Natural Resources & Energy Outlook:
Coal, Oil, Natural Gas, Minerals
By Terry Johnson
Eye on Energy

Major Developments in 2013

• U.S. Geological Survey
  – Revised Assessment
  – Three Forks Doubles Recoverable Reserves

• NorthWestern Energy
  – Proposed Purchase of Dams
  – Purchase of Natural Gas Properties

• Natural Gas Improvement

• CO2 Injection Begins

• Wind Farm Litigation

• Sage Grouse
U.S. Crude Oil Production

US Oil Production Rank
September 2013, Barrels per Day

- Texas: 2,726,367
- North Dakota: 931,933
- California: 546,367
- Alaska: 511,067
- Oklahoma: 320,033
- New Mexico: 279,600
- Louisiana: 198,633
- Wyoming: 183,667
- Colorado: 177,833
- Kansas: 126,700
- Utah: 92,700
- Montana: 81,033
- Mississippi: 65,467
- All Other States: 27,100

Source: Energy Information Administration
Is Infrastructure Available?

Williston Basin Oil Export Capacity
Thousand Barrels per Day

Source: Energy Information Administration
U.S. Refinery Oversupply

U.S. Crude Price vs. Europe Brent Price

Dollars per Barrel

$0 $20 $40 $60 $80 $100 $120 $140 $160


Europe Brent Cushing, OK
Drilling Rig Efficiencies

Rig Count
Versus Bakken New Well Oil Production

Drilling Rig Efficiencies

Rig Count
New Well Oil Production/Rig

Barrels per Day

Jan-07 Jun-07 Nov-07 Apr-08 Sep-08 Feb-09 Jul-09 Dec-09 May-10 Oct-10 Mar-11 Aug-11 Jan-12 Jun-12 Nov-12 Apr-13 Sep-13

Rig Count
New Well Oil Production/Rig

Barrels per Day
Montana Oil Production & Price
Quarter 1 & 2 by Calendar Year

Source: Energy Information Administration, Montana Department of Revenue
Montana Coal Production & Price
Quarter 1 & 2 by Calendar year

Source: Energy Information Administration, Montana Department of Revenue
Montana Coal Market Shift

Montana Coal Destination Calendar 2007
- Domestic: 99%
- Exports/Brokers: 1%

Montana Coal Destination Calendar 2012
- Domestic: 75%
- Exports/Brokers: 25%

Source: Energy Information Administration
Montana Coal Headwinds

- **Environmental Regulations**
  - EPA Clean Air Standards for new power plants (applies to both new gas and coal fired plants) (60 day comment period)
  - EPA Clean Air Standards for existing power plants (proposed standards by June 1, 2014)

- **Pacific Northwest Port Facilities**

- **Stock Prices**
Montana’s Energy Outlook

- **Coal** *(Stable)*
  - Export Markets
  - Transportation Costs

- **Oil** *(Increase)*
  - Drilling Efficiencies
  - Transportation Options
  - Refinery Oversupply
Montana’s Energy Outlook

- **Natural Gas** (Increase)
  - Electricity Generation
  - Environmental Issues with Coal
- **Mineral** (Decrease)
  - Economic Recovery
  - Commodity Prices
## Governmental Revenues

### Natural Resource & Energy Tax Trends

Revenue Collections By Fiscal Year

<table>
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<tr>
<th></th>
<th>Millions</th>
<th>Change</th>
<th>% Change</th>
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</thead>
<tbody>
<tr>
<td>2004</td>
<td>$184.8</td>
<td>$70.1</td>
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<tr>
<td>2005</td>
<td>$254.9</td>
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<tr>
<td>2006</td>
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<tr>
<td>2009</td>
<td>$484.6</td>
<td>($52.7)</td>
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<tr>
<td>2010</td>
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<td>($50.8)</td>
<td>-11.8%</td>
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<tr>
<td>2011</td>
<td>$381.0</td>
<td>($0.0 )</td>
<td>0.0%</td>
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<tr>
<td>2012</td>
<td>$381.0</td>
<td>($3.1)</td>
<td>-0.8%</td>
</tr>
<tr>
<td>2013</td>
<td>$377.9</td>
<td>($3.1)</td>
<td>-0.8%</td>
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</tbody>
</table>

Source: Montana Statewide Budgeting and Human Resource System
Questions

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