Wyoming Coal Information Committee

2018 WYOMING COAL OVERVIEW
Safety is paramount in Wyoming mining and is one of the core values of the industry.

All WMA board and committee meetings start with a “safety share” in which an individual offers an example of how safety is important in our work and daily routines.

It is critical for the public to understand the steps taken by individual companies to ensure a safe work environment for employees.
WYOMING INCIDENT RATE IN 2016
(INJURIES PER 200,000 HOURS WORKED)

Source: Bureau of Labor Statistics: http://doe.state.wy.us/LMI/OSH/OSH_16/Tables_SD_Table_1.pdf
Wyoming Coal Producers

- Arch Coal
- Black Butte Coal
- Blackjewell Mining
- Bridger Coal Company
- Buckskin Mining Company
- Cloud Peak Energy
- Peabody
- Western Fuels
- Westmoreland Coal
- Wyodak Coal
Wyoming produces 40% of the nation’s coal and has been the leading coal producing state since 1986.

Recent estimates give Wyoming more than 165 billion tons of recoverable coal. Nearly 20 billion tons is economically recoverable today.

Wyoming is home to over 1.4 trillion tons in total coal resources (885 billion tons in the PRB).

Source: Wyoming State Geological Survey
Wyoming’s Powder River Basin coal seams can run from 80 to 100 feet thick.
Wyoming mines produced 316.6 million tons of coal in 2017, most of that from the Powder River Basin (PRB).

Up to 60 single destination trains of up to 150 cars leave the PRB for energy markets across America each day.

In 2017, Wyoming coal mines employed nearly 5,700 workers with a payroll of about $625 million.

In 2017, coal’s financial contribution to Wyoming in taxes, royalties and fees was over $891 million based on the prior year’s production.
WYOMING COAL PRODUCTION

1970-2017 (in Tons)

Source: Annual Reports of the State Inspector of Mines of Wyoming
## Revenue for Wyoming

<table>
<thead>
<tr>
<th>Source</th>
<th>Amount</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Federal mineral royalties</td>
<td>$242,907,857</td>
<td>27%</td>
</tr>
<tr>
<td>Severance taxes</td>
<td>$202,963,660</td>
<td>23%</td>
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<tr>
<td>Federal mineral bonus payments</td>
<td>$124,387,115</td>
<td>14%</td>
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<tr>
<td>Abandon mine lands distributions</td>
<td>$44,951,780</td>
<td>5%</td>
</tr>
<tr>
<td>Ad valorem production</td>
<td>$175,548,218</td>
<td>20%</td>
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<td>20%</td>
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<tr>
<td>State rents and royalties</td>
<td>$58,456,697</td>
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<td>Sales and use taxes</td>
<td>$25,328,309</td>
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<tr>
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<td>$44,951,780</td>
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</tr>
<tr>
<td>Ad valorem property</td>
<td>$16,854,046</td>
<td>2%</td>
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<td>Federal mineral royalties</td>
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<td>27%</td>
</tr>
<tr>
<td>Total estimated contribution:</td>
<td>$891,397,681</td>
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</tr>
</tbody>
</table>

*Based on 2016 production year

Note: The last federal coal lease was awarded in 2010 and the final coal bonus bid was paid in 2017, leaving a gap in major funding sources for Wyoming school construction.
Wyoming coal builds Wyoming schools – For the past 2 decades, money from lease bonus bids has funded school construction. Every county in Wyoming has benefitted.
Permitting - The First Step

- Permits must be obtained prior to mining.
- They are the code of conduct for the operator.
  - Specifies activities operator must implement.
  - Identifies the standards.
- Serves as the basis for enforcement by the respective agency.
PERMITTING – THE FIRST STEP

- Obtain exploration license from Bureau of Land Management (Up to 2 Years)
- Obtain a federal coal lease from Bureau of Land Management (4-7 Years – Mostly NEPA Work)
- Obtain a Permit to Mine from Wyoming DEQ Land Quality Division (2-3 Years)
- Obtain Federal Mine Plan Approval from Office of Surface Mining (Up to 1 Year)
- Obtain a Special Use Permit from the US Forest Service (2-3 Years)
PERMITTING – THE FIRST STEP

Elapsed Time for Permitting Process

- Exploration License: 1-2 years
- Lease: 4-7 years
- WY Permit to Mine: 2-3 years
- Federal Mine Plan Approval: 1 year

Total elapsed time to mine coal: 8-13 years

- Forest Service Special Use Permit: 2-3 years

Total elapsed time: 10-16 years
HOW IS COAL MINED?

Explosives are used to loosen and remove overburden and fracture the coal seam.
HOW IS COAL MINED?

Overburden is removed by draglines, or shovels and trucks. The coal is then removed by shovels or loaders and hauled in large trucks.
A 400 ton haul truck. Coal is mined in Wyoming at a rate of approximately 10 tons a second.
Trains carrying coal from the Powder River Basin to energy markets across the nation run 24 hours a day, 7 days a week, 365 days a year. A train can be up to 150 cars long, with each car carrying up to 115 tons of coal.
WHERE DOES OUR COAL GO?

- Electrical power generation is by far the largest consumer of coal in the United States.

- The vast majority of Wyoming coal is used as steam coal for the generation of electricity and is shipped all over the country.

- Wyoming produces about 40 percent of the nation’s coal. With coal providing about 30 percent of America’s electricity generation, Wyoming coal provides about 12 percent of the electricity produced in this country.

- The Energy Information Administration projects coal’s share of energy production in 2050 will be about 22 percent (compared to about 31 percent in 2017).

- America will continue to rely on coal for the foreseeable future.
Wyoming coal consumption by state (millions of tons - 2017)

Source: US Energy Information Administration (March, 2018)
WYOMING COAL STILL LIGHTS UP AMERICA
AFFORDABLE ELECTRICITY

Retail Cost per KWH and Percent of Coal Generation
(US Average = 10.27¢  26.2%)

¢ = average retail price per kilowatt hour
% = percent of total electricity generation from coal

Alaska = 17.9¢  0%
Hawaii = 23.9¢  10%
District of Columbia = 11.7¢  0%

Source: US Energy Information Administration State Electricity Profiles (May, 2018)
* 2012 US Average = 9.8¢  38%
COAL USAGE AND A CLEAN ENVIRONMENT CAN (AND DO) CO-EXIST

U.S. Emissions Rate Declines 73% Since 1970; Coal Use Rises 70%

STATE OF THE INDUSTRY TODAY

- Stable and Adapting to a Changed Environment
  - Improved Federal Regulatory Environment
    - Clean Coal Plan Replacement
    - Moratorium on Federal Coal Leases Lifted
    - Stream Protection Rule Repealed
    - Mercury Rule Under Review
    - Waters of the US Rule Under Review
  - Competition from Natural Gas/Renewables Remains
  - Market Uncertainty Remains
STATE ISSUES

- Tax Issues/Revenue Shortfalls Remain
  - Opposed to any new tax burden
  - Raising taxes should be last resort
  - Pursue cost reductions, savings, diversions and efficiencies

- Self-Bonding
  - Self-bonding is a legally binding promise that serves as form of a guarantee
  - Other options include cash, letters of credit, surety bonds amongst others
  - All Wyoming coal operators are in compliance with reclamation obligations
Wyoming mine reclamation has been recognized nationally with awards.

The reclamation process is done contemporaneously with mining operations. It includes backfilling the void with overburden, contouring the filled surface, replacing topsoil, preparing the seedbed and sowing approved seed mixtures, and monitoring plants, fauna, water, air quality, etc.

In Wyoming, about 51 percent of lands disturbed by coal mining have either been reclaimed or the reclamation process is in progress. The remainder hold active mine operations, stockpiles, and facilities.

Wyoming’s mines are meeting and will continue to meet reclamation obligations.
BEFORE AND AFTER

Dave Johnson Mine – South 1994

Dave Johnson Mine – South 2016
WORLD CLASS RECLAMATION
Technology is Key
- The industry strongly supports Wyoming’s leadership in the development of advanced coal technologies including carbon capture, use and storage (CCUS).
- The industry supports development of alternative value-added coal and carbon products.

Exports
- Access to growing Asian markets offers growth opportunities for exporting Wyoming coal.
- Support and action from all levels of government is needed to improve access and expansion to deep water sea ports on the west coast.

America and the World Need Coal
- Coal is an abundant, affordable and reliable energy resource
- Coal continues to be in demand around the world with countries building new coal-fueled plants to meet growing demand
- The U.S. is sacrificing affordability and reliability through pre-mature retirement of the coal fleet
- Renewables simply can’t offer the same baseload reliability as coal
Certainty in taxation and regulation is essential

You are invited to participate in regulatory comment periods

Attend events supporting coal

Use your voice to support the industry through op-eds and letters to the editor

Talk to your peers outside of Wyoming
Thank You!

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