

# Energy in Colorado

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WilmerHale

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# Energy in Colorado

## Successes and Challenges

Andrew L. Spielman, Chair of Energy, Environmental and Natural Resources



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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

BUSINESS

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

Colorado's solar industry continues to gather steam

BUSINESS > ENERGY

Huge Rush Creek Wind project gets PUC OK

BUSINESS

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





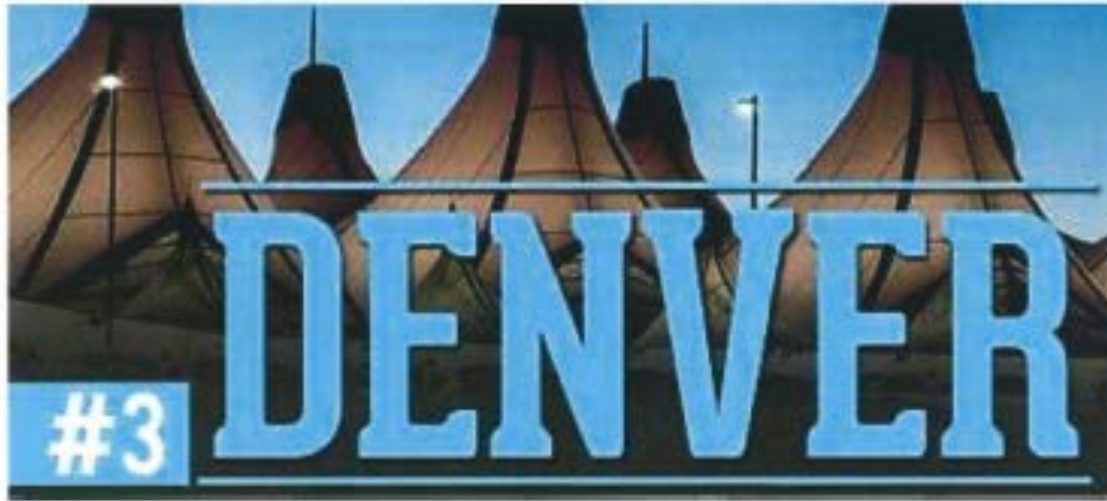
## Colorado is Energizing America

- National leader in natural gas and renewables
- 7<sup>th</sup> 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









## Colorado Natural Gas

- Eleven of the nation's 100 biggest natural gas fields
- 6<sup>th</sup> largest natural gas reserves
- 5<sup>th</sup> in the U.S. for natural gas production
- Holds more than one-third of the U.S. total coalbed methane reserves

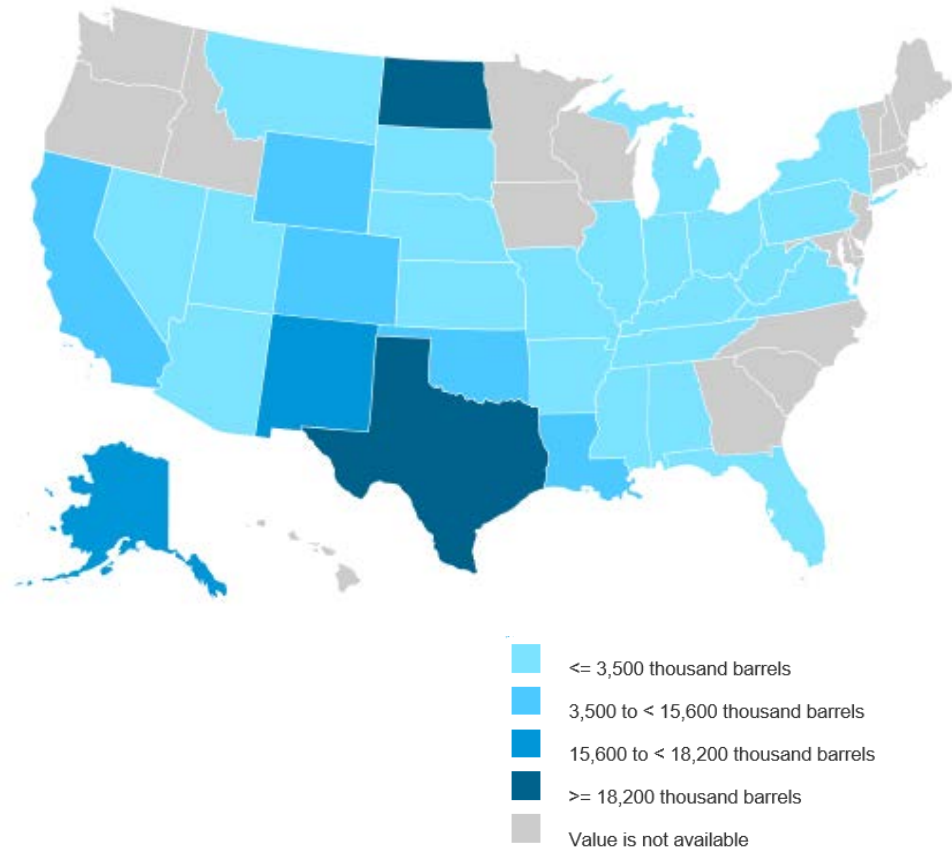


GETTY IMAGES



## Crude Oil in Colorado

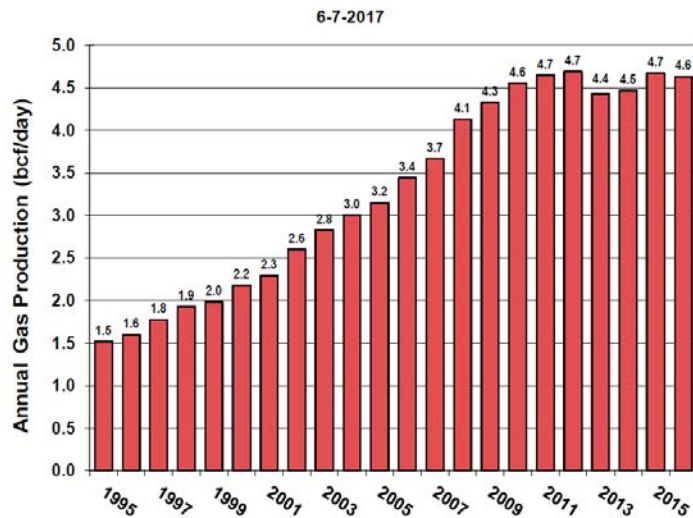
- 7<sup>th</sup> in the U.S. for production
- **Reserves and Supply**
  - 1.3 million barrels
  - 3.9% of U.S. reserves
- **Production Contributions**
  - 13.3 million barrels
  - 4.3% of U.S. production



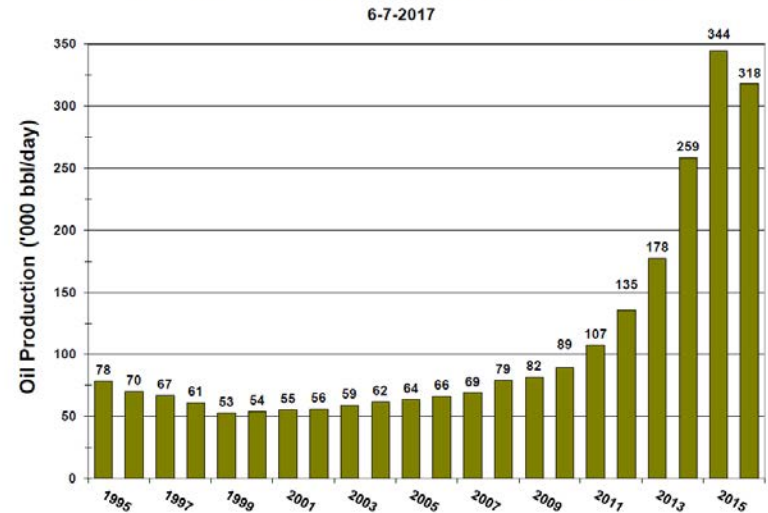


## Colorado's Energy Growth – Oil & Gas

**COLORADO NATURAL GAS PRODUCTION 1995-2016**  
BILLION CUBIC FEET OF GAS PER DAY



**COLORADO OIL PRODUCTION:**  
1995-2016 IN THOUSAND BARRELS PER DAY



Source: Colorado Oil and Gas Conservation Commission



## Colorado Coal

- 13<sup>th</sup> largest coal-producing state in the U.S.
- 12.6 million tons mined in 2016
- Ranked 10<sup>th</sup> among the states estimated recoverable coal reserves







## Renewables and Colorado

- 20% of the state's energy supply comes from renewable sources
- 10<sup>th</sup> in the U.S. for renewable energy generation
- 10<sup>th</sup> in the U.S. for wind generation
- 11<sup>th</sup> 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



Photograph by Jack Dempsey, AP

# Balancing Energy Production and Colorado's Growing Population

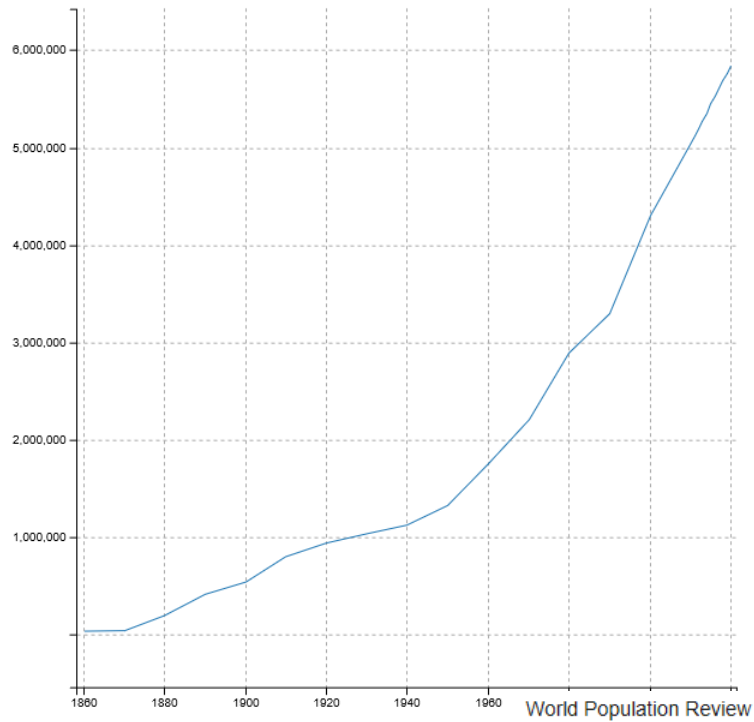


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# Today: Higher Population Brings More Conflicts

Colorado Population Chart





## Colorado Becomes Energy Battleground as Cities Ban Fracking





# Tension Between State Regulation and Local Government

U.S.

## ***Colorado Court Strikes Down Local Bans on Fracking***

By MICHAEL WINES MAY 2, 2016

**The New York Times**

“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



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## 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)



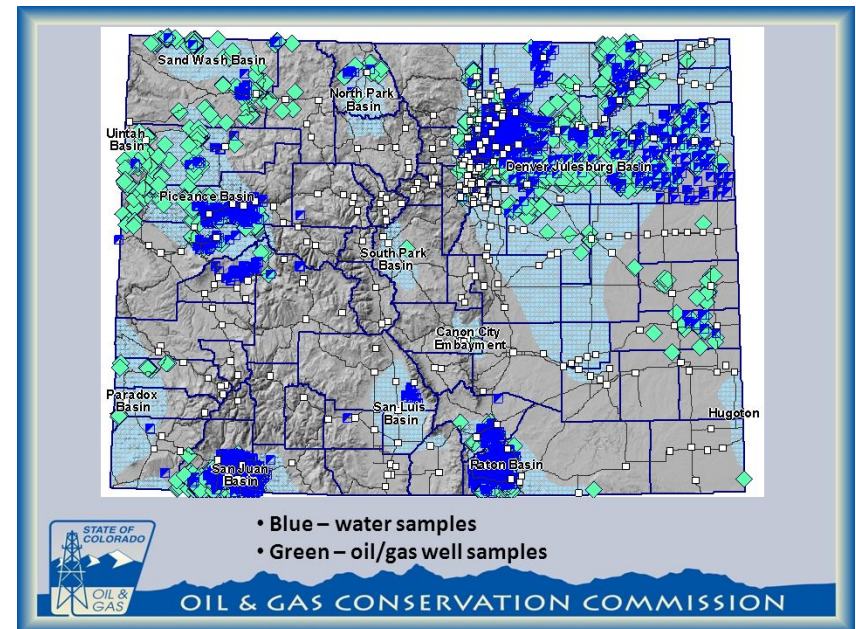
# Colorado Regulations Promoting Certainty

- 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



**COLORADO**  
Oil & Gas Conservation  
Commission

Department of Natural Resources





# 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





## Current 150/350 ft. Setback







## 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

**E&E NEWS**  
CLEAN AIR POLICY

### **Colorado First State to Limit Methane Pollution from Oil and Gas Wells**

Air pollution from fossil fuel production has contributed to worsening smog and climate change

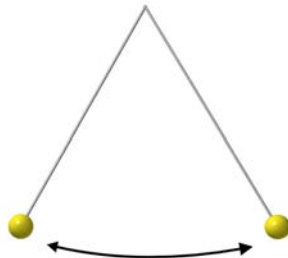
By Stephanie Paige Ogburn, ClimateWire on February 25, 2014



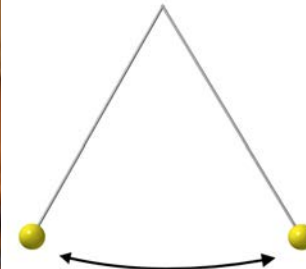
## Pendulum → Uncertainty



Secretary Sally Jewell  
2013 - 2017



Secretary Ryan Zinke  
2017

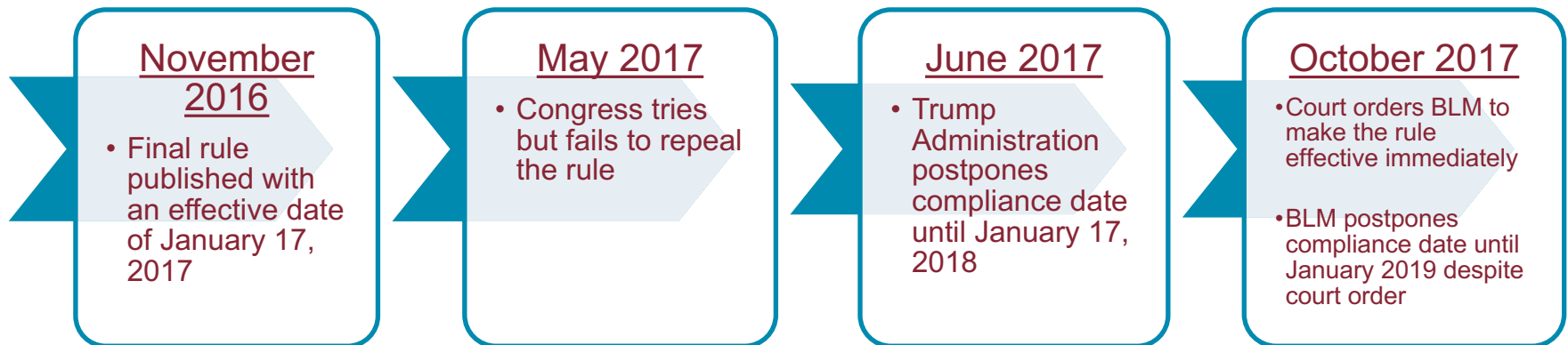


???  
2020 and beyond



# Uncertain Regulatory Regimes

## ■ Bureau of Land Management – Methane and Waste Prevention Rule





## 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



Joe Amon, Denver Post file

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

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# 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

