



# Cutting Subsidies and Closing Loopholes in the U.S. Department of the Interior's Coal Program

By Matt Lee-Ashley and Nidhi Thakar     January 6, 2015

In 2002, the Powder River Basin, or PRB, in Wyoming and Montana surged past the Appalachian coalfields that stretch from Pennsylvania to Tennessee to become the nation's largest coal-producing region.<sup>1</sup> Today, the PRB occupies a 40 percent share of the U.S. coal market.<sup>2</sup> Although market forces, mechanization, and technological changes help explain some of the coal industry's decision to shift more production from privately owned lands in the East to federal lands in the American West, the U.S. Department of the Interior's, or DOI's, coal policies have played an equally important—though largely unnoticed—role in this transition.

Specifically, the DOI's Bureau of Land Management, or BLM, and Office of Natural Resources Revenue, or ONRR, use their royalty-collection authority to subsidize coal production on federal lands. Coal companies, in turn, have learned to maximize these subsidies by shielding themselves from royalty payments through increasingly complex financial and legal mechanisms. Reform is urgently needed to cut these subsidies and to close loopholes that disadvantage other coal producing regions and distort U.S. energy markets.

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## Subsidizing federal coal through royalty relief

The law governing royalty payments for coal produced on federally owned lands is straightforward. Under the Mineral Leasing Act of 1920 and its amendments, coal companies are required to pay a royalty of at least 12.5 percent of the value of surface-mined coal and 8 percent for coal from underground mines.<sup>3</sup> The law authorizes the secretary of the interior to set the regulations by which the value of federal coal is determined for calculating a royalty.

In a competitive marketplace, a product's value on the market is the price that maximizes profit for the seller based on what a buyer is willing to pay.<sup>4</sup> In the case of thermal coal—or coal that is burned to produce electricity—power plants and electric utilities are the buyers in the market. The market value of thermal coal, therefore, is the price that power plants are willing to pay for the product. In theory, royalties should be paid on this market price of coal.

In reality, however, the DOI has built a complex regulatory framework that provides agency officials the power to reduce the effective royalty rate that coal companies pay and thereby subsidizes coal production. The subsidies that DOI officials routinely provide coal companies come in three forms:

- 1. The assessment of royalties on the so-called “first arm’s-length sale” price of coal instead of the true market value.** Coal companies pay royalties on the price that they receive at the first sale to another entity. This transaction can be to an affiliated or nonaffiliated entity but must be valued as an arm’s-length transaction irrespective of the buyer’s relationship to the coal company.<sup>5</sup> This sale often occurs near the point of production, meaning that taxpayers typically receive royalties on the mine-mouth price of coal instead of the true market price at which the coal is sold to a power plant or other end user, such as a broker who exports the coal. As a result, the federal government assesses royalties too early in the sale process and on prices that are not reflective of the true value of coal, which in turn results in lower royalty returns to taxpayers.
- 2. Royalty reductions for noneconomically viable coal production or financial hardship.** The BLM provides royalty reductions as low as 2 percent of the sale price if a mine becomes unprofitable due to unfavorable conditions—such as limited access to coal or a decrease in its quality—or if a mining company can show it is facing financial hardship.<sup>6</sup>
- 3. Subsidies for the costs of washing and transporting coal produced on federal land.** Under the current system, coal lessees can deduct transportation and washing costs, with no cap on deductions, from the total sale price upon which federal coal royalties are due.<sup>7</sup> This translates into an allowance for the full cost of transporting federal coal from the mine mouth to a remote point of sale or to transport the coal to a distant wash plant.<sup>8</sup> Unlike coal, transportation deductions for oil and gas are capped at 50 percent of the value of the resource.<sup>9</sup>

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## Captive transactions

The coal industry staunchly defends these subsidies and is lobbying the Obama administration to preserve them. In fact, the National Mining Association told the administration in November 2014 that the royalty-collection system is working and that the coal-valuation regulations that were last updated in 1989 are still relevant and effective.<sup>10</sup> In their written presentation to the administration, the National Mining Association argues, “Changes to the existing regulations are not justified as there have been no significant market changes in the last 25 years and markets are even more transparent.”<sup>11</sup>

A review of government data and the records of the largest coal companies operating in the PRB—such as Alpha Natural Resources, Ambre Energy, Arch Coal, Cloud Peak Energy, and Peabody Energy—reveals that, notwithstanding industry claims that the markets have remained stagnant, the coal market in the PRB has changed dramatically in the past decade alone. Of perhaps greatest note, the major coal companies operating in the PRB have built an extensive network of subsidiaries and affiliates through which they sell and distribute their coal, which appears to help maximize their subsidies.

A review of corporate documents from five of the biggest coal companies operating in the PRB, listed below, reveals hundreds of affiliates and subsidiaries of parent companies with names such as Excelven Pty Ltd., licensed in the British Virgin Islands, and Jacobs Ranch Holdings LLC, licensed in Delaware.<sup>12</sup>

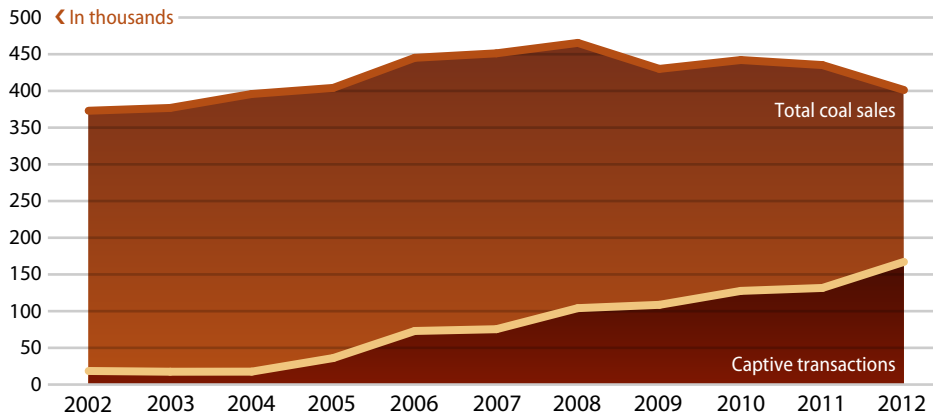
- Alpha Natural Resources, operator of the Belle Ayr and Eagle Butte mines in Wyoming, has built a network of 184 domestic and foreign subsidiaries.<sup>13</sup>
- Ambre Energy, which operates the Decker Mine in Montana that has produced more than 300 million tons of coal, has built a network of 26 domestic and foreign subsidiaries.<sup>14</sup>
- Arch Coal—which controls more than 3.3 billion tons of coal reserves in the PRB and operates the Black Thunder Mine, one of the globe’s largest coal mines and the first in the world to ship 1 billion tons of coal—has built a network of 83 domestic and foreign subsidiaries.<sup>15</sup>
- Cloud Peak Energy, which operates the Antelope, Spring Creek, and Cordero Rojo mines in the PRB that produced more than 86 million tons of coal in 2013 alone, has built a network of at least 31 domestic subsidiaries.<sup>16</sup>
- Peabody Energy—which operates the North Antelope Rochelle Mine in Wyoming, the largest coal mine in the United States—has built a network of 141 domestic subsidiaries and 101 foreign subsidiaries.<sup>17</sup>

A full list of the affiliates and subsidiaries of these companies is provided in the appendix.

Sales of PRB coal through this network have skyrocketed in the past decade. According to data from the U.S. Energy Information Administration, or EIA, 42 percent of all coal produced in Wyoming in 2012 was sold through a “captive transaction”—a sale between an affiliate and parent company—up from just 4 percent in 2004.<sup>18</sup> This upward trend appears to have begun in 2004; captive transactions in Wyoming spiked 105 percent between 2004 and 2005 alone.<sup>19</sup>

**FIGURE 1**  
**Rise in captive transactions in Wyoming, 2002 to 2012**

Sales of coal to affiliates and subsidiaries, thousands of short tons



Source: U.S. Energy Information Administration, Annual Coal Report (U.S. Department of Energy, 2004–2012), available at <http://www.eia.gov/coal/annual/>.

## Evading royalties

A growing body of evidence suggests that the major coal companies use their elaborate network of subsidiaries and affiliates to maximize the subsidies that can be gained through existing federal royalty regulations. To keep the price of coal artificially low for royalty, tax, and other valuation purposes, companies are allegedly cloaking sales to their network of subsidiaries and affiliates as arm’s-length transactions when they are in fact captive, non-arm’s-length transactions.

For example, in *Western Minerals v. KCP*—which involved a contract dispute filed in the U.S. District Court of Montana in 2012—Western Minerals alleged that Ambre Energy engaged in “self-dealing transactions, by selling to itself coal from the Decker Coal Company through either Ambre Limited directly or an affiliated subsidiary and then reselling such coal at a higher price.”<sup>20</sup>

Similarly, in *Cloud Peak Energy v. Montana Department of Revenue*—a Montana state court case regarding a tax dispute—the state of Montana alleged that Cloud Peak Energy intentionally undervalued federal coal sold to two affiliates between 2005 and 2007 to pay reduced taxes.<sup>21</sup>

Coal industry records suggest that masking sales to subsidiaries and affiliates as arm’s length to reduce federal royalty payments is a common practice. In a 2013 filing to the Securities and Exchange Commission, for example, Cloud Peak Energy says that the company’s finances would be adversely affected if there is a change to how the federal government assesses royalty payments on non-arm’s-length sales: “If the federal government were to materially alter the method for valuing royalty payments for our non-arm’s-length sales, our profitability and cash flows could be materially adversely affected.”<sup>22</sup>

The arm's-length-transaction loophole is particularly lucrative for coal companies that are exporting PRB coal to foreign buyers.<sup>23\*</sup> A 2012 Reuters investigation estimated that the loophole allowed companies to pocket at least an additional \$40 million on coal exports from Wyoming and Montana alone in 2011.<sup>24</sup>

The state of Wyoming—which, similar to other coal producing states, receives approximately 50 percent of the royalty revenue from coal production on federal lands within its boundaries—has formally asked the Obama administration to change current regulations to better prevent coal companies from using their networks of subsidiaries to dodge royalties.<sup>25</sup> “Non-arm’s-length transactions are highly susceptible to manipulation,” wrote Michael Geesey, director of the Wyoming Department of Audit, to ONRR in 2011.<sup>26</sup> According to Geesey, Wyoming’s chief auditor, ONRR should change current regulation to prevent coal company sales to “affiliates, partners, marketing agents, and trade and export associations” from qualifying as arm’s-length transactions.<sup>27</sup> Republican and Democratic members of Congress and independent reviewers have also called for reforms to close this loophole.<sup>28</sup>

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## Overdue reforms and recommendations to eliminate subsidies and close loopholes

President Obama’s 2011 commitments under the Extractive Industries Transparency Initiative, or EITI—a global initiative to improve the transparency of natural resource governance, including revenues—highlight why the coal royalty system should be an important next chapter in the administration’s energy reform agenda.<sup>29</sup> The president has stated that the United States joined the EITI to ensure that “industries, governments and civil society, all work together for greater transparency so that taxpayers receive every dollar they’re due from the extraction of natural resources.”<sup>30</sup>

Today, however, the DOI’s federal coal program can hardly be held up as a model of American leadership in transparency or efficiency. U.S. taxpayers and the states that share in these royalty collections are receiving far less than the 12.5 percent royalty rate that is required to be collected from surface-mined coal. Additionally, the United States’ biggest coal competitors in Pacific markets, such as Indonesia and Australia, do not allow many of the subsidies currently in place under the U.S. system. In Indonesia, for example, the royalty rate for exported coal is based on the true market value of the coal received at the export terminal, which is a price determined from the benchmark price or actual sales price, whichever is higher.<sup>31</sup> Further, Indonesia does not allow transportation costs to be deducted from the price of coal upon which a royalty is levied.<sup>32</sup> Likewise, states in Australia do not allow transportation deductions for domestic shipments of coal.<sup>33</sup>

*\*Correction, February 9, 2015: This issue brief has been corrected to remove a reference to Peabody Energy’s revenues and royalty payments. Endnote 23 has also been updated.*

The DOI has acknowledged some of the deficiencies of the current royalty-collection system, recently issuing a proposed rule to remedy the arm's-length-transaction loophole.<sup>34</sup> While this proposed rule closes one regulatory gap by eliminating the arm's-length-transaction loophole, more significant reforms are needed to improve efficiency and transparency in the federal royalty-collection process.

The Obama administration should take a major step toward eliminating the DOI's subsidies for coal by modernizing existing regulations to apply the federal royalty on the commodity's true market price—which is at the final point of sale to an end user, such as a utility or power plant, for both domestic and export sales. This straightforward reform would alleviate burdensome royalty assessments for ONRR while also ensuring that taxpayers are receiving a royalty on the true market value of coal. Currently, the EIA provides publicly available information with the final sales price for federal coal,<sup>35</sup> ONRR auditors could use this information to calculate and verify royalty obligations, eliminating the need for complicated and time-consuming closed-door valuation estimates by federal regulators.

Making such a change would not come without opposition from coal companies, which have built a complex system of corporate entities to game the current system and short-change taxpayers. Nevertheless, the administration must enact reforms. Each month, U.S. taxpayers and state governments are missing out on tens of millions of dollars in revenue that would accrue if the DOI was enforcing the minimum 12.5 percent royalty rate that is required by statute rather than effectively lowering rates through subsidies and regulatory loopholes.

Taxpayers are not the only ones hurt by an outdated coal royalty system. Federal subsidies in the PRB unfairly disadvantage coal producers in Appalachia and other regions, contributing to job losses and economic dislocation in Appalachia. More broadly, the DOI's subsidies for coal distort U.S. energy markets, incentivize U.S. coal exports by subsidizing transportation costs, disadvantage cleaner sources of energy, and ultimately undercut the president's Climate Action Plan. The DOI should level the playing field between coal operators and ensure that taxpayers are receiving a fair return on their publicly owned resources by expanding its proposed rule to apply the federal royalty rate to the true market value of coal at its final point of sale.

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## Appendix: Network of Powder River Basin coal companies

### Alpha Natural Resources, Inc.: Subsidiaries

|   |  |
|---|--|
| T. Massey Coal Company, Inc.                      | ANR Receivables Funding, LLC               |
| Alex Energy, Inc.                                 | Appalachia Coal Sales Company, Inc.        |
| Alpha American Coal Company, LLC                  | Appalachia Holding Company                 |
| Alpha American Coal Holding, LLC                  | Aracoma Coal Company, Inc.                 |
| Alpha Appalachia Holdings, Inc.                   | Austin Rubber Company LLC                  |
| Alpha Appalachia Services, Inc.                   | Axiom Excavating and Grading Services, LLC |
| Alpha Australia, LLC                              | Bandmill Coal Corporation                  |
| Alpha Australia Services, LLC                     | Bandytown Coal Company                     |
| Alpha Coal India Private Limited                  | Barbara Holdings Inc.                      |
| Alpha Coal Resources Company, LLC                 | Barnabus Land Company                      |
| Alpha Coal Sales Co., LLC                         | Belfry Coal Corporation                    |
| Alpha Coal Sales International Limited            | Ben Creek Coal Company                     |
| Alpha Coal West, Inc.                             | Big Bear Mining Company                    |
| Alpha European Sales, Inc.                        | Black Castle Mining Company, Inc.          |
| Alpha Gas and Oil Company                         | Black Dog Coal, LLC                        |
| Alpha India, LLC                                  | Black King Mine Development Co.            |
| Alpha Land and Reserves, LLC                      | Black Mountain Cumberland Resources, Inc.  |
| Alpha Midwest Holding Company                     | Black Mountain Resources LLC               |
| Alpha Natural Resources, Inc.                     | Boone East Development Co.                 |
| Alpha Natural Resources, LLC                      | Brooks Run Mining Company, LLC             |
| Alpha Natural Resources International, LLC        | Brooks Run South Mining, LLC               |
| Alpha Natural Resources Services, LLC             | Buchanan Energy Company, LLC               |
| Alpha Natural Resources Singapore Private Limited | Castle Gate Holding Company                |
| Alpha PA Coal Terminal, LLC                       | Central Penn Energy Company, Inc.          |
| Alpha Shipping and Chartering, LLC                | Ceratech, Inc.                             |
| Alpha Sub One, LLC                                | Ceratech USA Holdings, LLC                 |
| Alpha Sub Two, LLC                                | Clear Fork Coal Company                    |
| Alpha Terminal Company, LLC                       | Coal Gas Recovery II, LLC                  |
| Alpha Wyoming Land Company, LLC                   | Coal Handling Solutions LLC                |
| AMFIRE, LLC                                       | Coral Energy Services, LLC                 |
| AMFIRE Holdings, LLC                              | Covington Handling LLC                     |
| AMFIRE Mining Company, LLC                        | Crystal Fuels Company                      |
| AMFIRE WV, L.P.                                   | Cumberland Coal Resources, LP              |

|  |  |
|--|--|
| Dehue Coal Company                       | Kingwood Mining Company, LLC                     |
| Delbarton Mining Company                 | Knox Creek Coal Corporation                      |
| Delta Mine Holding Company               | Lauren Land Company                              |
| Dickenson-Russell Coal Company, LLC      | Laxare, Inc.                                     |
| Dickenson-Russell Land and Reserves, LLC | Litwar Processing Company, LLC                   |
| Dominion Terminal Associates             | Logan County Mine Services, Inc.                 |
| DRIH Corporation                         | Long Fork Coal Company                           |
| Dry Systems Technologies, Inc.           | Lynn Branch Coal Company, Inc.                   |
| Duchess Coal Company                     | Mahatamil Mining and Thermal Energy Limited      |
| Eagle Energy, Inc.                       | Maple Meadow Mining Company                      |
| Elk Run Coal Company, Inc.               | Marfork Coal Company, Inc.                       |
| Emerald Coal Resources, LP               | Marshall Land LLC                                |
| Enterprise Mining Company, LLC           | Martin County Coal Corporation                   |
| Esperanza Coal Co., LLC                  | Maxxim Rebuild Co., LLC                          |
| Excelven Pty Ltd.                        | Maxxim Shared Services, LLC                      |
| Foundation Mining, LLC                   | Maxxum Carbon Resources, LLC                     |
| Foundation PA Coal Company, LLC          | Maysville Handling LLC                           |
| Foundation Royalty Company               | McDowell-Wyoming Coal Company, LLC               |
| Freeport Mining, LLC                     | Mill Branch Coal Corporation                     |
| Freeport Resources Company, LLC          | Mountaineer Capital, LP                          |
| Green Source Holdings LLC                | Neweagle Industries, Inc.                        |
| Goals Coal Company                       | New Ridge Mining Company                         |
| Gray Hawk Insurance Company              | New River Energy Corporation                     |
| Green Valley Coal Company                | Nicewonder Contracting, Inc.                     |
| Greyeagle Coal Company                   | North Fork Coal Corporation                      |
| Harlan Reclamation Services LLC          | Omar Mining Company                              |
| Herndon Processing Company, LLC          | Paramont Coal Company Virginia, LLC              |
| Highland Mining Company                  | Paynter Branch Mining, Inc.                      |
| Hopkins Creek Coal Company               | Peerless Eagle Coal Co.                          |
| Independence Coal Company, Inc.          | Pennsylvania Land Holdings Company, LLC          |
| Jacks Branch Coal Company                | Pennsylvania Land Resources Holding Company, LLC |
| Jay Creek Holding, LLC                   | Pennsylvania Land Resources, LLC                 |
| Joboner Coal Company                     | Pennsylvania Services Corporation                |
| Kanawha Energy Company                   | Performance Coal Company                         |
| Kepler Processing Company, LLC           | Peter Cave Mining Company                        |
| Kingsport Handling LLC                   | Pigeon Creek Processing Corporation              |
| Kingsport Services LLC                   | Pilgrim Mining Company, Inc.                     |
| Kingston Mining, Inc.                    | Pioneer Fuel Corporation                         |



|                                     |   |
|-------------------------------------|---|
| Plateau Mining Corporation          | Solomons Mining Company                   |
| Power Mountain Coal Company         | Spartan Mining Company                    |
| Premium Energy, LLC                 | Stirrat Coal Company                      |
| Rawl Sales & Processing Co.         | Sycamore Fuels, Inc.                      |
| Republic Energy, Inc.               | T. C. H. Coal Co.                         |
| Resource Development LLC            | Tennessee Consolidated Coal Company       |
| Resource Land Company LLC           | Tennessee Energy Corp.                    |
| River Processing Corporation        | Town Creek Coal Company                   |
| Riverside Energy Company, LLC       | Trace Creek Coal Company                  |
| Riverton Coal Production Inc.       | Tucson Limited Liability Company          |
| Road Fork Development Company, Inc. | Twin Star Mining, Inc.                    |
| Robinson-Phillips Coal Company      | Twisted Gun, LLC                          |
| Rockspring Development, Inc.        | Vantage Mining Company                    |
| Rostraver Energy Company            | Wabash Mine Holding Company               |
| Rum Creek Coal Sales, Inc.          | Warrick Holding Company                   |
| Russell Fork Coal Company           | West Kentucky Energy Company              |
| Scarlet Development Company         | West Virginia Media Partners, LP          |
| Shannon-Pocahontas Coal Corporation | White Buck Coal Company                   |
| Shannon-Pocahontas Mining Company   | Williams Mountain Coal Company            |
| Sidney Coal Company, Inc.           | Wyomac Coal Company, Inc.                 |
| Simmons Fork Mining, Inc.           | Wyoming Quality Healthcare Coalition, LLC |

Source: Edgar Online, "Alpha Natural Resources, Inc. Form 10-K" (2014), available at <http://cleanenergyaction.org/wp-content/uploads/2014/06/Alpha-Natural-Resources-ANR-2013-10-K-Annual-Report.pdf>.

## Ambre Energy Limited: Subsidiaries

| Subsidiary                                       | Country of incorporation | Ownership interest |
|--|--------------------------|--------------------|
| Ambre Energy (Felton) Pty Ltd                    | Australia                | 100%               |
| Ambre Energy Exploration Pty Ltd                 | Australia                | 100%               |
| Ambre Fuels Limited (formerly Ambre CTL Limited) | Australia                | 100%               |
| Ambre EOR Pty Ltd                                | Australia                | 100%               |
| Ambre Pipelines Pty Ltd                          | Australia                | 100%               |
| AE Minerals Pty Ltd                              | Australia                | 100%               |
| AE Oil Shale, Inc.                               | United States            | 100%               |
| Ambre Energy Partners, Inc.                      | United States            | 100%               |
| Ambre Energy Technology, LLC                     | United States            | 100%               |
| AE Alternative Fuels, LLC                        | United States            | 100%               |
| AE Fuels North America, LLC                      | United States            | 100%               |
| Ambre Energy North America, Inc.                 | United States            | 100%               |
| AE Coal, LLC                                     | United States            | 100%               |
| AE Infrastructure, LLC                           | United States            | 100%               |
| Millennium Bulk Terminals-Longview, LLC          | United States            | 62%                |
| AE Coal Marketing, LLC                           | United States            | 100%               |
| Coyote Island Terminal, LLC                      | United States            | 100%               |
| Gulf States Bulk Terminal, LLC                   | United States            | 100%               |
| Barlow Point Land Company, LLC                   | United States            | 62%                |
| Pacific Transloading, LLC                        | United States            | 100%               |
| AE Wind River, LLC                               | United States            | 100%               |
| Eldorado Coal, Inc.                              | United States            | 100%               |
| KCP, Inc.  | United States            | 100%               |
| KCP Properties, Inc.                             | United States            | 100%               |
| Big Horn Coal Company                            | United States            | 100%               |
| Rosebud Coal Sales Company USA                   | United States            | 100%               |

Source: Ambre Energy, "Annual Report" (2012), available at [http://www.ambreenergy.com/FileLibrary/ambre\\_energy\\_limited\\_annual\\_report\\_30\\_june\\_2012\\_lr.pdf](http://www.ambreenergy.com/FileLibrary/ambre_energy_limited_annual_report_30_june_2012_lr.pdf).

## Arch Coal, Inc.: Subsidiaries

| Subsidiary                           | Country or state of incorporation | Ownership interest |
|--------------------------------------|-----------------------------------|--------------------|
| Arch Coal Asia-Pacific PTE. LTD.     | Singapore                         | 100%               |
| Arch of Australia PTY LTD            | Australia                         | 100%               |
| Arch Coal Australia PTY LTD          | Australia                         | 100%               |
| Arch Coal Australia Holdings PTY LTD | Australia                         | 100%               |
| Arch Coal Europe Limited             | United Kingdom                    | 100%               |
| Arch Reclamation Services, Inc.      | Delaware                          | 100%               |
| Arch Western Acquisition Corporation | Delaware                          | 100%               |
| Arch Western Acquisition, LLC        | Delaware                          | 100%               |
| Arch Western Resources, LLC          | Delaware                          | 0.5%               |
| Arch Western Resources, LLC          | Delaware                          | 99.5%              |
| Arch of Wyoming, LLC                 | Delaware                          | 100%               |
| Arch Western Finance, LLC            | Delaware                          | 100%               |
| Arch Western Bituminous Group, LLC   | Delaware                          | 100%               |
| Mountain Coal Company, L.L.C.        | Delaware                          | 100%               |
| Thunder Basin Coal Company, L.L.C.   | Delaware                          | 100%               |
| Triton Coal Company, LLC             | Delaware                          | 100%               |
| ACI Terminal, LLC                    | Delaware                          | 100%               |
| Ark Land Company                     | Delaware                          | 100%               |
| Western Energy Resources, Inc.       | Delaware                          | 100%               |
| Ark Land KH, Inc.                    | Delaware                          | 100%               |
| Ark Land LT, Inc.                    | Delaware                          | 100%               |
| Ark Land WR, Inc.                    | Delaware                          | 100%               |
| Allegheny Land Company               | Delaware                          | 100%               |
| Apogee Holdco, Inc.                  | Delaware                          | 100%               |
| Arch Coal Sales Company, Inc.        | Delaware                          | 100%               |
| Arch Energy Resources, LLC           | Delaware                          | 100%               |
| Arch Coal Terminal, Inc.             | Delaware                          | 100%               |
| Arch Coal West, LLC                  | Delaware                          | 100%               |
| Arch Development, LLC                | Delaware                          | 100%               |
| Arch Receivable Company, LLC         | Delaware                          | 100%               |
| Ashland Terminal, Inc.               | Delaware                          | 100%               |
| Catenary Coal Holdings, Inc.         | Delaware                          | 100%               |
| Cumberland River Coal Company        | Delaware                          | 100%               |
| Lone Mountain Processing, Inc.       | Delaware                          | 100%               |
| Powell Mountain Energy, LLC          | Delaware                          | 100%               |
| Catenary Holdco, Inc.                | Delaware                          | 100%               |
| Coal-Mac, Inc.                       | Kentucky                          | 100%               |

| Subsidiary                     | Country or state of incorporation | Ownership interest |
|--------------------------------|-----------------------------------|--------------------|
| Energy Development Co.         | Iowa                              | 100%               |
| Hobet Holdco, Inc.             | Delaware                          | 100%               |
| International Coal Group, Inc. | Delaware                          | 100%               |
| ICG, LLC                       | Delaware                          | 100%               |
| ICG, Inc.                      | Delaware                          | 100%               |
| Arch Flint Ridge, LLC          | Delaware                          | 100%               |
| ICG Beckley, LLC               | Delaware                          | 100%               |
| ICG Natural Resources, LLC     | Delaware                          | 100%               |
| ICG East Kentucky, LLC         | Delaware                          | 100%               |
| ICG Illinois, LLC              | Delaware                          | 100%               |
| ICG Knott County, LLC          | Delaware                          | 100%               |
| ICG Tygart Valley, LLC         | Delaware                          | 100%               |
| Shelby Run Mining Company, LLC | Delaware                          | 100%               |
| ICG Eastern, LLC               | Delaware                          | 100%               |
| ICG Eastern Land, LLC          | Delaware                          | 100%               |
| ICG Hazard, LLC                | Delaware                          | 100%               |
| ICG Hazard Land, LLC           | Delaware                          | 100%               |
| CoalQuest Development LLC      | Delaware                          | 100%               |
| Hunter Ridge Holdings, Inc.    | Delaware                          | 100%               |
| Hunter Ridge, Inc. (Delaware)  | Delaware                          | 100%               |
| Hunter Ridge Coal Company      | Delaware                          | 100%               |
| White Wolf Energy, Inc.        | Virginia                          | 100%               |
| Bronco Mining Company, Inc.    | West Virginia                     | 100%               |
| Juliana Mining Company, Inc.   | West Virginia                     | 100%               |
| Hawthorne Coal Company, Inc.   | West Virginia                     | 100%               |
| Marine Coal Sales Company      | Delaware                          | 100%               |
| Upshur Property, Inc.          | Delaware                          | 100%               |
| King Knob Coal Co., Inc.       | West Virginia                     | 100%               |
| Vindex Energy Corporation      | West Virginia                     | 100%               |
| Patriot Mining Company, Inc.   | West Virginia                     | 100%               |
| Melrose Coal Company, Inc.     | West Virginia                     | 100%               |
| Wolf Run Mining Company        | West Virginia                     | 100%               |
| The Sycamore Group, LLC        | West Virginia                     | 50%**              |
| Simba Group, Inc.              | Delaware                          |                    |
| Jacobs Ranch Holdings I LLC    | Delaware                          |                    |
| Jacobs Ranch Holdings II LLC   | Delaware                          |                    |
| Jacobs Ranch Coal LLC          | Delaware                          |                    |
| Mingo Logan Coal Company       | Delaware                          |                    |

| <b>Subsidiary</b>             | <b>Country or state of incorporation</b> | <b>Ownership interest</b> |
|-------------------------------|--|---------------------------|
| Mountain Gem Land, Inc.       | West Virginia                            | 100%                      |
| Mountain Mining, Inc.         | Delaware                                 | 100%                      |
| Mountaineer Land Company      | Delaware                                 | 100%                      |
| Otter Creek Coal, LLC         | Delaware                                 | 100%                      |
| P.C. Holding, Inc.            | Delaware                                 | 100%                      |
| Prairie Holdings, Inc.        | Delaware                                 | 100%                      |
| Prairie Coal Company, LLC     | Delaware                                 | 100%                      |
| Saddleback Hills Coal Company | Delaware                                 | 100%                      |

Source: Arch Coal, Inc., "Form 10-K" (2014), available at <http://cleanenergyaction.org/wp-content/uploads/2014/06/Arch-Coal-Inc-ACI-2013-10-K-Annual-Report.pdf>.

Note: The Sycamore Group is 50 percent owned by Wolf Run Mining Company and 50 percent owned by Emily Gibson Coal Co., Inc.

## Cloud Peak Energy, Inc.: Subsidiaries

| Domestic subsidiary                       | State of incorporation | Ownership interest |
|---|------------------------|--------------------|
| Antelope Coal LLC                         | Delaware               | 100%               |
| Arrowhead I LLC                           | Delaware               | 100%               |
| Arrowhead II LLC                          | Delaware               | 100%               |
| Arrowhead III LLC                         | Delaware               | 100%               |
| Big Metal Coal Co. LLC                    | Delaware               | 100%               |
| Caballo Rojo Holdings LLC                 | Delaware               | 100%               |
| Caballo Rojo LLC                          | Delaware               | 100%               |
| Cloud Peak Energy Finance Corp.           | Delaware               | 100%               |
| Cloud Peak Energy Logistics LLC           | Oregon                 | 100%               |
| Cloud Peak Energy Receivables LLC         | Delaware               | 100%               |
| Cloud Peak Energy Services Company        | Delaware               | 100%               |
| Cordero Mining Holdings LLC               | Delaware               | 100%               |
| Cordero Mining LLC                        | Delaware               | 100%               |
| Cordero Oil and Gas LLC                   | Delaware               | 100%               |
| Decker Coal Company                       | Unincorporated         | 50%                |
| Kennecott Coal Sales LLC                  | Oregon                 | 100%               |
| Montana Royalty Company Ltd.              | Unincorporated         | 50%                |
| NERCO Coal Sales LLC                      | Tennessee              | 100%               |
| NERCO Coal LLC                            | Delaware               | 100%               |
| NERCO LLC                                 | Delaware               | 100%               |
| Prospect Land and Development LLC         | Oregon                 | 100%               |
| Resource Development LLC                  | Washington state       | 100%               |
| Sequatchie Valley Coal Corporation        | Tennessee              | 100%               |
| Spring Creek Coal LLC                     | Delaware               | 100%               |
| The Interstate Ditch Company              | Wyoming                | 59.68%             |
| Venture Fuels Partnership                 | Colorado               | 50%                |
| Western Minerals LLC                      | Oregon                 | 100%               |
| Wyoming Quality Healthcare Coalition, LLC | Delaware               | 33.30%             |
| Youngs Creek Holdings I LLC               | Delaware               | 100%               |
| Youngs Creek Holdings II LLC              | Delaware               | 100%               |
| Youngs Creek Mining Company, LLC          | Delaware               | 100%               |

Source: Morningstar Document Research, "Cloud Peak Energy, Inc., Form 10-K" (2014), available at <http://cleanenergyaction.org/wp-content/uploads/2014/06/Cloud-Peak-CLD-2013-10-K-Annual-Report.pdf>.

## Peabody Energy Corp.: Subsidiaries

| Foreign subsidiary                     | Country of incorporation |
|--|--------------------------|
| Bowen Basin Coal Joint Venture         | Australia                |
| Conexcel 1 Pty Ltd.                    | Australia                |
| Coppabella and Moorvale Joint Venture  | Australia                |
| Excel Equities International Pty Ltd.  | Australia                |
| Helensburgh Coal Pty Ltd.              | Australia                |
| Metropolitan Collieries Pty Ltd.       | Australia                |
| Middlemount Coal Pty Ltd               | Australia                |
| Middlemount Mine Management Pty Ltd    | Australia                |
| Burton Coal Pty Ltd.                   | Australia                |
| Capricorn Joint Venture                | Australia                |
| Millennium Coal Pty Ltd.               | Australia                |
| Monto Coal 2 Pty Ltd                   | Australia                |
| Monto Coal Joint Venture               | Australia                |
| Moorvale West Joint Venture            | Australia                |
| North Goonyella Coal Mines Pty Ltd.    | Australia                |
| North Wambo Pty Ltd.                   | Australia                |
| Olive Downs South Joint Venture        | Australia                |
| Peabody (Bowen) Pty Ltd.               | Australia                |
| Peabody (Burton Coal) Pty Ltd.         | Australia                |
| Peabody (Horse Creek) Pty Ltd.         | Australia                |
| Peabody (Kogan Creek) Pty Ltd.         | Australia                |
| Peabody (Wilkie Creek) Pty Ltd. South  | Australia                |
| Peabody Acquisition Co. No. 2 Pty Ltd. | Australia                |
| Peabody Acquisition Co. No. 5 Pty Ltd  | Australia                |
| Peabody Australia Holdco Pty Ltd.      | Australia                |
| Peabody Australia Intermediate Pty Ltd | Australia                |
| Peabody Australia Mining Pty Ltd.      | Australia                |
| Peabody BB Interests Pty Ltd           | Australia                |
| Peabody Bistrotel Pty Ltd              | Australia                |
| Peabody Budjero Holdings Pty Ltd       | Australia                |
| Peabody Budjero Pty Ltd                | Australia                |
| Peabody Capricorn Pty Ltd              | Australia                |
| Peabody Coalsales Australia Pty Ltd.   | Australia                |
| Peabody Coaltrade Australia Pty Ltd.   | Australia                |
| Peabody Coppabella Coal Pty Ltd        | Australia                |
| Peabody Custom Mining Ltd              | Australia                |
| Peabody Energy Australia Coal Pty Ltd. | Australia                |

| Foreign subsidiary   | Country of incorporation |
|--|--------------------------|
| Peabody Energy Australia PCI (C&M Equipment) Pty Ltd                 | Australia                |
| Peabody Energy Australia PCI (C&M Management) Pty Ltd                | Australia                |
| Peabody Energy Australia PCI Berrigurra Pty Ltd                      | Australia                |
| Peabody Energy Australia PCI Equipment Pty Ltd                       | Australia                |
| Peabody Energy Australia PCI Exporation Pty Ltd                      | Australia                |
| Peabody Energy Australia PCI Financing Pty Ltd                       | Australia                |
| Peabody Energy Australia PCI Management Pty Ltd                      | Australia                |
| Peabody Energy Australia PCI Mine Management Pty Ltd                 | Australia                |
| Peabody Energy Australia PCI Pty Ltd                                 | Australia                |
| Peabody Energy Australia PCI Rush Pty Ltd                            | Australia                |
| Peabody Energy Australia Pty Ltd                                     | Australia                |
| Peabody Energy Finance Pty Ltd.                                      | Australia                |
| Peabody MCC Holdco Pty Ltd.  | Australia                |
| Peabody Monto Coal Pty Ltd   | Australia                |
| Peabody Moorvale Pty Ltd.  | Australia                |
| Peabody Moorvale West Pty Ltd  | Australia                |
| Peabody Olive Downs Pty Ltd  | Australia                |
| Peabody Pastoral Holdings Pty Ltd.                                   | Australia                |
| Peabody Queensland Coke & Energy Pty Ltd                             | Australia                |
| Peabody West Burton Pty Ltd  | Australia                |
| Peabody West Rolleston Pty Ltd                                       | Australia                |
| Peabody West Walker Pty Ltd  | Australia                |
| PEAMCoal Holdings Pty Ltd.   | Australia                |
| PEAMCoal Pty Ltd.  | Australia                |
| Ribfield Pty Ltd   | Australia                |
| Wambo Coal Pty Ltd.  | Australia                |
| Wambo Coal Terminal Pty Ltd.   | Australia                |
| Wambo Open Cut Pty Ltd.  | Australia                |
| West/North Burton Joint Venture                                      | Australia                |
| West Rolleston Joint Venture   | Australia                |
| West Walker Joint Venture  | Australia                |
| Wilpinjong Coal Pty Ltd.   | Australia                |
| Excelven Pty Ltd.  | British Virgin Islands   |
| Peabody Coal Venezuela Ltd.  | Bermuda                  |
| Peabody Energy (Botswana) (Proprietary) Limited                      | Botswana                 |
| Peabody Investment & Development Business Services Beijing Co., Ltd. | China                    |
| Peabody Bear Run Mining, LLC   | Delaware                 |
| Peabody Coaltrade GmbH   | Germany                  |



| Foreign subsidiary                            | Country of incorporation |
|---|--------------------------|
| Peabody Energy (Gibraltar) Limited            | Gibraltar                |
| Peabody Holdings (Gibraltar) Limited          | Gibraltar                |
| Peabody International (Gibraltar) Limited     | Gibraltar                |
| Peabody Investments (Gibraltar) Limited       | Gibraltar                |
| Peabody MCC (Gibraltar) Limited               | Gibraltar                |
| Peabody Mining (Gibraltar) Limited            | Gibraltar                |
| Peabody Coaltrade India Private Ltd           | India                    |
| PT Peabody Coaltrade Indonesia                | Indonesia                |
| PT Peabody Mining Services                    | Indonesia                |
| Peabody Energy (Gibraltar) Limited and S.C.S. | Luxembourg               |
| Peabody Gobi LLC                              | Mongolia                 |
| Peabody Mozambique, Limitada                  | Mozambique               |
| BTU International BV                          | Netherlands              |
| Peabody Acquisition Cooperative U.A.          | Netherlands              |
| Peabody AMBV2 B.V.                            | Netherlands              |
| Peabody Holland BV                            | Netherlands              |
| Peabody Netherlands Holding B.V.              | Netherlands              |
| 9 East Shipping (Asia) Pte Ltd.               | Singapore                |
| Peabody Coaltrade Asia Private Ltd.           | Singapore                |
| Peabody Global Services Pte Ltd.              | Singapore                |
| 9 East Shipping Limited                       | United Kingdom           |
| Peabody Coaltrade International Limited       | United Kingdom           |
| Carbones Peabody de Venezuela S.A.            | Venezuela                |
| Complejo Siderurgico Del Lago, CA             | Venezuela                |
| Desarrollos Venshelf IV, CA                   | Venezuela                |
| Transportes Coal Sea de Venezuela, CA         | Venezuela                |

| <b>Domestic subsidiary: Peabody</b>           | <b>State of incorporation</b> |
|---|-------------------------------|
| American Land Development, LLC                | Delaware                      |
| American Land Holdings of Colorado, LLC       | Delaware                      |
| American Land Holdings of Illinois, LLC       | Delaware                      |
| American Land Holdings of Indiana, LLC        | Delaware                      |
| American Land Holdings of Kentucky, LLC       | Delaware                      |
| American Land Holdings of West Virginia, LLC  | Delaware                      |
| Arid Operations, Inc.                         | Delaware                      |
| Big Sky Coal Company                          | Delaware                      |
| BTU Western Resources, Inc.                   | Delaware                      |
| Caballo Grande, LLC                           | Delaware                      |
| Caseyville Dock Company, LLC                  | Delaware                      |
| Central States Coal Reserves of Illinois, LLC | Delaware                      |
| Central States Coal Reserves of Indiana, LLC  | Delaware                      |
| Coal Reserve Holding LLC No. 1                | Delaware                      |
| Coalsales II, LLC                             | Delaware                      |
| Colorado Yampa Coal Company                   | Delaware                      |
| Conservancy Resources, LLC                    | Delaware                      |
| Cottonwood Land Company                       | Delaware                      |
| Cyprus Creek Land Company                     | Delaware                      |
| Cyprus Creek Land Resources LLC               | Delaware                      |
| Dyson Creek Coal Company, LLC                 | Delaware                      |
| Dyson Creek Mining Company, LLC               | Delaware                      |
| El Segundo Coal Company, LLC                  | Delaware                      |
| Elkland Holdings, LLC                         | Delaware                      |
| Gallo Finance Company                         | Delaware                      |
| Gold Fields Chile, LLC                        | Delaware                      |
| Gold Fields Mining, LLC                       | Delaware                      |
| Gold Fields Ortiz, LLC                        | Delaware                      |
| Hayden Gulch Terminal, LLC                    | Delaware                      |
| Highwall Mining Service Company               | Delaware                      |
| Hillside Recreational Lands, LLC              | Delaware                      |
| HMC Mining LLC                                | Delaware                      |
| Independence Material Handling, LLC           | Delaware                      |
| James River Coal Terminal, LLC                | Delaware                      |
| Juniper Coal Company                          | Delaware                      |
| Kayenta Mobile Home Park, Inc.                | Delaware                      |
| Kentucky Syngas, LLC                          | Delaware                      |
| Lively Grove Energy Partners, LLC             | Delaware                      |

| <b>Domestic subsidiary: Peabody</b>        | <b>State of incorporation</b> |
|--|-------------------------------|
| Lively Grove Energy, LLC                   | Delaware                      |
| Marigold Electricity, LLC                  | Delaware                      |
| Midwest Coal Acquisition Corp.             | Delaware                      |
| Midwest Coal Reserves of Illinois, LLC     | Delaware                      |
| Midwest Coal Reserves of Indiana, LLC      | Delaware                      |
| Midwest Coal Reserves of Kentucky, LLC     | Delaware                      |
| Moffat County Mining, LLC                  | Delaware                      |
| Mustang Clean Energy, LLC                  | Delaware                      |
| Mustang Energy Company, LLC                | Delaware                      |
| New Mexico Coal Resources, LLC             | Delaware                      |
| P&L Receivables Company LLC                | Delaware                      |
| Pacific Export Resources, LLC              | Delaware                      |
| Peabody America, Inc.                      | Delaware                      |
| Peabody Archveyor, LLC                     | Delaware                      |
| Peabody Arclar Mining, LLC                 | Delaware                      |
| Peabody Bear Run Services, LLC             | Delaware                      |
| Peabody Bear Run Mining, LLC               | Delaware                      |
| Peabody Caballo Mining, LLC                | Delaware                      |
| Peabody Cardinal Gasification, LLC         | Delaware                      |
| Peabody China, LLC                         | Delaware                      |
| Peabody Coalsales, LLC                     | Delaware                      |
| Peabody Coaltrade International (CTI), LLC | Delaware                      |
| Peabody Coaltrade, LLC                     | Delaware                      |
| Peabody Colorado Operations, LLC           | Delaware                      |
| Peabody Colorado Services, LLC             | Delaware                      |
| Peabody Coulterville Mining, LLC           | Delaware                      |
| Peabody Development Company, LLC           | Delaware                      |
| Peabody Electricity, LLC                   | Delaware                      |
| Peabody Employment Services, LLC           | Delaware                      |
| Peabody Energy Generation Holding Company  | Delaware                      |
| Peabody Energy Investments, Inc.           | Delaware                      |
| Peabody Energy Solutions, Inc.             | Delaware                      |
| Peabody Gateway North Mining, LLC          | Delaware                      |
| Peabody Gateway Services, LLC              | Delaware                      |
| Peabody Holding Company, LLC               | Delaware                      |
| Peabody Illinois Services, LLC             | Delaware                      |
| Peabody Indiana Services, LLC              | Delaware                      |
| Peabody International Investments, Inc.    | Delaware                      |

| <b>Domestic subsidiary: Peabody</b>             | <b>State of incorporation</b> |
|---|-------------------------------|
| Peabody International Services, Inc.            | Delaware                      |
| Peabody Investments Corp.                       | Delaware                      |
| Peabody Magnolia Grove Holdings, LLC            | Delaware                      |
| Peabody Midwest Management Services, LLC        | Delaware                      |
| Peabody Midwest Operations, LLC                 | Delaware                      |
| Peabody Midwest Services, LLC                   | Delaware                      |
| Peabody Mongolia, LLC                           | Delaware                      |
| Peabody Natural Gas, LLC                        | Delaware                      |
| Peabody Natural Resources Company               | Delaware                      |
| Peabody New Mexico Services, LLC                | Delaware                      |
| Peabody Operations Holding, LLC                 | Delaware                      |
| Peabody Powder River Mining, LLC                | Delaware                      |
| Peabody Powder River Operations, LLC            | Delaware                      |
| Peabody Powder River Services, LLC              | Delaware                      |
| Peabody PowerTree Investments LLC               | Delaware                      |
| Peabody Recreational Lands LLC                  | Delaware                      |
| Peabody Rocky Mountain Management Services, LLC | Delaware                      |
| Peabody Rocky Mountain Services, LLC            | Delaware                      |
| Peabody Sage Creek Mining, LLC                  | Delaware                      |
| Peabody School Creek Mining, LLC                | Delaware                      |
| Peabody Services Holding, LLC                   | Delaware                      |
| Peabody Southwest, LLC                          | Delaware                      |
| Peabody Southwestern Coal Company               | Delaware                      |
| Peabody Terminal Holding Company, Inc.          | Delaware                      |
| Peabody Terminals, LLC                          | Delaware                      |
| Peabody Trout Creek Reservoir LLC               | Delaware                      |
| Peabody Twentymile Mining, LLC                  | Delaware                      |
| Peabody Venezuela Coal Corporation              | Delaware                      |
| Peabody Venture Fund, LLC                       | Delaware                      |
| Peabody Western Coal Company                    | Delaware                      |
| Peabody Wild Boar Mining, LLC                   | Delaware                      |
| Peabody Wild Boar Services, LLC                 | Delaware                      |
| Peabody Williams Fork Mining, LLC               | Delaware                      |
| Peabody Wyoming Gas, LLC                        | Delaware                      |
| Peabody Wyoming Services, LLC                   | Delaware                      |
| Peabody-Waterside Development LLC               | Delaware                      |
| PEC Equipment Company, LLC                      | Delaware                      |
| PG Investments Six LLC                          | Delaware                      |

| <b>Domestic subsidiary: Peabody</b>                | <b>State of incorporation</b> |
|--|-------------------------------|
| Point Pleasant Dock Company LLC                    | Delaware                      |
| Pond River Land Company                            | Delaware                      |
| Porcupine Production LLC                           | Delaware                      |
| Porcupine Transportation LLC                       | Delaware                      |
| Riverview Terminal Company                         | Delaware                      |
| Sage Creek Holdings, LLC                           | Delaware                      |
| School Creek Coal Resources, LLC                   | Delaware                      |
| Seneca Coal Company, LLC                           | Delaware                      |
| Shoshone Coal Corporation                          | Delaware                      |
| Star Lake Energy Company LLC                       | Delaware                      |
| Thoroughbred Generating Company LLC                | Delaware                      |
| Thoroughbred Mining Company LLC                    | Delaware                      |
| Twentymile Coal LLC                                | Delaware                      |
| West Roundup Resources, LLC                        | Delaware                      |
| Big Ridge, Inc.                                    | Illinois                      |
| Black Hills Mining Company, LLC                    | Illinois                      |
| Century Mineral Resources, Inc.                    | Illinois                      |
| Illinois Land Holdings, LLC                        | Illinois                      |
| Midco Supply and Equipment Corporation             | Illinois                      |
| Falcon Coal Company, LLC                           | Indiana                       |
| Kentucky United Coal LLC                           | Indiana                       |
| Peabody Midwest Mining, LLC                        | Indiana                       |
| Sugar Camp Properties, LLC                         | Indiana                       |
| United Minerals Company LLC                        | Indiana                       |
| Newhall Funding Company (MBT)                      | Massachusetts                 |
| Sterling Centennial Missouri Insurance Corporation | Missouri                      |
| Sterling Centennial Insurance Corp.                | Vermont                       |

Source: Morningstar Document Research, "Peabody Energy Corp. Form 10-K" (2014), available at <http://cleanenergyaction.org/wp-content/uploads/2014/06/Peabody-BTU-2013-10-K-Annual-Report.pdf>.

## Endnotes

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