Energy in Colorado

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March 22, 2018
Energy in Colorado

Successes and Challenges
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Natural Resources Development is Colorado’s Economic Development History

- Gold rushes put Colorado on the map
- Coal, oil, silver, gas and uranium also key natural resources
Second Oil Well in the U.S. – Florence, CO

• Drilled in 1862
• Still a producing field
Today, Energy From All Sources Play an Important Role in Colorado’s Economy

Report: Booming energy sector has led to good-paying jobs in Colorado

Colorado’s solar industry continues to gather steam

Huge Rush Creek Wind project gets PUC OK

Colorado oil production hits more than 50-year high on Niobrara wells

Renewable energy has helped rural counties

Surprise, surprise?

2/7/2014

By Peter Marcus

THE COLORADO STATESMAN
Colorado is Energizing America

- National leader in natural gas and renewables
- 7th in the U.S. for Total Energy Production
- A model of balanced consumption
- Establishing a national regulatory model
Colorado’s International Role

- Denver rated #3 Top Oil and Gas City in the World By Rigzone
- With increased production, Colorado’s international role becomes more prominent
Colorado: Energy Production
Rocky Mountain/Colorado Shale Gas Plays
Colorado Natural Gas

- Eleven of the nation’s 100 biggest natural gas fields
- 6th largest natural gas reserves
- 5th in the U.S. for natural gas production
- Holds more than one-third of the U.S. total coalbed methane reserves
Crude Oil in Colorado

- 7\textsuperscript{th} in the U.S. for production
- **Reserves and Supply**
  - 1.3 million barrels
  - 3.9% of U.S. reserves
- **Production Contributions**
  - 13.3 million barrels
  - 4.3% of U.S. production
Colorado’s Energy Growth – Oil & Gas

Source: Colorado Oil and Gas Conservation Commission
Colorado Coal

- 13th largest coal-producing state in the U.S.
- 12.6 million tons mined in 2016
- Ranked 10th among the states estimated recoverable coal reserves
Renewables and Colorado

- 20% of the state’s energy supply comes from renewable sources
- 10th in the U.S. for renewable energy generation
- 10th in the U.S. for wind generation
- 11th in the U.S. for solar generation

“Colorado is considered a global leader in the industry of renewable energy.” ABC News
Colorado’s Energy Growth – Wind & Solar

**Solar**
- Colorado’s solar power capacity increased 70% in 2016
  - 2015 – 544 MW of capacity
  - 2016 – 926 MW of capacity

**Wind**
- Between 2005 and 2016, wind energy increased from 1.5% to 17.3% of electricity generated in the state
  - 2015 – 2,992 MW of capacity
  - 2016 – 3,026 MW of capacity

*Sources: U.S. Department of Energy, Solar Energy Industries Association*
Colorado’s RPS

• First U.S. state to create a renewable portfolio standard (RPS) by ballot initiative when voters approved Amendment 37 in November 2004
• RPS requirements have continually changed and expanded
• Colorado’s RPS requires that 30 percent of retail power sales be sourced from qualifying renewable energy generation by 2020
Balancing Energy Production and Colorado’s Growing Population
Today: Higher Population Brings More Conflicts
Colorado Becomes Energy Battleground as Cities Ban Fracking
Tension Between State Regulation and Local Government

Colorado’s Supreme Court on Monday struck down local government prohibitions on hydraulic fracturing, or fracking, handing oil and gas companies a victory in a lengthy battle over energy production in the environmentally conscious state.

City of Longmont v. Colorado Oil and Gas Association
City of Fort Collins v. Colorado Oil and Gas Association
Regulation in the Energy Sector
Role of Regulation in the Energy Sector

Well-drafted, stable regulatory regimes can bring certainty to business.

- Provides clear expectations for businesses engaged in the energy sector.
- Attracts businesses seeking certainty in the regulatory climate.
- Regulations must be well-drafted and clear, and the regulatory climate must be stable (no pendulum effect).
Colorado Regulations Promoting Certainty

- Colorado Oil and Gas Conservation Commission
  - Rule 609 – State Groundwater Baseline Sampling and Monitoring Requirements
    - Imposed groundwater monitoring requirements near oil and gas developments
    - Supplemented existing COGCC rules protecting groundwater
  - Effective May 1, 2013

[Map image: Blue – water samples, Green – oil/gas well samples]
Colorado Regulations Promoting Certainty

- Colorado Oil and Gas Conservation Commission

- Rule 604 – Setback Rules
  - Expanded setback requirements for oil and gas wells and production facilities
  - Imposed other notice, meeting, and mitigation requirements designed to protect residences and communities

- Effective August 1, 2013
1,000 ft. Setback – Both Fields
Colorado Regulations Promoting Certainty

- Colorado Oil and Gas Conservation Commission
  - Rule 205A – Hydraulic Fracturing Chemical Disclosure Rule
    - Requires operators to publicly disclose all chemicals used to hydraulically fracture wells in Colorado
    - At the time it was enacted, it was the strongest such rule in the country, and many states followed Colorado’s model
  - Effective April 1, 2012
Colorado on Air Quality Regulation

- **Methane Rule** – limits air pollution by requiring companies:
  - to find/fix methane leaks
  - maintain technology that captures 95% of emissions of VOCs

- **Continued work towards attainment with Federal Ozone Regulations**
  - June 2017 Fort Collins Extension
  - 2018 Revisions
Pendulum → Uncertainty

Secretary Sally Jewell
2013 - 2017

Secretary Ryan Zinke
2017

???
2020 and beyond
Uncertain Regulatory Regimes

- Bureau of Land Management – Methane and Waste Prevention Rule

**November 2016**
- Final rule published with an effective date of January 17, 2017

**May 2017**
- Congress tries but fails to repeal the rule

**June 2017**
- Trump Administration postpones compliance date until January 17, 2018

**October 2017**
- Court orders BLM to make the rule effective immediately
- BLM postpones compliance date until January 2019 despite court order
Uncertain Regulatory Regimes

- Environmental Protection Agency – Clean Power Plan

Final Rule published in October 2015

President Trump issues an Executive Order mandating review in March 2017

Clean Power Plan is repealed October 10, 2017

Status: Replacement rule forthcoming?
What’s Next?

BUSINESS

Newmont Mining inks deal to help sage grouse habitat in Nevada

Once estimated to total 16 million across the West, the greater sage grouse population has dwindled to as few as 200,000. These two were seen in Craig.

By THE ASSOCIATED PRESS
PUBLISHED: August 30, 2016 at 9:46 pm | UPDATED: August 30, 2016 at 11:57 pm
Sage Grouse Conservation

- September 2015
  - Multi-stakeholder agreement covering 67 million acres negotiated over 10 years to protect sage grouse habitat and avoid Endangered Species Act listing

- June 2017
  - Department of the Interior orders review of Sage Grouse Management Plans

- October 2017
  - Bureau of Land Management issues a Notice of Intent to Amend Land Use Plans Regarding Greater Sage-Grouse Conservation
Questions