



THE OUTLOOK FOR ENERGY

Montana Energy Industries: Year of Change?

By Terry Johnson



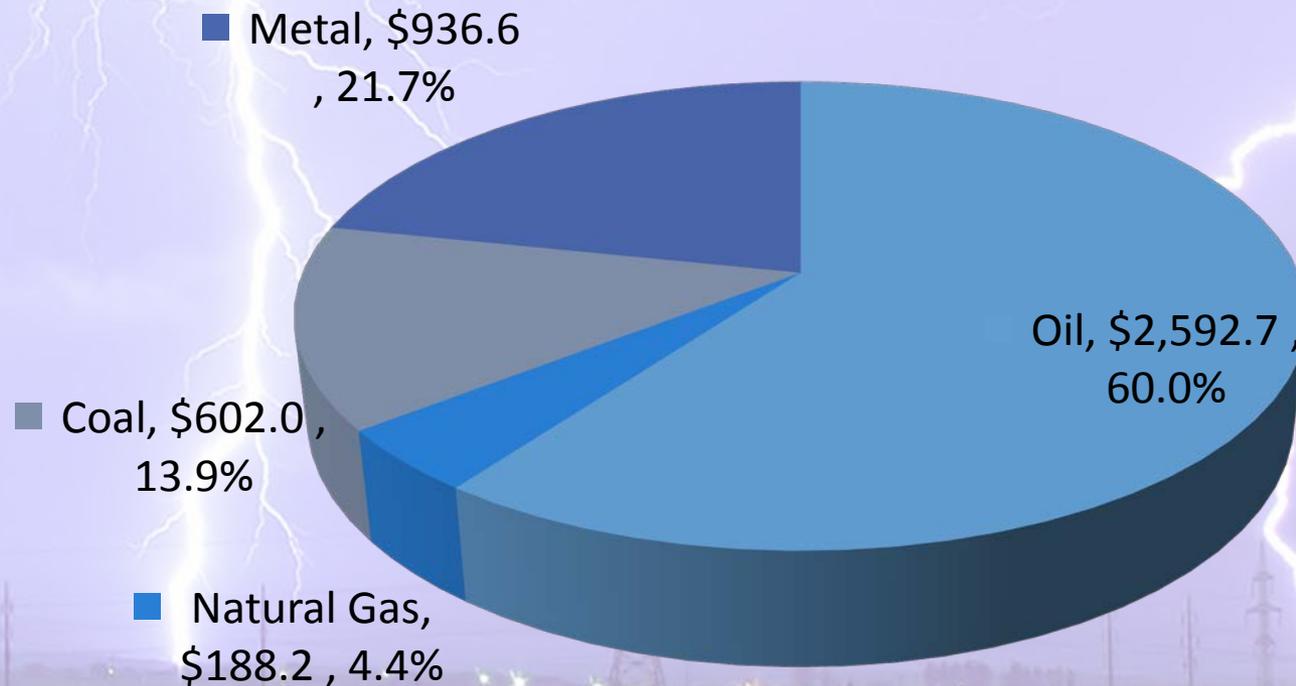
A Quick Look Back

Major Developments in 2014

- **NorthWestern Energy**
 - Purchased Dams
- **US Oil & Natural Gas Production**
 - #1 Producer in the World
- **Oil Price Collapse**
- **New CO₂ Standards Proposed**
 - US Coal Fired Plant Impacts
- **Production Tax Credit Extended**
 - Further Wind Farm Development

Total Value of Production in Montana Oil, Natural Gas, Coal, Metals

How Big is the Industry ? **2013 \$4.3 Billion**

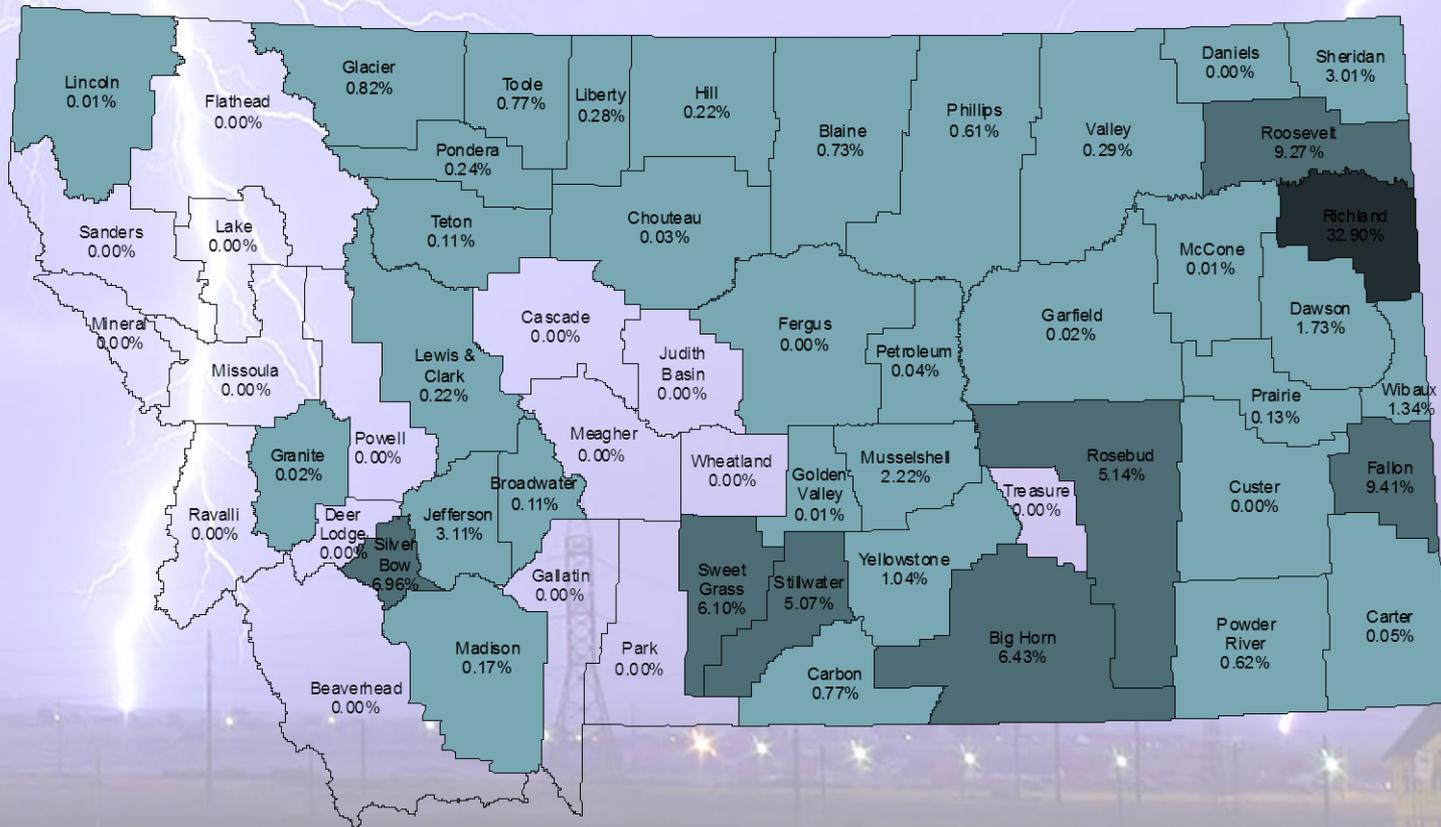


Source: Montana Department of Revenue

2013 Production Value by County

Oil, Natural Gas, Coal, Metals

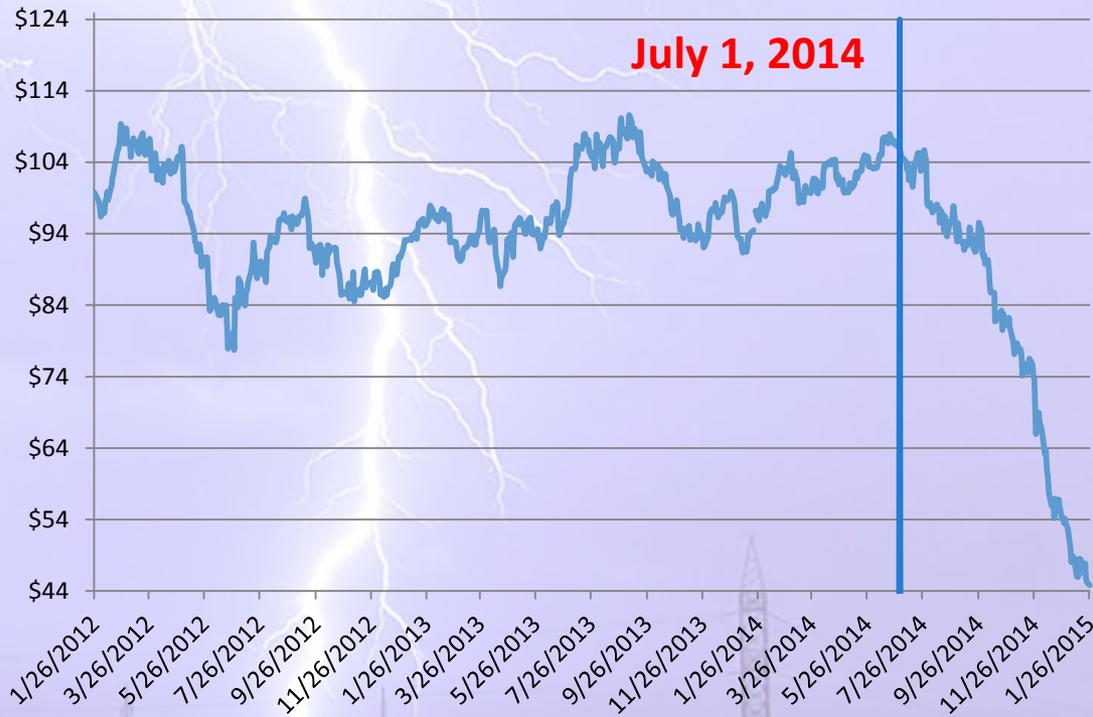
Only 16 Counties Do Not Have Production Activity



Source: Montana Department of Revenue

Oil Situation

Oil Price Plunge

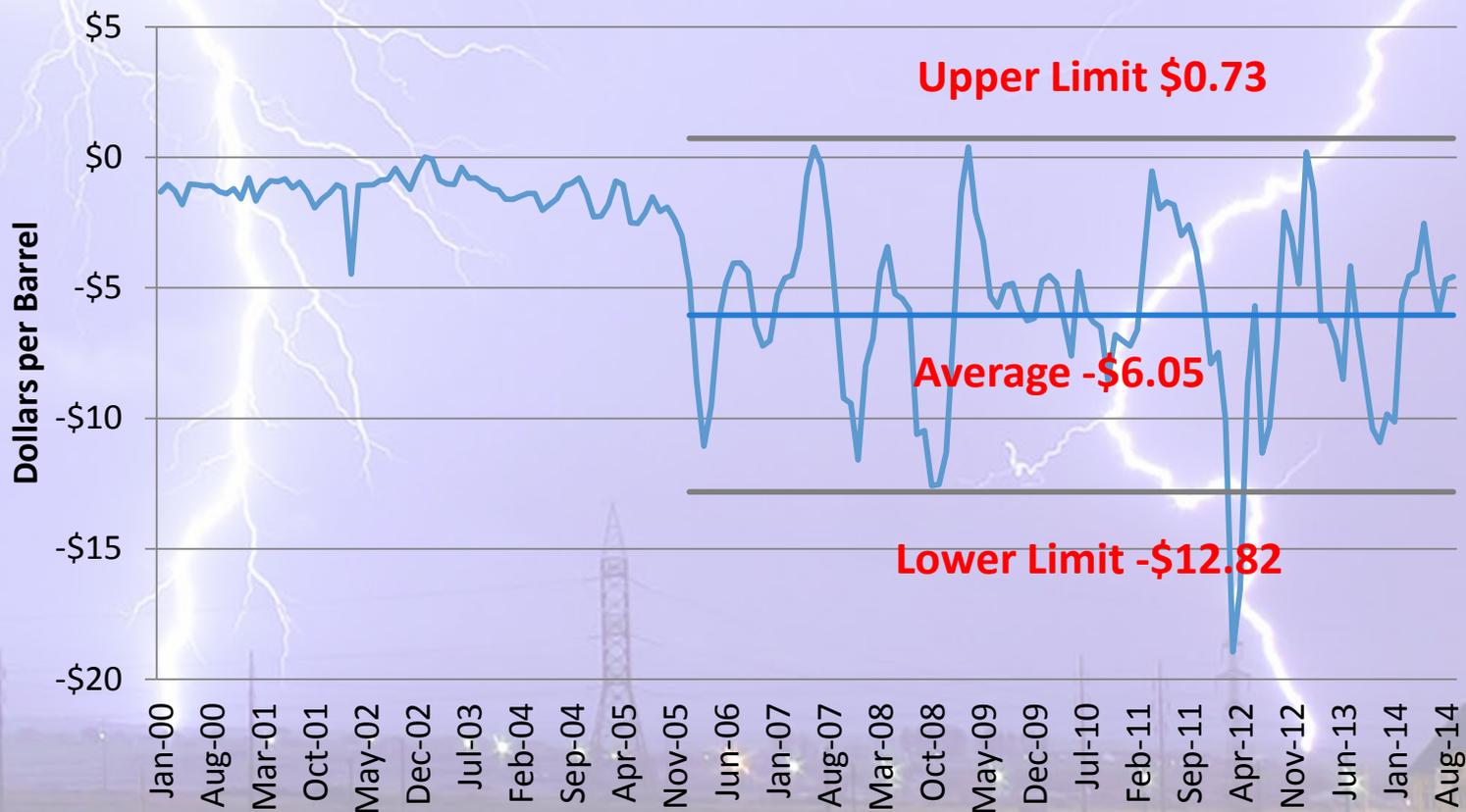


- **Increased US Production**
 - ✓ **Texas & North Dakota**
- **Slower Economic Growth**
 - ✓ **China & Other Asian Countries**
- **OPEC Maintaining Production Quotas**
 - ✓ **30 million B/D**

57.8% decline

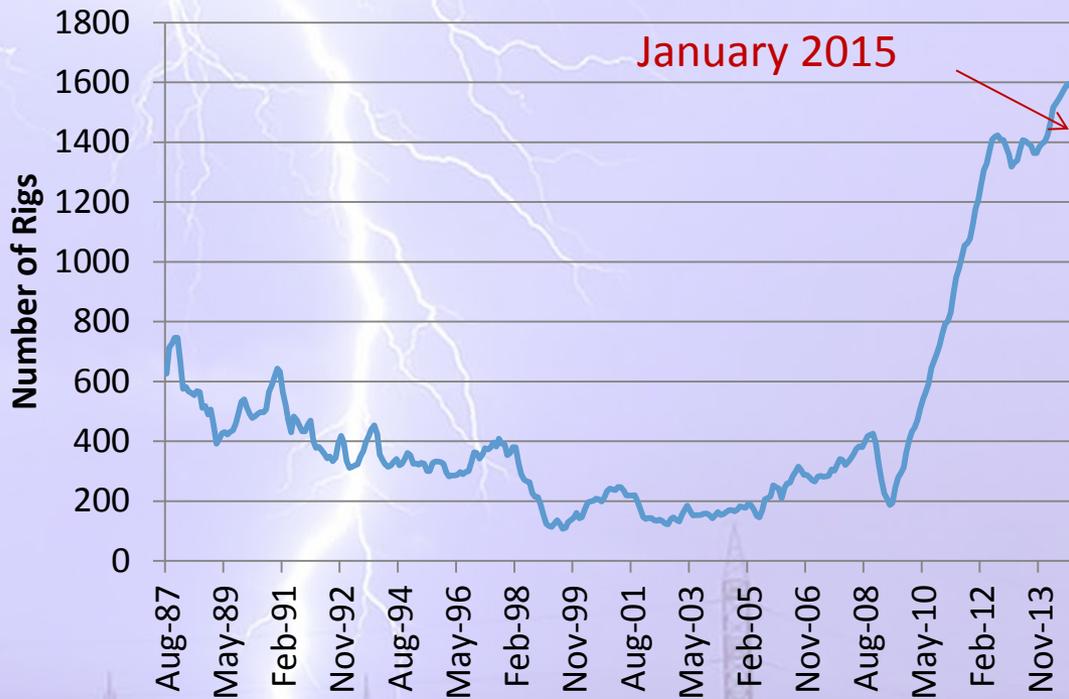
Source: Energy Information Administration

Oil Price Differential Montana vs. West Texas Intermediate



Source: Energy Information Administration

U.S. Rotary Rigs in Operation

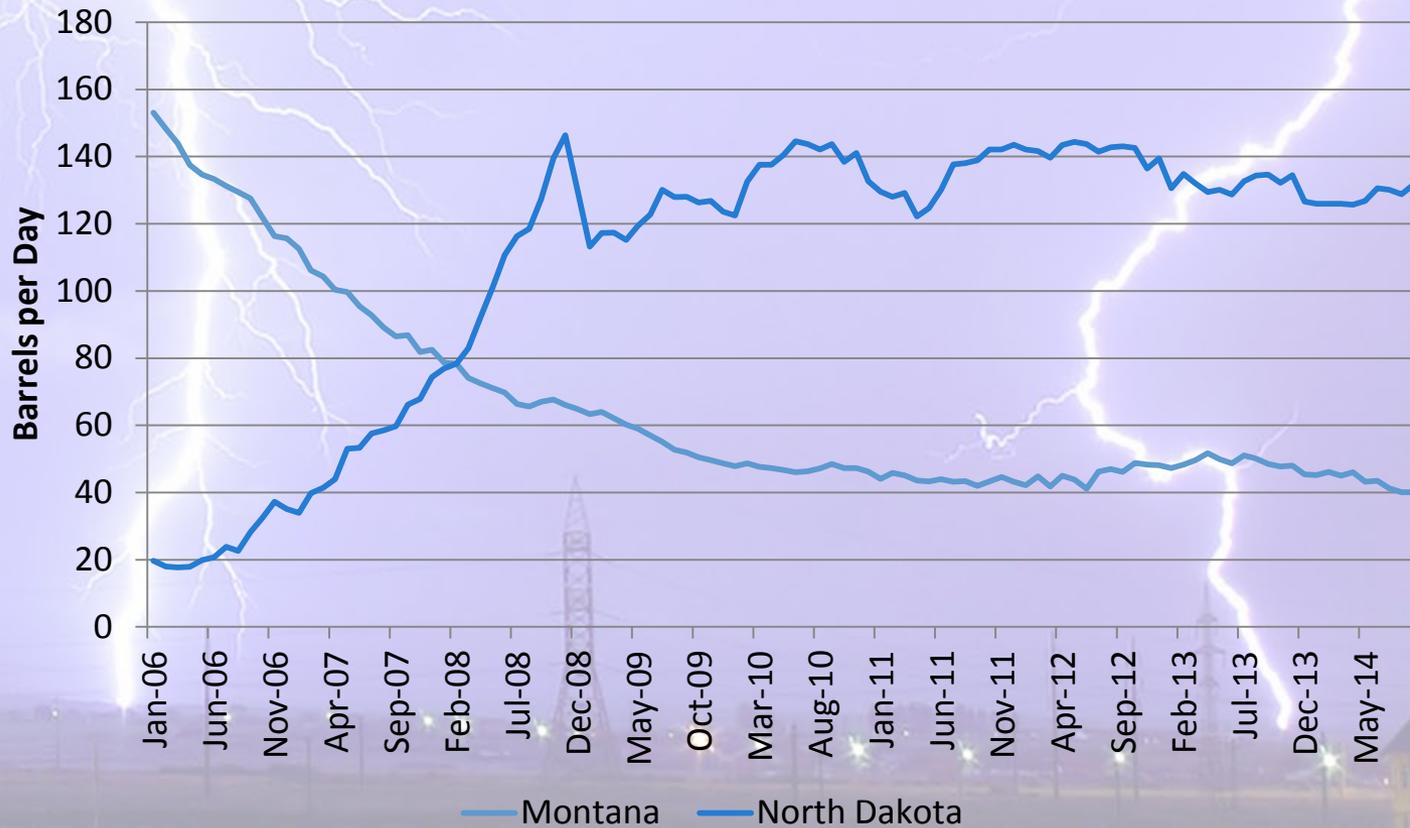


The Bad News ...

- “Texas drilling permits drop 57% in November.”
- “Continental Resources will cut spending 40%.” (largest producer in MT.)
- “Will also reduce drilling rigs by a third.”

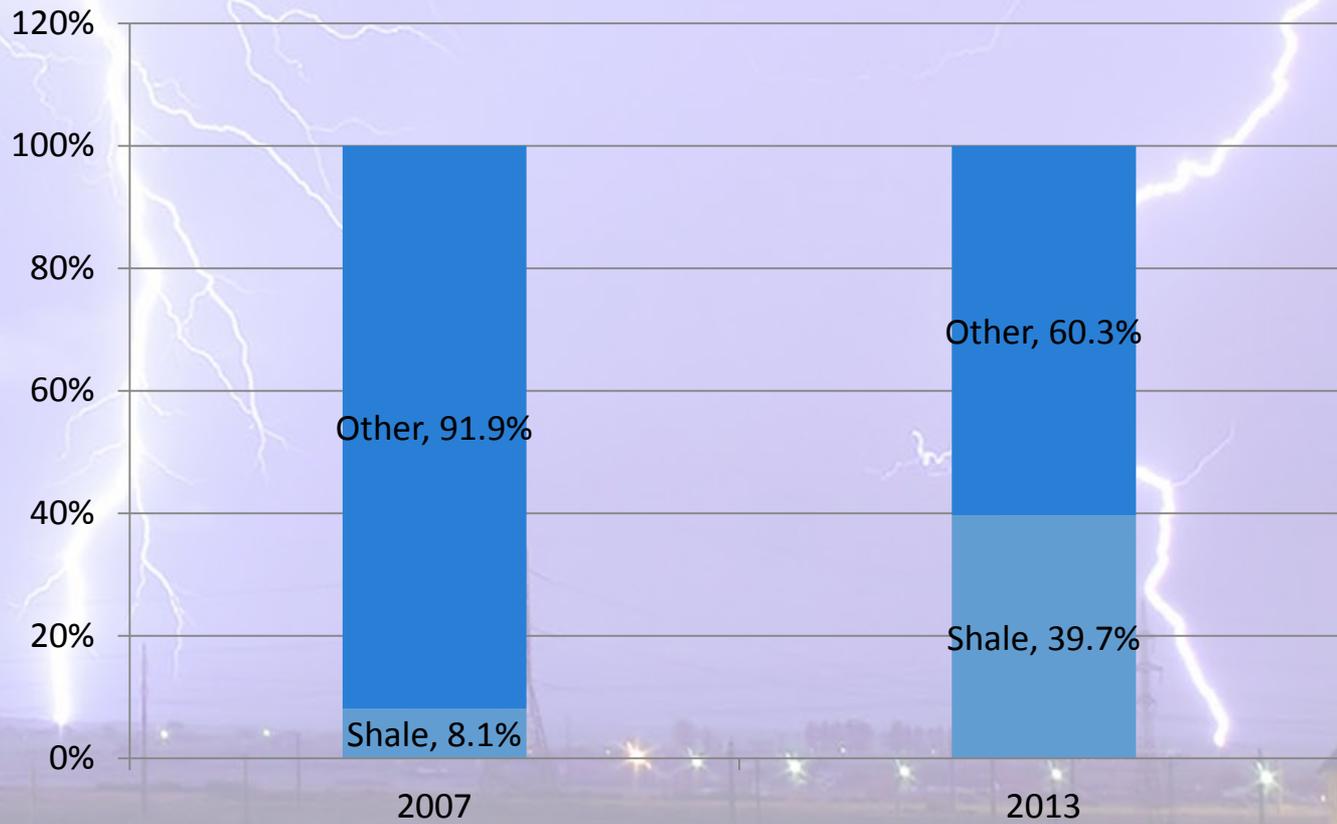
Source : RIGZONE.com 12/23/2014

Average Barrels per Day per Well Bakken Formation



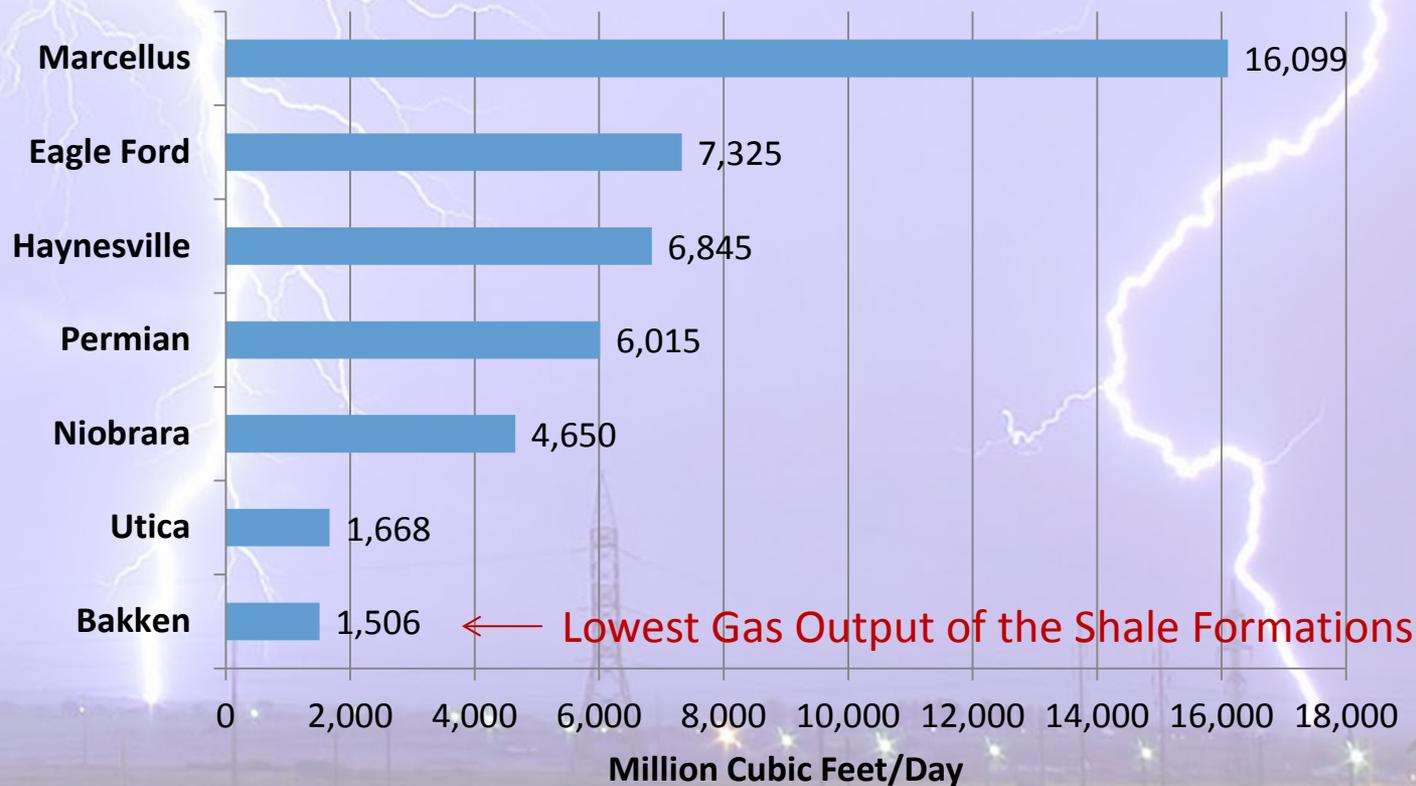
Source: MT. Board of Oil and Gas, North Dakota Industrial Commission

US Natural Gas Production By Type of Well



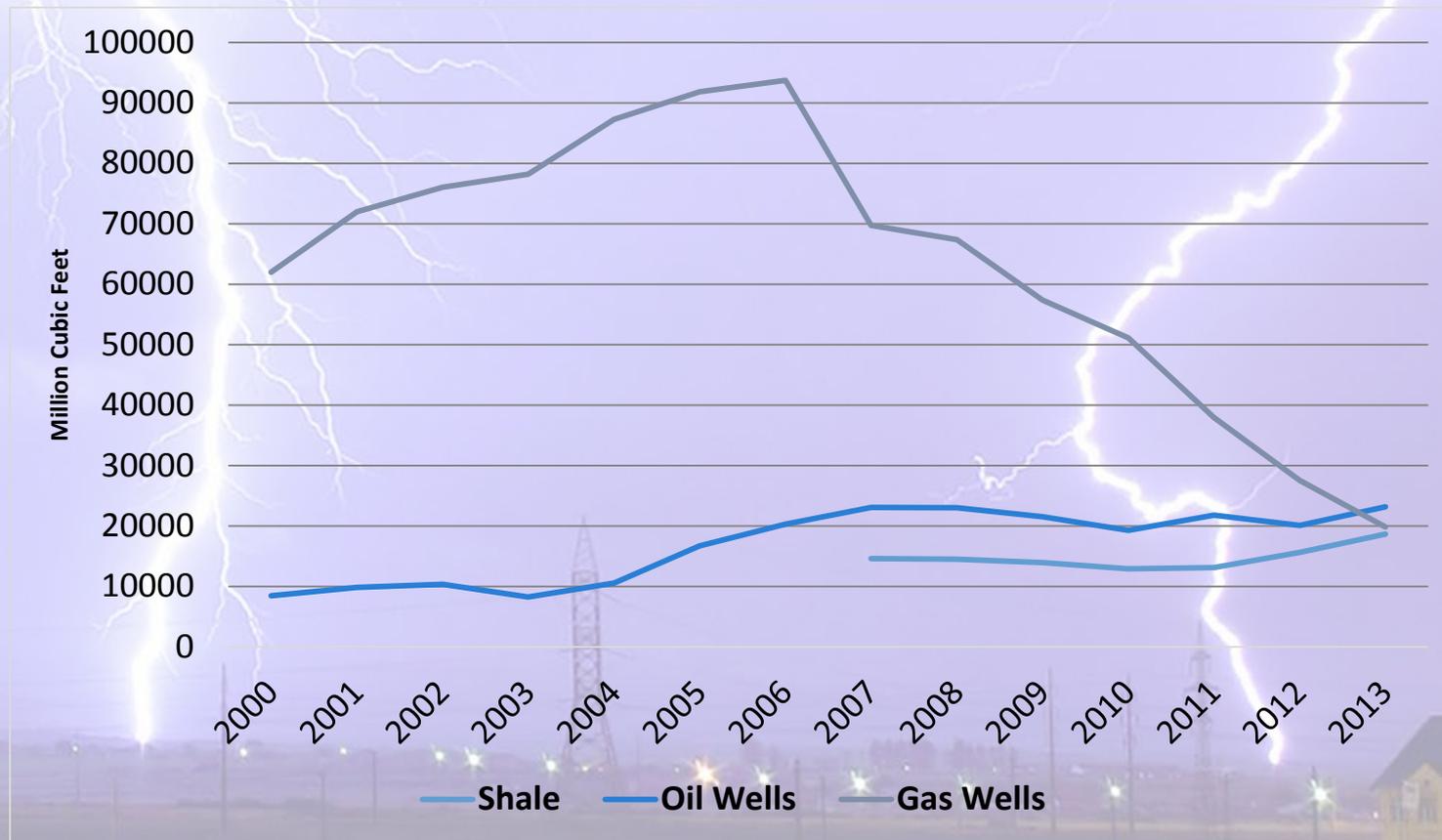
Source: Energy Information Administration

US Natural Gas Production December 2014 Shale Formations



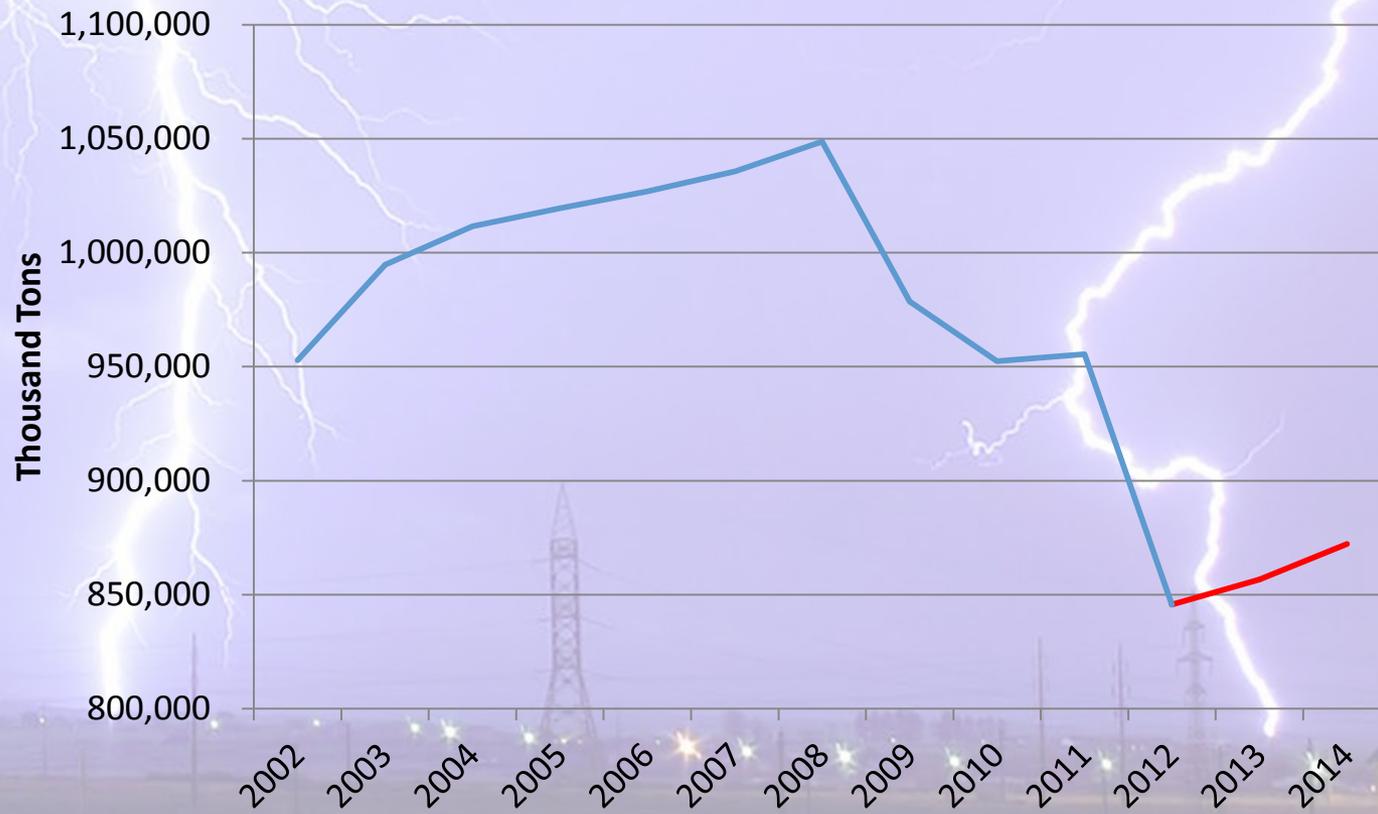
Source: Energy Information Administration

Montana Natural Gas Production By Well Type



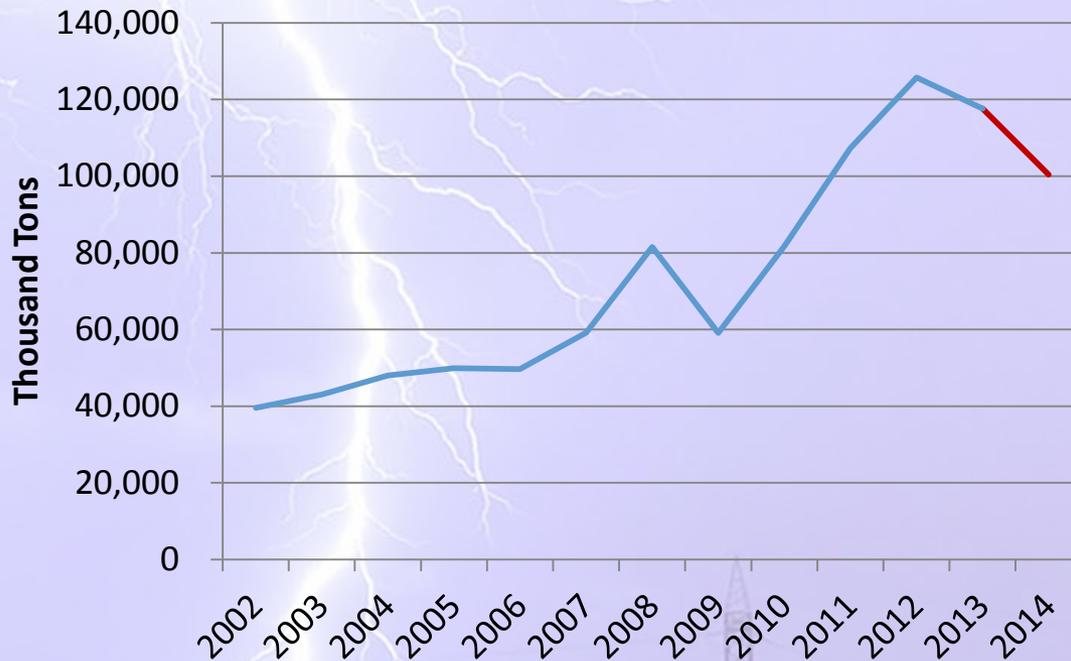
Source: Energy Information Administration

US Coal Consumption By Electric Utilities (Fiscal Year)



Source: Energy Information Administration

US Coal Exports (Fiscal Year)

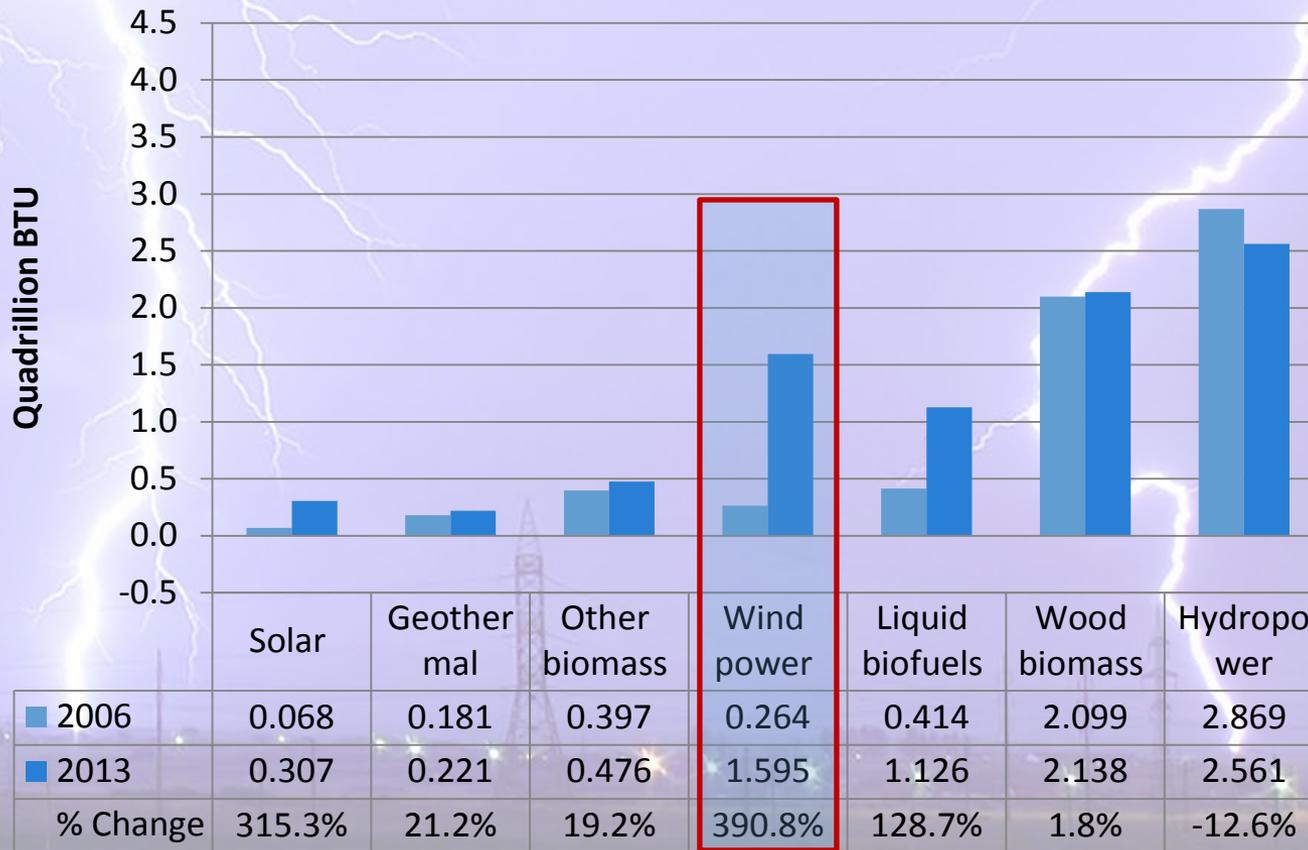


US Export Markets - 2013

- Europe 61 Million
- Asia 27 Million
- North America 13 Million
- South America 13 Million
- Africa 4 Million

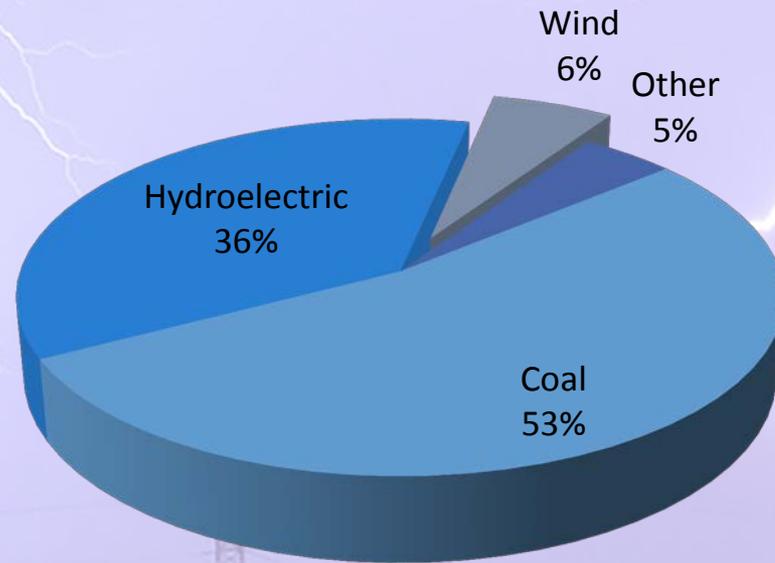
Source: Energy Information Administration

US Renewable Energy By Type



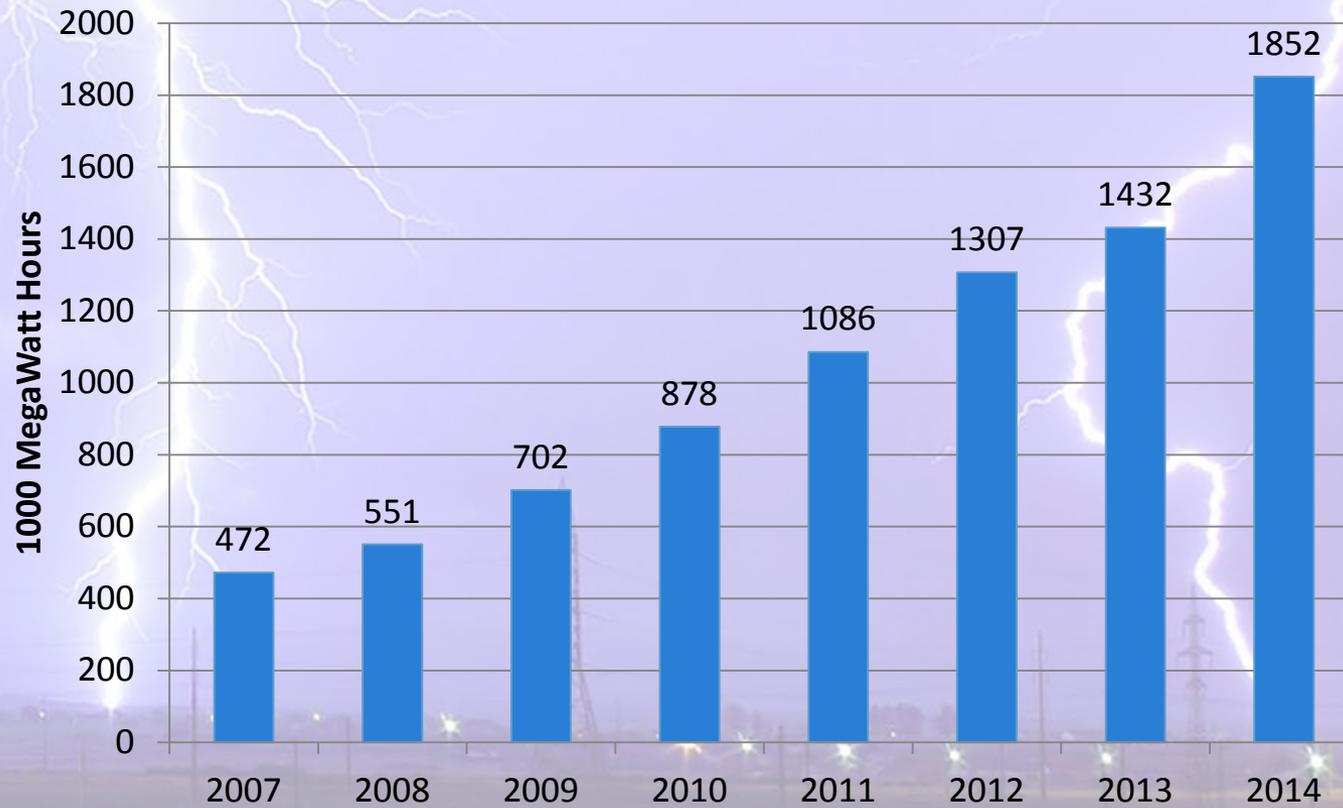
Source: Energy Information Administration

Montana Electricity Generation By Type 2013



Source: Energy Information Administration

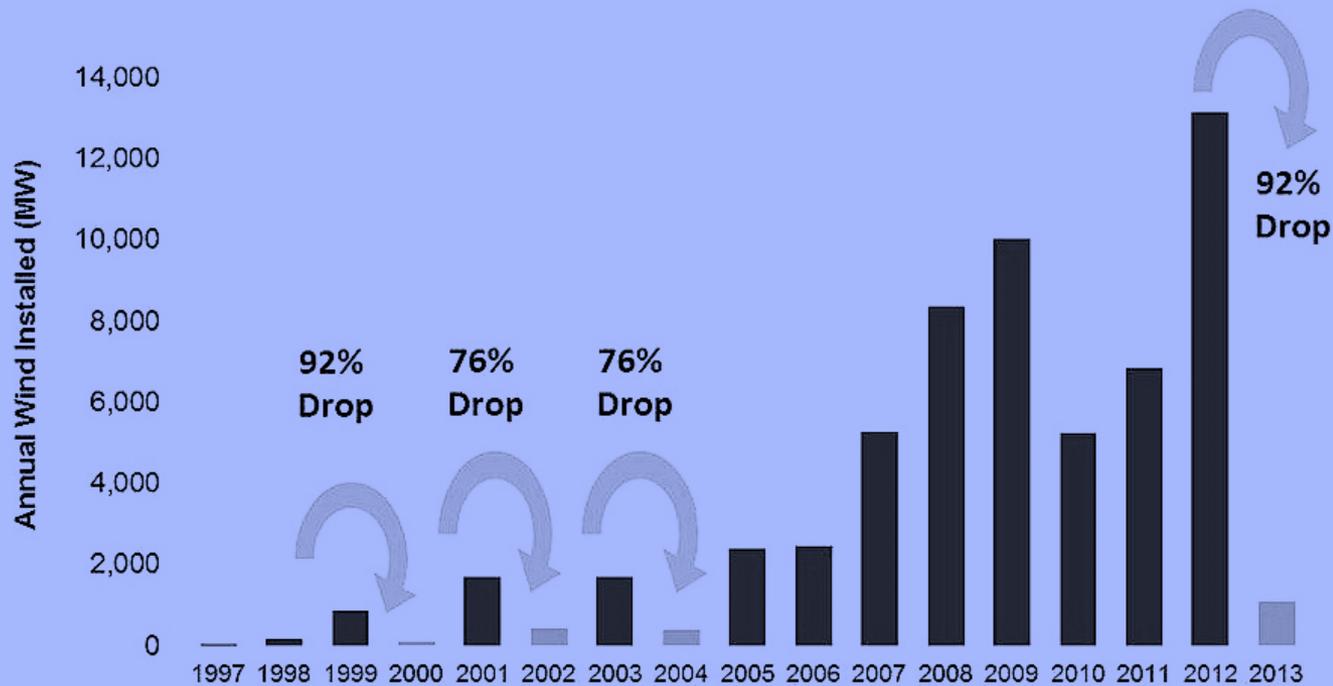
Montana Wind Production By Fiscal Year



Source: Energy Information Administration

Impact of Production Tax Credit

Historic Impact of Production Tax Credit (PTC) Expiration on Annual Wind Capacity Installation



Source: American Wind Energy Administration

Montana's Energy Outlook

- **Oil -**

- **Low Prices**

- Over supply
 - Slow World Economic Growth
 - OPEC Production Quotas

- **Production Declines**

- Maturing Wells
 - Reduced Investment

- **Coal –**

- **Stable Prices**

- Transportation and Labor Costs

- **Reduced Production**

- US Power Plant Demand
 - Export Markets

Montana's Energy Outlook

- **Natural Gas -**

- **Price Declines**

- Over Supply
 - Adequate Inventories

- **Production Declines**

- Maturing Fields
 - Reduced Investment

- **Wind -**

- **Production Increase**

- Production Tax Credit Extension

- **Production Tax Credit Future Legislation**

Questions

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