Trends in

U.S. Coal Production:

1990-2012

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Table of Contents

INTRODUCTION ........................................................................................................... 4

COAL PRODUCTION TOP 5 STATES 1990-2012 ............................................. 7

WYOMING 1990-2012 ............................................................................................... 8

WEST VIRGINIA 1990-2012 .................................................................................. 9

KENTUCKY 1990-2012 ............................................................................................ 10

PENNSYLVANIA 1990-2012 ................................................................................... 11

MONTANA 1990-2012 ............................................................................................. 12

TEXAS 1990-2012 ..................................................................................................... 13

COLORADO 1990-2012 ........................................................................................... 14

INDIANA 1990-2012 ............................................................................................... 15

ILLINOIS 1990-2012 ............................................................................................... 16

NORTH DAKOTA 1990-2012 ................................................................................ 17

NEW MEXICO 1990-2012 ....................................................................................... 18

UTAH 1990-2012 ...................................................................................................... 19

OHIO 1990-2012 ...................................................................................................... 20

ALABAMA 1990-2012 ............................................................................................ 21

VIRGINIA 1990-2012 ............................................................................................. 22

ARIZONA 1990-2012 .............................................................................................. 23
Introduction

As shown below and in the graphs in this report, it appears that the US is likely past “peak coal” production.\(^1\) Nationally, coal production appears to have peaked in 2008 at 1.171 billion tons. US coal production in 2012 had fallen by about 155 million tons to 1.016 billion tons. While there are likely to be yearly ups and downs and no one can predict the future with certainty, it does not appear that the US is likely to exceed the 2008 peak in coal production.

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\(^1\) Given the increasing reliance of the US on lower heat content subbituminous coals, it has been noted that the United States very likely passed peak coal production on a heat content basis in the 1990s. See for example, page 30 in the 2007 Energy Watch Group report “Coal: Future Resources and Production,” available at www.energywatchgroup.org/.../EWG_Report_Coal_10-07-2007ms.pdf
As shown in the table below and in the graphs for each state, it appears that the top 16 states, which combined produce over 95% of US coal, are all past their peak production of coal, with only Indiana likely to exceed its earlier peak.\textsuperscript{2}

### Top 16 Coal-Producing States—All Past Peak?


<table>
<thead>
<tr>
<th>2012 Rank</th>
<th>US Coal Producing State</th>
<th>Apparent Peak Year</th>
<th>Production in Peak Year (Million Tons\textsuperscript{3})</th>
<th>Production in 2012\textsuperscript{4} (Million Tons)</th>
<th>Approximate Percent Reduction in 2012 Production from Peak</th>
</tr>
</thead>
<tbody>
<tr>
<td>#1</td>
<td>Wyoming</td>
<td>2008</td>
<td>467.6</td>
<td>401.4</td>
<td>-14.2%</td>
</tr>
<tr>
<td>#2</td>
<td>West Virginia</td>
<td>1947\textsuperscript{9}</td>
<td>176.2</td>
<td>120.1</td>
<td>-31.8%</td>
</tr>
<tr>
<td>#3</td>
<td>Kentucky</td>
<td>1990\textsuperscript{9}</td>
<td>173.3</td>
<td>90.6</td>
<td>-47.7%</td>
</tr>
<tr>
<td>#4</td>
<td>Pennsylvania</td>
<td>1918\textsuperscript{7}</td>
<td>277.4</td>
<td>55.0</td>
<td>-80.2%</td>
</tr>
<tr>
<td>#5</td>
<td>Illinois</td>
<td>1918\textsuperscript{4}</td>
<td>89.3</td>
<td>47.9</td>
<td>-46.4%</td>
</tr>
<tr>
<td>#6</td>
<td>Texas</td>
<td>1990\textsuperscript{7}</td>
<td>55.8</td>
<td>44.2</td>
<td>-20.8%</td>
</tr>
<tr>
<td>#7</td>
<td>Montana</td>
<td>2008</td>
<td>44.8</td>
<td>36.7</td>
<td>-18.1%</td>
</tr>
<tr>
<td>#8</td>
<td>Indiana</td>
<td>1984\textsuperscript{10}</td>
<td>37.6</td>
<td>36.7</td>
<td>-2.4%</td>
</tr>
<tr>
<td>#9</td>
<td>Colorado</td>
<td>2004</td>
<td>39.9</td>
<td>28.6</td>
<td>-28.3%</td>
</tr>
<tr>
<td>#10</td>
<td>Ohio</td>
<td>1970\textsuperscript{11}</td>
<td>55.4</td>
<td>27.6</td>
<td>-50.2%</td>
</tr>
<tr>
<td>#11</td>
<td>North Dakota</td>
<td>1994</td>
<td>32.3</td>
<td>27.5</td>
<td>-14.9%</td>
</tr>
<tr>
<td>#12</td>
<td>New Mexico</td>
<td>2001</td>
<td>29.6</td>
<td>22.4</td>
<td>-24.3%</td>
</tr>
<tr>
<td>#13</td>
<td>Alabama</td>
<td>1990</td>
<td>29.0</td>
<td>19.6</td>
<td>-32.4%</td>
</tr>
<tr>
<td>#14</td>
<td>Virginia</td>
<td>1990</td>
<td>46.9</td>
<td>18.1</td>
<td>-61.4%</td>
</tr>
<tr>
<td>#15</td>
<td>Utah</td>
<td>2001</td>
<td>27.0</td>
<td>16.4</td>
<td>-39.3%</td>
</tr>
<tr>
<td>#16</td>
<td>Arizona</td>
<td>2001</td>
<td>13.4</td>
<td>7.5</td>
<td>-44.0%</td>
</tr>
</tbody>
</table>

\textsuperscript{2} With less than 5% of US coal production, a new peak for Indiana is not likely to change the conclusion that the US is very likely past peak coal production.

\textsuperscript{3} Production numbers provided as million short tons.

\textsuperscript{4} 2012 Production numbers are preliminary numbers from the EIA 2012 Q4 Quarterly Coal Report available from [http://www.eia.gov/coal/production/quarterly/](http://www.eia.gov/coal/production/quarterly/).


Further information on US coal cost and supply issues is available in the following Clean Energy Action reports


A review of the data and references in the reports listed above indicates that the US is very likely rapidly approaching the end of economically recoverable coal. If coal can’t be mined at a profit, it is not likely that much of it will be mined.

As seen in the graphs on the following pages, the period from 1990-2008 was characterized by rapidly increasing coal production from Wyoming but declining production from eastern states. Since 2008, coal production in Wyoming has begun to fall off significantly and it does not appear likely that this production will be regained due to the increasing difficulties of reaching the coal as discussed in the first two reports listed above.

Given that the US is very likely past “peak coal” production, it does not appear that large investments in new coal plants or coal plant technologies is likely to be wise at this point in time given significant uncertainty about future US coal production and coal costs.
West Virginia 1990-2012 Coal Production

Data from EIA Annual Coal Report Table 1 - http://www.eia.gov/coal/annual/
Peak Year: www.nma.org/pdf/c_production_state_rank.pdf

Apparent Peak Year--1947 176.2 Million Tons
Kentucky 1990-2012 Coal Production

Data from EIA Annual Coal Report Table 1 - http://www.eia.gov/coal/annual/

Apparent Peak Year--1990 173.3 Million Tons
Pennsylvania 1990-2012 Coal Production

Data from EIA Annual Coal Report Table 1 - http://www.eia.gov/coal/annual/
Peak Year: www.nma.org/pdf/c_production_state_rank.pdf

Apparent Peak Year--1918 277.4 Million Tons
Montana 1990-2012 Coal Production
Data from EIA Annual Coal Report Table 1 - http://www.eia.gov/coal/annual/

Apparent Peak Year--2008?  44.8 Million Tons
Texas 1990-2012 Coal Production
Data from EIA Annual Coal Report Table 1 - http://www.eia.gov/coal/annual/

Apparent Peak Year--1990 55.7 Million Tons
Colorado 1990-2012 Coal Production
Data from EIA Annual Coal Report Table 1 - http://www.eia.gov/coal/annual/

Apparent Peak Year--2004 39.9 Million Tons

[Bar chart showing coal production from 1990 to 2012, with peak production in 2004 at 39.9 million tons.]
Indiana 1990-2012 Coal Production
Data from EIA Annual Coal Report Table 1 - http://www.eia.gov/coal/annual/
Peak Year: www.nma.org/pdf/c_production_state_rank.pdf

Apparent Peak Year--1984 37.6 Million Tons
Illinois 1990-2012 Coal Production

Data from EIA Annual Coal Report Table 1 - http://www.eia.gov/coal/annual/
Peak Year: www.nma.org/pdf/c_production_state_rank.pdf

Apparent Peak Year--1918 89.3 Million Tons
North Dakota 1990-2012 Coal Production

Data from EIA Annual Coal Report Table 1 - http://www.eia.gov/coal/annual/

Apparent Peak Year--1994 32.3 Million Tons
New Mexico 1990-2012 Coal Production
Data from EIA Annual Coal Report Table 1 - http://www.eia.gov/coal/annual/

Apparent Peak Year--2001  29.6 Million Tons
Utah 1990-2012 Coal Production
Data from EIA Annual Coal Report Table 1 - http://www.eia.gov/coal/annual/

Apparent Peak Year--2001  27.0 Million Tons
Ohio 1990-2012 Coal Production

Data from EIA Annual Coal Report Table 1 - http://www.eia.gov/coal/annual/

Apparent Peak Year--1990 35.3 Million Tons
Alabama 1990-2012 Coal Production
Data from EIA Annual Coal Report Table 1 - http://www.eia.gov/coal/annual/

Apparent Peak Year--1990  29.0 Million Tons
Virginia 1990-2012 Coal Production

Data from EIA Annual Coal Report Table 1 - http://www.eia.gov/coal/annual/
Peak Year: www.nma.org/pdf/c_production_state_rank.pdf

Apparent Peak Year--1990  46.9 Million Tons
Arizona 1990-2012 Coal Production
Data from EIA Annual Coal Report Table 1 - http://www.eia.gov/coal/annual/

Apparent Peak Year--2001 13.4 Million Tons