



Achieving Energy Independence for North America: Strategies from the West

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To Cover Today:

- New Mexico Energy Policy
- Regional Energy Initiatives
- The Energy-Climate Policy Nexus
- National Context

New Mexico Energy Resources

- Significant oil & gas production
- Significant coal reserves
- Electricity exporter (~50%)
- ...and now Governor Richardson has declared NM the “Clean Energy State”
 - Solar – 2nd best
 - Wind – 12th best
 - Geothermal – 7th best
 - Efficiency
 - Other renewables

New Mexico Energy Policy

The Clean Energy State

- Renewable Portfolio Standard:
 - 20% by 2020 for IOUs
 - 10% by 2010 for rural electric co-ops
- Renewable Energy Transmission Authority
- Natural gas resources: key renewable-firming role
- Suite of incentives to create friendly business environment for clean tech companies:
 - Renewable PTC
 - Advanced Energy Tax Credit (TC)
 - Alternative Energy Product Manufacturers TC
 - Solar Market Development Income TC
 - Sustainable Building TC

New Mexico Energy Policy

Economic Security

- **Green Jobs Cabinet established January '09**
- **NM Dept. of Workforce Solutions**
 - “WIRED” Initiative → support innovative development & expansion of green mfg in NM: Advanced mfg, green building, clean and renewable technologies...
- **CNM and Santa Fe Community Colleges:**
 - green collar jobs curricula
 - “quick on their feet” training course development catered to new businesses’ and industries’ needs
- **San Juan Community College** – solar training program
- **Mesalands Community College**→
- **Northern NM College**
 - Solar Energy Research Park & Academy**



New Mexico Energy Policy

Green Grid Initiative

- Aging transmission infrastructure is barrier to energy security
- NM green grid initiative formed in August 2008
- Applied for DOE funds to establish 5 micro grids using diverse renewable technologies in an integrated way
- Diversity of type, scale, location
- Collaborating with utilities, private sector, national labs, universities
- Partnership with Japan (NEDO)
- Goal is to attract venture capital and build statewide green grid

NM Green Grid Sites

Los Alamos

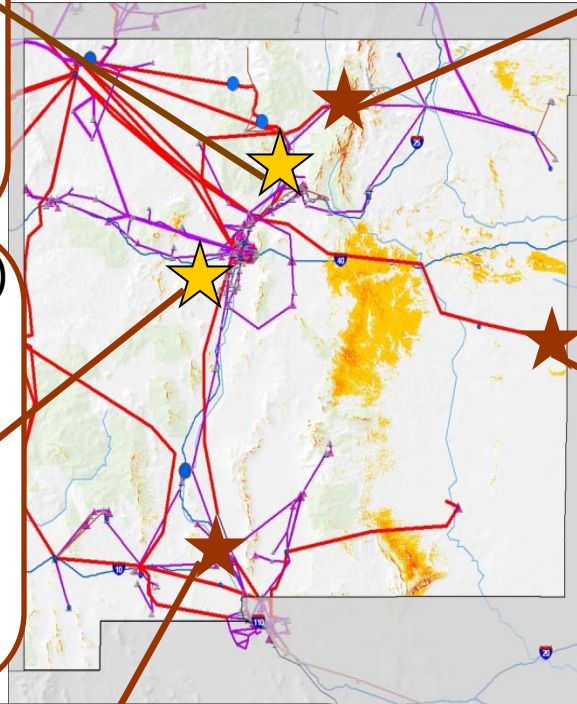
Suburban w national lab;
hi elevation mountainous terrain;
Municipal Utility: residential use
of fossil and hydro;
Smart grid with > 30% solar and
storage; smart grid model home.

Mesa del Sol (Albuquerque)

Largest NM urban center;
hi elevation semi-arid desert;
State's largest IOU; average
commercial demand; mostly
fossil fuel generation;
Site Objectives: Energy efficient
buildings, smart grid with
30-100% solar PV and storage.

NMSU / Las Cruces

University campus; semi-arid desert;
University-owned/operated utility with IOU provider;
summer cooling demand; currently nuclear and fossil;
Site Objectives: smart grid w advanced controls.



Taos / Taos Pueblo

Rural county and Pueblo;
hi elevation mountainous terrain
Rural Electric Cooperative Utility;
summer cooling/winter heating;
mostly fossil generation;
Site Objectives: smart grid with > 30%
solar with 10 MW PV and storage.

Roosevelt County

Rural agrarian community;
open flat plains;
Rural Electric Cooperative Utility;
irrigation water pumping demand;
currently mix of fossil and wind;
Site Objectives: smart grid with
> 30% wind/pumped water storage.



NEDO Sites



New Mexico Energy Policy

Biofuels

- Emphasis on non-food feedstocks
- NM climate-appropriate crops (drought tolerant, use less water)
 - Critical not to trade off domestic security for water insecurity
 - Algae, camelina, canola, etc.
- Good oil quantity/quality
- Drop-in to existing infrastructure
- Southwestern Biofuels Association
- Biodiesel standards & incentives

Regional Energy Initiatives

Western Governors' Association

- Clean & Diversified Energy Initiative
 - 30,000 MW of clean energy to the West by 2015
 - Increase energy efficiency by 20% by 2020
 - Provide 25 years of secure, reliable transmission
- Renewable Energy Zones (REZ) Initiative
 - Renewable resource areas
 - Transmission needs
 - Expect to contribute to new fed efforts: Congress, Dept. of Interior
 - See www.westgov.org for Phase I Report

WGA Policy Resolution 09-01

The governors believe that the United States must:

- Promote a more efficient use of energy throughout the economy;
- Reduce greenhouse gas emissions on a scale necessary to contribute to climate stabilization;
- Maximize the economic development opportunities offered by clean energy;
- Ensure that energy costs are affordable for consumers and support a sustainable, growing economy;
- Increase the proportion of our energy supplies that come from domestic resources and friendly trading partners;
- Minimize any adverse environmental impacts associated with energy development and use.

2005 Climate Change & Greenhouse Gas Reduction Executive Order



- Set state GHG reduction targets
 - 2000 levels by 2012
 - 10% below 2000 by 2020
 - 75% below 2000 by 2050
- Created the Climate Change Advisory Group (CCAG) to make recommendations for meeting targets
- 69 CCAG recommendations; 67 unanimous

Regional Cap-and-Trade

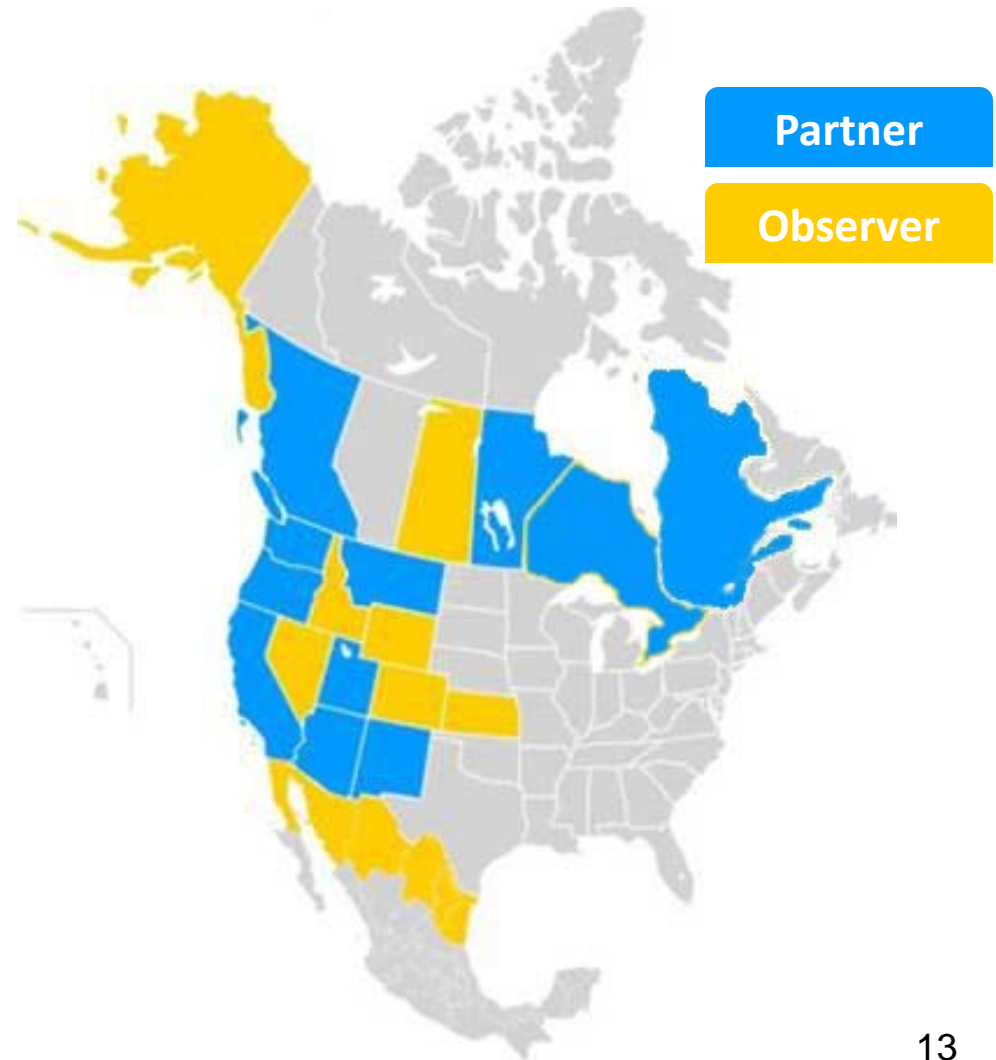
Unanimous CCAG Recommendation:

“NM should lead or participate in a regional collaborative to investigate market-based mechanisms, such as cap and trade...”

- National or regional (i.e., multi-state)
- Reduce regional emissions
- Serve as national model

Western Climate Initiative

- **Develop regional strategies to address climate change**
- **Washington, Oregon, California, Arizona, and New Mexico signed in February, 2007**
- **Montana, Utah, British Columbia, Manitoba, Quebec and Ontario have signed on**
- **6 US states, 6 Mexican states and 1 Province are official observers**



National Policy

Goal is for federal government to follow the lead of progress in states:

- Energy policy, focusing on domestic clean energy & friendly trading partners
- Transmission grid improvements
- Comprehensive climate policy

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