West Virginia Coal
Our Natural Advantage

Presented to the 2013 North Carolina Coal Institute
July 16, 2013
Myrtle Beach, South Carolina

Presented by Chris R. Hamilton, Senior Vice President
304.342.4153 or chamilton@wvcoal.com
Historical Overview

Coal has been mined in West Virginia since the mid-1800s.

- Construction of the C&O and N&W opened the state’s coalfields to rapid growth around 1900.
- Despite producing well over 100 million tons almost every year since 1924, West Virginia still has an estimated 54 BILLION tons of recoverable reserves remaining.

It may be hard to believe today, but the scenic New River Gorge area was once a major coal-producing area of the state, clearly showing that mining has a temporary impact on the environment.

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Background:

Coal has long been one of the state’s leading industries.

- Thousands of good paying jobs
- Millions of payroll and tax dollars for local and state economies
- Low cost, dependable electricity

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THE BASICS

- Second leading coal producing state
- Leading underground coal producing state
- Leading coal export state (@ 50 million tons)
- 70% of production shipped to 26 domestic states and 37 foreign countries.
- West Virginia coal powers 40% of the East Coast.

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## Top 15 West Virginia Foreign Exports of Coal 2011/2012

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Netherlands</td>
<td>$525,857,080</td>
<td>$801,363,330</td>
<td>52.39%</td>
</tr>
<tr>
<td>2</td>
<td>Italy</td>
<td>$581,295,247</td>
<td>$697,805,582</td>
<td>20.04%</td>
</tr>
<tr>
<td>3</td>
<td>India</td>
<td>$602,674,319</td>
<td>$689,450,833</td>
<td>14.40%</td>
</tr>
<tr>
<td>4</td>
<td>China</td>
<td>$93,418,770</td>
<td>$567,685,012</td>
<td>507.68%</td>
</tr>
<tr>
<td>5</td>
<td>Brazil</td>
<td>$546,916,319</td>
<td>$558,017,763</td>
<td>2.03%</td>
</tr>
<tr>
<td>6</td>
<td>Korean Republic</td>
<td>$266,901,592</td>
<td>$520,296,435</td>
<td>94.94%</td>
</tr>
<tr>
<td>7</td>
<td>United Kingdom</td>
<td>$287,517,238</td>
<td>$456,904,185</td>
<td>58.91%</td>
</tr>
<tr>
<td>8</td>
<td>Turkey</td>
<td>$276,079,423</td>
<td>$403,039,403</td>
<td>45.99%</td>
</tr>
<tr>
<td>9</td>
<td>Japan</td>
<td>$29,149,708</td>
<td>$395,174,585</td>
<td>1255.67%</td>
</tr>
<tr>
<td>10</td>
<td>France</td>
<td>$248,724,083</td>
<td>$383,074,465</td>
<td>54.02%</td>
</tr>
<tr>
<td>11</td>
<td>Ukraine</td>
<td>$499,430,818</td>
<td>$358,450,642</td>
<td>-28.23%</td>
</tr>
<tr>
<td>12</td>
<td>Canada</td>
<td>$201,896,245</td>
<td>$272,030,245</td>
<td>34.74%</td>
</tr>
<tr>
<td>13</td>
<td>Germany</td>
<td>$136,262,151</td>
<td>$155,687,548</td>
<td>14.26%</td>
</tr>
<tr>
<td>14</td>
<td>Morocco</td>
<td>$73,024,531</td>
<td>$152,334,270</td>
<td>108.61%</td>
</tr>
<tr>
<td>15</td>
<td>Spain</td>
<td>$52,280,137</td>
<td>$151,692,138</td>
<td>190.15%</td>
</tr>
</tbody>
</table>

Data from Global Trade Information Services
US Dependence on WV Coal For Electricity

The Appalachia region produced 378 million short tons (33% of US)
- West Virginia produced over 153 million short tons of coal in 2007
- WV produced 100 million tons for power generation nationally
  - 28% of the coal consumed in WV
  - 72% exported for US power generation
- 4.6 GW power generation reliant on WV coal
- Top 20 plants generate 29GW of

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West Virginia Coal: Our natural advantage

KEY FINDINGS

- Payroll $3.6 Billion
- Severance $500 Million
- General Tax & Fees $490 Million
- TOTAL JOB IMPACT 63,000 JOBS
- TOTAL IMPACT $26 BILLION

Note: Coal and electric utilities account for ^ 60% of state business taxes

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Coal Severance:

- Provides revenue for all 55 counties
- First $22 million dedicated to infrastructure projects
- Primary uses: education, seniors, less fortunate

USES

- Schools
- Roads
- Public Services
- Water/Sewer

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### The State of Coal 2012

<table>
<thead>
<tr>
<th>Category</th>
<th>2012</th>
<th>2013 to date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Production</td>
<td>129,107,370</td>
<td>53,783,186</td>
</tr>
<tr>
<td>Underground</td>
<td>89,210,479</td>
<td></td>
</tr>
<tr>
<td>Surface</td>
<td>39,896,891</td>
<td></td>
</tr>
<tr>
<td>Coal Companies Operating in WV</td>
<td>231</td>
<td></td>
</tr>
<tr>
<td>Number of Mines</td>
<td>177</td>
<td></td>
</tr>
<tr>
<td>Underground</td>
<td>126</td>
<td></td>
</tr>
<tr>
<td>Surface</td>
<td>51</td>
<td></td>
</tr>
<tr>
<td>West Virginia Coal Employment</td>
<td>22,351 (UG+SU)</td>
<td>19,261</td>
</tr>
<tr>
<td>Underground</td>
<td>16,868</td>
<td></td>
</tr>
<tr>
<td>Surface</td>
<td>5,483</td>
<td></td>
</tr>
<tr>
<td>Coal Handling Facilities</td>
<td>2,150</td>
<td></td>
</tr>
<tr>
<td>Contractors</td>
<td>2,100</td>
<td></td>
</tr>
<tr>
<td>Total Coal Employment</td>
<td>26,601</td>
<td></td>
</tr>
<tr>
<td>Estimated Average Annual Coal Wage</td>
<td>$68,500</td>
<td></td>
</tr>
<tr>
<td>Estimated Production Value 2012</td>
<td>$7,746,422,200</td>
<td></td>
</tr>
<tr>
<td>Estimated Coal Severance Tax Paid</td>
<td>@ $500 Million</td>
<td></td>
</tr>
</tbody>
</table>

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Today’s Reality……..
THE PERFECT STORM

- Economic “uncertainty” –
  - America and worldwide
- Mild winter
- Natural gas prices
- Federal government – “Encourage, not discourage”
  - EPA
  - MSHA
  - OSM
EPA Interference

- Formal objections to mine permits (404 and 402)
- Interagency MOU- Revise permitting and policy
- Enhanced Coordinated Review Process
  \((Enhanced\ Permit\ Delay)\)
- Nearly All Permits Held Hostage
- Ecological Assessment
- Suspension of NWP 21
- Revocation of Spruce Fork Permit
- Targeting All Mining

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Permitorium

Impacts of EPA Involvement in NPDES Permitting
(New Permits, Reissuances and Modifications)

Year

Permits

2008  2009  2010  2011  2012

0  73  418  716  772

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**EPA’s Interference (Air)**

- **CSAPR** 4.8 GW
  - $2-3 billion annually
  - SO2
  - Nox

- **HgMACT** 10 GW
  - $10-11 billion annually
  - PM?

- **NAAQS**
  - SO2, NOx, PM, CO, Ozone, Lead
  - Initial Cost = $1.5 billion annually
  - SO2
  - Ozone
  - PM?

- **GHG NSPS**
  - No New Coal Plants
  - Requirements applied to existing plants per NSR
  - Technology Does Not Exist

- **COAL ASH**
  - RCRA Hazardous Waste
  - $1.5 billion annually
  - WV Amendment-Transportation

**TOTAL PROJECTED IMPACT**
- $22.5 billion - $40.5 billion

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OSM Interference

- More federal inspections
- Direct federal modifications to state issued permit
- OSM becomes the “co-regulator” of mining without regard to state primacy
- Direct reporting by mining companies to OSM
- Proposed regulations- Stream Buffer Zone and Approximate Original Contour, etc.
West Virginia Coal: Our natural advantage

The National Agenda is “Out-of-Whack!”

- Global climate change
- Carbon Tax legislation
- Increasing renewable portfolio
- EPA’s assault on coal
- War on mountaintop mining

The current agenda is regressive, punitive and will displace workers.

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Today’s Reality……

- 25% Lost Production (165m/tons in 2008 to 129m/tons in 2012).
- 3,000 Lost Jobs in West Virginia and 5,000 Lost Jobs in Region.
- Downward Trending Coal Prices and Mine Efficiencies
- Closure of Coal-Fired Power Plants
- Lost Revenues to Communities and States
- Lost Coal Severance Revenues

The War on Coal Takes Hold:
Total Severance Collections 2008-2012

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Trends: The Forecast Appears Bleak

West Virginia Coal Production

Annual Production Tonnage

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BUT.......
Trends: Opportunity Abounds

- Increased Production in Asia, Europe and Australia, but ....
  - China, India, Australia, Indonesia and other Pacific rim nations have abundant domestic coal but are growing at such a rate demand still outpaces capacity.
  - European nations are turning to coal and Russia is increasing production but much of the European reserve base has been depleted.

- Growth of demand in Asia and Europe
  - China, India and the Asian rim nations are expanding their economies.
  - European nations are turning away from sustainable energy and nuclear projects back to coal.
  - As economic recovery occurs, so will energy demand increase.
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Energy Forecast

Coal continues to gain more of the world’s energy share

Coal’s Share of Global Energy Market

- In 2000
  - Coal: 23%
- In 2011
  - Coal: 30%
  - Other: 70%

- Coal has been the largest and fastest-growing major fuel source for power generation in the world
- Coal is projected to supplant oil as the world’s most prominent energy source by 2015
- By 2020, coal consumption should increase 2 billion tons if trends continue ... and could increase 4 billion tons if some forecasts prove true
We expect continued strength in met coal markets – based on projected growth in global steel consumption.

World Steel Production (in billions of tons of crude steel)

<table>
<thead>
<tr>
<th>Year</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>0.8</td>
</tr>
<tr>
<td>2020</td>
<td>2.2</td>
</tr>
</tbody>
</table>

Global Metallurgical Coal Use (in billions of tons of coal)

<table>
<thead>
<tr>
<th>Year</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>0.5</td>
</tr>
<tr>
<td>2010</td>
<td>0.9</td>
</tr>
<tr>
<td>2020F</td>
<td>1.5+</td>
</tr>
</tbody>
</table>

World steel consumption is projected to increase more than 50 percent from 2011 levels of 1.4 billion tons.

Demand for met coal is driven by increased utilization at existing steel plants and a build-out of new steel capacity.
The trend line in seaborne coal demand is clear... with little reason to believe it will change soon.

India net imports (in millions of tonnes)

- Thermal
- Met

China net imports (in millions of tonnes)

- Thermal
- Met

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West Virginia Coal: Energy Forecast

Planned U.S. port expansions will support a more than doubling of coal exports over the next five years or so.

<table>
<thead>
<tr>
<th>U.S. Exports (in millions of tons)</th>
<th>West Coast</th>
<th>East Coast</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Ridley**</td>
<td>NS/Lamberts</td>
</tr>
<tr>
<td></td>
<td>Westshore**</td>
<td>DTA</td>
</tr>
<tr>
<td></td>
<td>MBT</td>
<td>CNX Marine</td>
</tr>
<tr>
<td></td>
<td>SSA Marine</td>
<td>Pier IX</td>
</tr>
<tr>
<td></td>
<td>Other Northwest</td>
<td>PA</td>
</tr>
<tr>
<td></td>
<td>CA</td>
<td>CSX/Curtis Bay</td>
</tr>
<tr>
<td>Actual</td>
<td>4</td>
<td>32</td>
</tr>
<tr>
<td>Projected Capacity</td>
<td>4</td>
<td>20</td>
</tr>
<tr>
<td>2006A*</td>
<td>15</td>
<td>16</td>
</tr>
<tr>
<td>2011A* Projected</td>
<td>10</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>10</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>U.S. Exports (in millions of tons)</th>
<th>Southwest</th>
<th>Midwest</th>
<th>Southeast</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Deepwater</td>
<td>Great Lakes</td>
<td>Mobile</td>
</tr>
<tr>
<td></td>
<td>Other Texas</td>
<td></td>
<td>Other AL</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Charleston</td>
</tr>
<tr>
<td>2006A*</td>
<td>10</td>
<td>8</td>
<td>18</td>
</tr>
<tr>
<td>2011A* Projected</td>
<td>5</td>
<td>8</td>
<td>5</td>
</tr>
</tbody>
</table>

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Energy Forecast

World energy needs and coal usage will increase.

The real question is not whether coal will continue to be used but rather where will it come from?

- East of the Mississippi River
  - 40 percent of the nation’s output
  - 80 percent of mining jobs

- Western Coal
- Illinois Basin
- Foreign Imports

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Appalachia’s share of the national coal market is projected to decline while the western region (Powder River) continues to climb.

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Competitive Forces

A Powder River, Wyoming Coal Seam

Approximately 100 feet

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By Comparison ...

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Regional Challenges

- Increased Mining Cost:
  - Thinner, Deeper Seams
  - Higher Ratios
- Litigation
- Geological Challenges
- Manpower Needs
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Poised for the Future:
The West Virginia coal industry is well-poised on high-growth opportunities as the country pursues energy independence and economic growth from a strong domestic energy industry

• The industry has great capacity
• Committed management teams in place
• Aggressive business plans
• Qualified, experienced workforce
• Strong will to succeed

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National Agenda Should Be:

- National Security & Defense
- Energy Independence
- National Energy Policy
- Coal to Liquids Reality
- Mine Production & Combustion Technologies
- Natural Resources as Assets

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Summary

- West Virginia/Central App is Changing.
  - Mid- to long-term prospects are questionable
  - Production is down to @ 129 million tons but appears to have stabilized.
  - Export markets are particularly attractive (China, India, Asia).
  - World coal use is growing (Opportunities Abound).

- Coal Remains Vital to the Economy
  - Key for energy independence
  - Provides a transition fuel for the future
  - Abundant, Affordable and Reliable

- Coal Infrastructure Well Established (Production to Consumption)
  - Rail, river, truck, port facilities, industrial, electric power, end user and consumer.
BUT

Is the glass half-empty or half-full?
Mountaintop Development

13,000 JOBS CREATED ON FORMER SURFACE MINE SITES IN WEST VIRGINIA

“With some areas of our state having little flat land for development, the use of surface mined lands has been critically important to providing land for new industry and facilities for use by the general public,” said former Division of Energy Director Jeff Herholdt. “In addition to the flat land, many projects are able to take advantage of infrastructure, roads, and electric service used during coal mining.”

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Opportunity—Alternate Post-Mining Land Use

- **MINING** creates level land, land that has the potential for many other uses. Properly planned -- mining can truly be “building a new West Virginia.”

- **DEVELOPED SITES**
  - West Virginia:
    - Joint Base West Virginia – Tyler-Morgan, Fola, Logan
    - Bechtel Summit Boy Scout Complex – Fayette
    - Mingo Central High School
    - King Coal Highway
    - Mingo County Regional Airport
    - Twisted Gun Golf Course
    - Hatfield-McCoy Trail System
    - The City of Weirton
    - Pete Dye golf course
    - Mount View High
    - Robert Byrd High School
    - Logan County Airport
    - Anker Sports Complex
    - Beckley YMCA Soccer Complex
    - FBI Complex
    - Mylan Park
    - Bright Mountain Subdivision
Mountaintop Development

The Rest of the Story

Former surface mines can provide the flat land so essential to industrial and community development.

Earl Ray Tomblin Hotel and Convention Center

Located on a former surface mine near Logan, WV, this is a clear example of the myriad uses for former surface mine land.

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Mountaintop Development

Mingo Central Comprehensive High School is a consolidated high school which resulted from Burch, Gilbert, Matewan and Williamson High Schools. Mingo Central opened its doors to new students in August 2011. Mingo Central is a Comprehensive 9-12 high school on a beautiful 90 acre site along the King Coal Highway overlooking the mountains of Mingo County. It is a 172,535 square foot school containing approximately 60 classrooms.

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Mountaintop Development

The Rest of the Story

Mylan Park in Morgantown is built on a former surface mine site.
Mountaintop Development

Mingo County Mountaintop Post-Mine Land Use Projects

Mingo County Industrial Park

Twisted Gun Golf Course

King Coal Highway & School Site

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Mountaintop Development

The Rest of the Story

A shopping mall in Bridgeport shows the wide range of development made possible across the state by the cooperation of mining and local planners.

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We Can Have Both!

West Virginia demonstrates every day that we can have a thriving industrial base and robust tourism while protecting our natural environment.

The End

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Oh, I almost forgot ....

Obama’s “Climate Change Initiative”