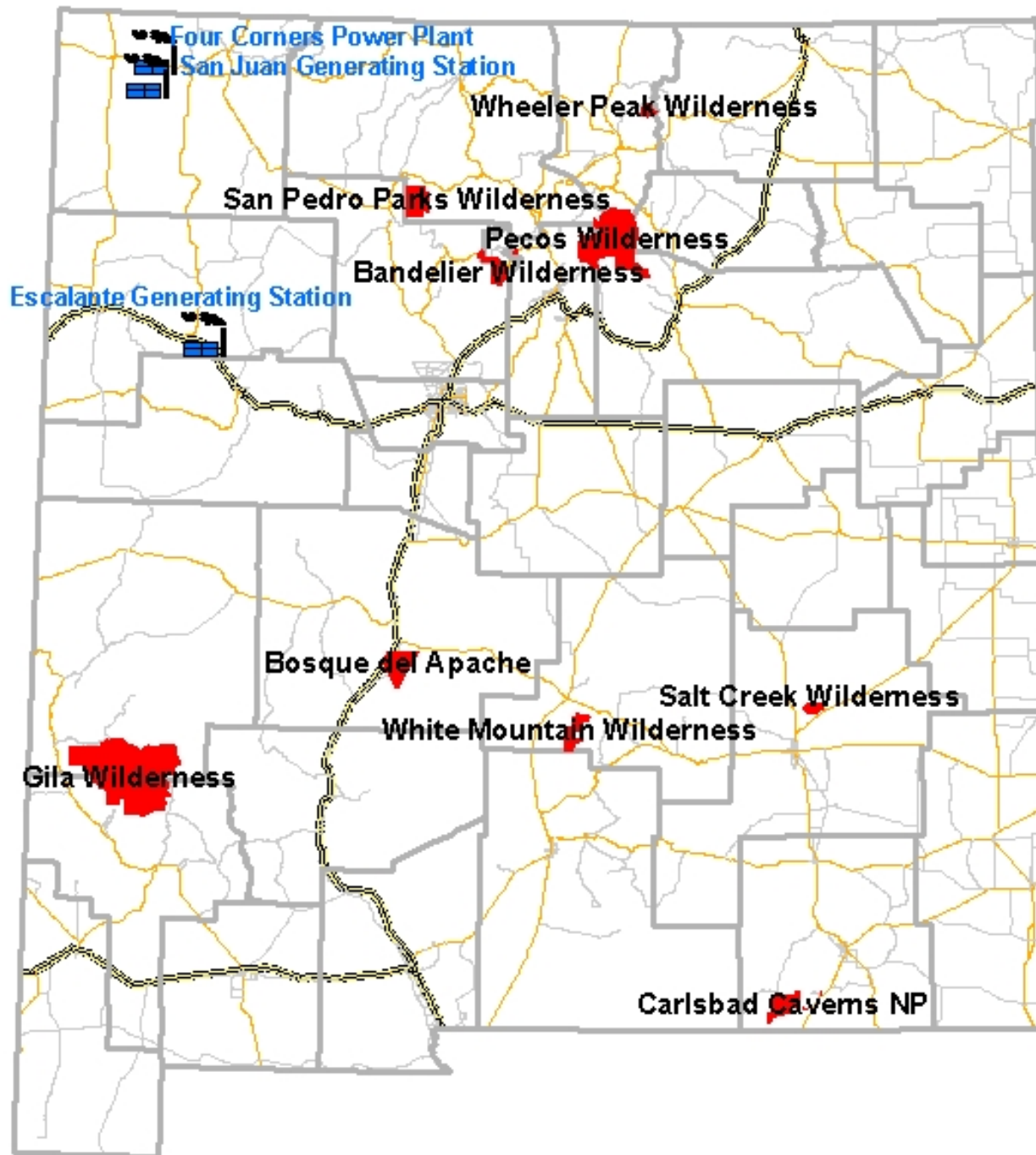
Over View

- New Mexico Profile
- Clean Energy and Climate Change Initiatives
- Policy Implications/Air Permitting

Current Projected Attainment of the National Ambient Air Quality Standards



*1997-1999 Ozone
1999 - 2000 PM2.5 preliminary depiction
based on 2 years of data. 3 years of complete
data are requested for attainment demonstrations.



Legend

- Class I areas
- County lines
- Interstate highways
- Primary roads
- Secondary roads





Clean Energy/Climate Change Initiatives

- Climate Change Executive Order with aggressive GHG emission reduction targets
- First State to join the Chicago Climate Exchange
- Renewable Portfolio Standard
- Solar Tax Credits
- Plans to develop and sell clean energy to the western markets

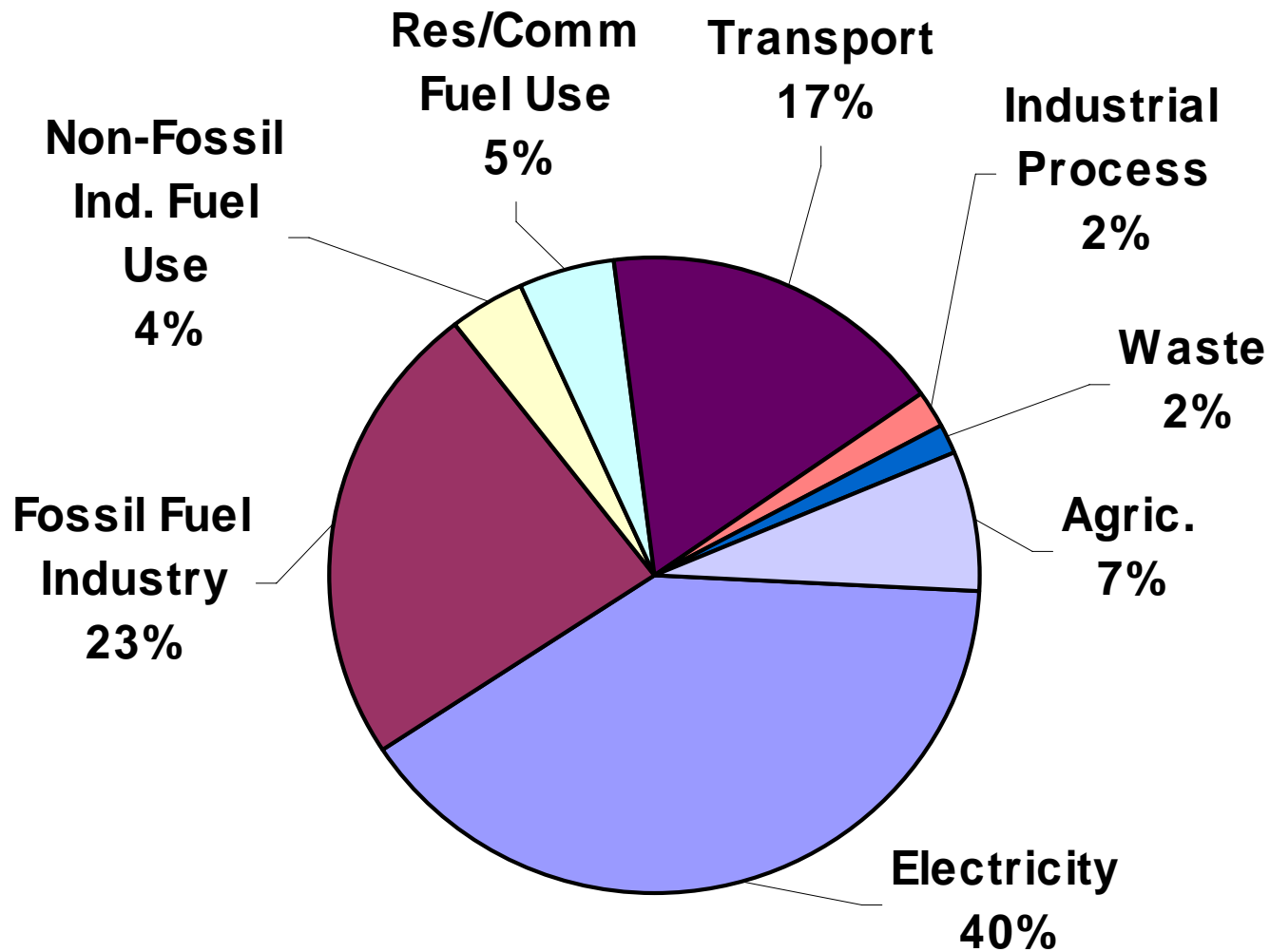


NM Greenhouse Gas Emissions Inventory

- On a per capita basis, NM produces twice the national average of GHG emissions.
- Electricity Generation is the largest emitter of GHG in NM followed by the Fossil Fuel Industry.
- GHG are predicted to grow in NM:
 - 21% increase in the 1990s
 - 8% above 2000 levels by 2010
 - 23% above 2000 levels by 2020

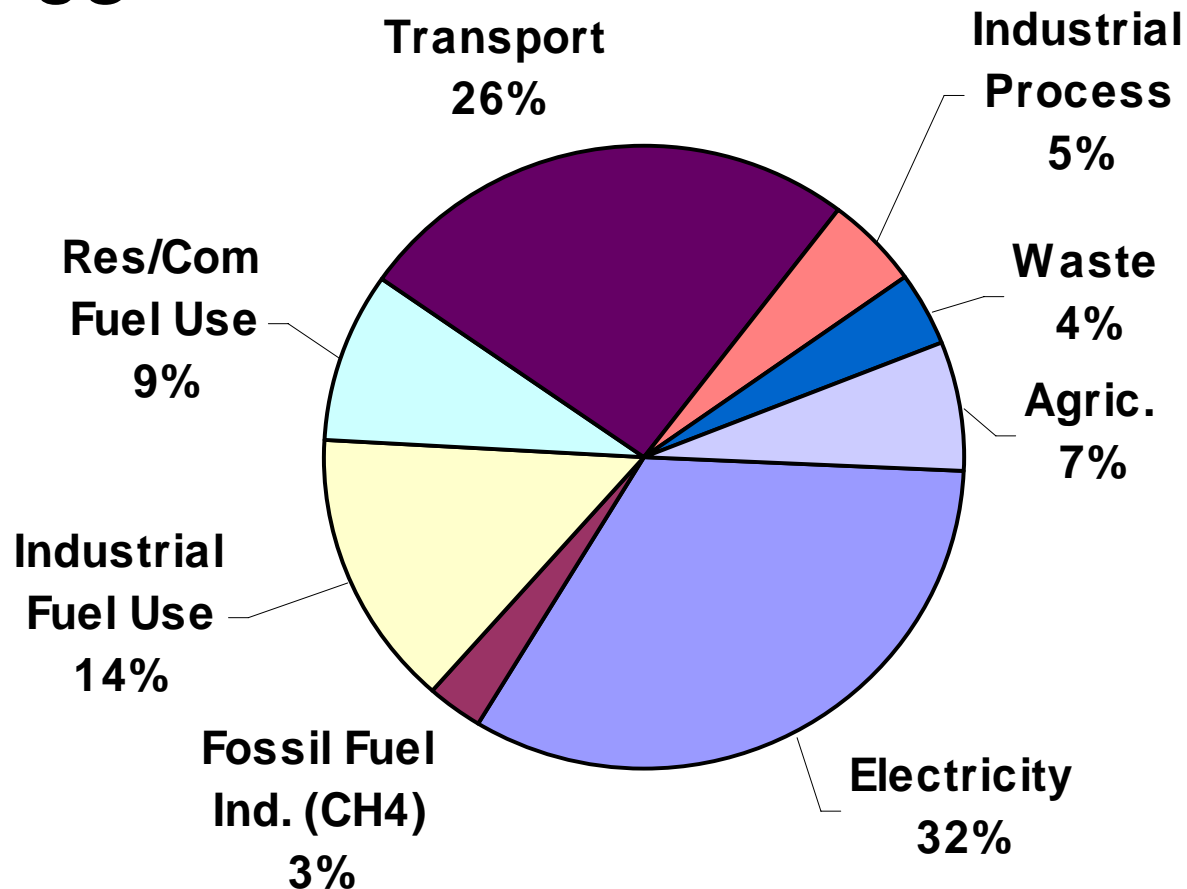
GHG Emissions by Sector

New Mexico



GHG Emissions by Sector

US





IGCC in BACT Analysis

- NM was the first state in the nation to require IGCC as part of the Best Available Control Technology (BACT) Analysis
- BACT is the technology with the most stringent emissions controls that has not been eliminated because of energy, economic or other environmental issues.
- IGCC is technologically feasible and must be part of the analysis.



IGCC in BACT Analysis

- The Clean Air Act states that BACT should take into account “innovative fuel combustion techniques”
- This language was added specifically to promote the consideration of coal burning options such as fluidized bed boilers and low Btu gasification technologies



EPA and IGCC

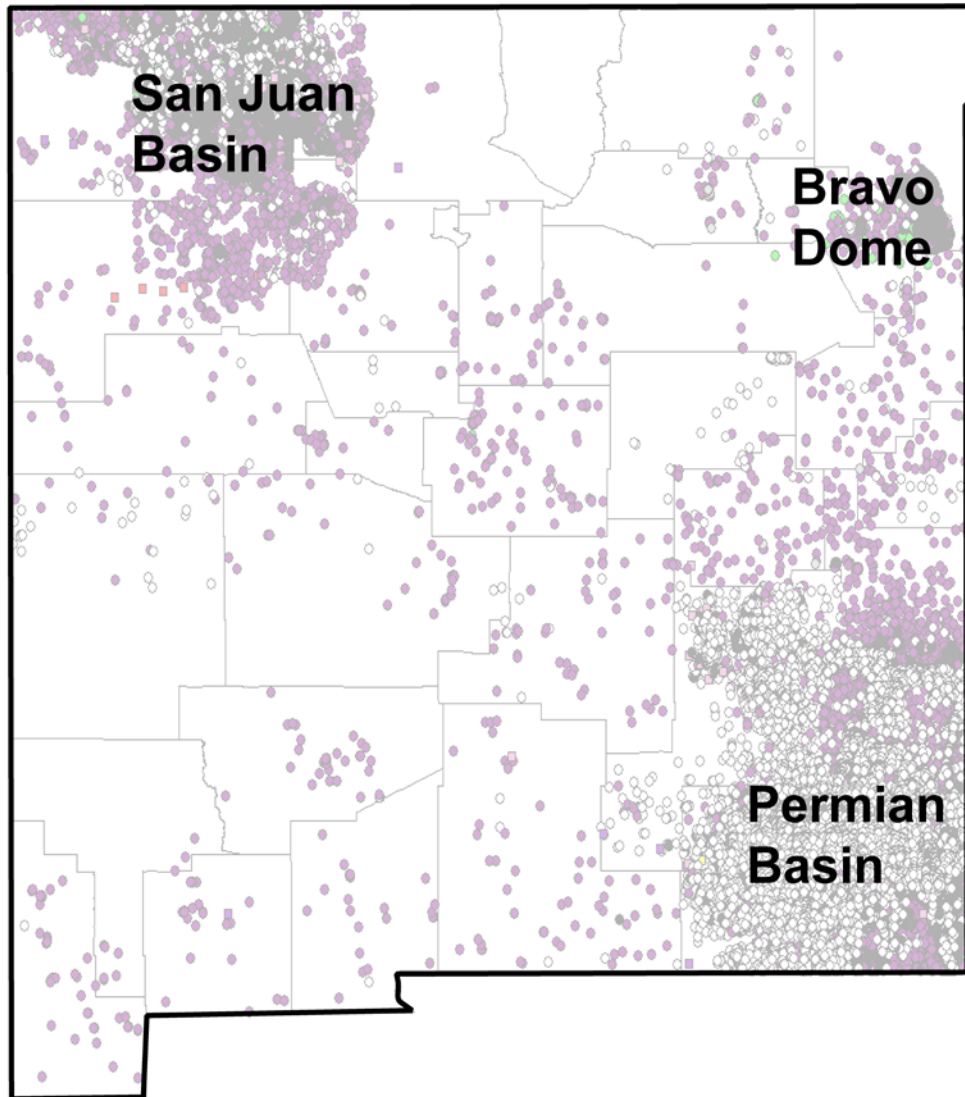
- A December 13, 2005 letter from EPA describes IGCC as “redefining the source” and therefore not required as part of the BACT analysis
- NM sees IGCC as an innovative lower emitting technology that the Clean Air Act intends to be included as a part of the BACT analysis for a new coal fired power plant.



Collateral Impacts

- The CAA requires states to address "impacts other than impacts on air quality standards due to emissions of the regulated pollutant in question, such as solid or hazardous waste generation, discharges of polluted water from a control device, visibility impacts, or *emissions of unregulated pollutants*".
- In the case of coal fired power plants we look at carbon dioxide emissions and water consumption.

Potential Geologic Storage Environments in New Mexico



Categories

- depleted O&G reservoirs (San Juan Basin; Permian Basin)
- coal-bed methane (San Juan Basin)
- deep saline reservoirs (little information, but potential in San Juan Basin, Permian Basin, and perhaps elsewhere)
- depleted CO₂ reservoir (Bravo Dome)





Challenges

- Costs
- Western Coal
- Altitude

For More Information

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