Coal Industry Turns the Corner

U.S. Coal in the 21st Century: Markets, Bankruptcy, Finance, and Law

September 8, 2016
Columbia University
About Doyle Trading Consultants

We give our clients an edge by providing the following:

- **Daily**: DTC’s highly regarded daily market commentary and price recap (global & US coverage)
- **Weekly**: DTC’s ‘Week Ahead’ email (previews key drivers and important data release dates)
- **Monthly**: A comprehensive summary and analysis of the major market drivers and price curves;
- **Monthly**: DTC’s Supply & Demand Forecast; Utility Inventory Forecast (& commentary)
- **Intra-monthly**: Timely reports on global steel production, monthly export/import data (company specific), US generation & inventory data, etc.
- **Quarterly**: Company-specific mining costs, priced positions and earnings summaries; quarterly production data and analysis; changes in institutional ownership of coal equities
- **Much, much more**: DTC monitors natgas vs coal dispatch economics; seaborne coal negotiations; steam coal export break-even economics; etc.
- **Quarterly Coal Outlook and Price Forecast**: DTC launched its *Quarterly Outlook and Price Forecast* in April 2014.
- **Bespoke Consulting**: available upon request.

---

**Colorado Office:**
751 Horizon Court
Suite 240
Grand Junction, CO 81506
USA

- Vicky Bray
- Director of Client Services
- Phone: +1 970 241 1510

---

**New York City Office:**
52 Vanderbilt Avenue
11th Floor
New York, NY 10017
USA

- Ted O'Brien
- CEO
- Phone: +1 646 840 1300
Agenda

• Supply/demand overview: better days to come
  • Utility demand set to rebound
  • Exports opportunities return
  • Coal shortage in 2017/2018?
• Capital structures reset
• Conclusion
Putting 2016 into perspective

- Total U.S. supply: down 201 mm tons YoY
- Total U.S. demand: down 126 mm tons YoY
  - Utility: down 101 mm tons due to natgas/renewables
  - Export: down 22 mm tons due to weak prices, strong US$
- Pain particularly strong after extremely weak 2011 – 2015
- Coal has been hit on all fronts
- Supply cuts outpacing demand destruction
  - YTD production down 25% YoY

---

### DTC's Supply and Demand Forecast (2015 - 2017)

**Sep 2016 (mm short tons)**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Coal (WV, KY, VA)</td>
<td>193.53</td>
<td>192.38</td>
<td>148.23</td>
<td>126.73</td>
<td>115.96</td>
<td>109.65</td>
<td>94.00</td>
<td>96.00</td>
</tr>
<tr>
<td>Colo-Utah</td>
<td>44.46</td>
<td>40.67</td>
<td>45.01</td>
<td>40.36</td>
<td>41.91</td>
<td>33.55</td>
<td>25.00</td>
<td>27.00</td>
</tr>
<tr>
<td>Il. Basin (IL, IN, WV)</td>
<td>106.40</td>
<td>116.14</td>
<td>126.89</td>
<td>132.10</td>
<td>137.26</td>
<td>124.00</td>
<td>95.00</td>
<td>101.00</td>
</tr>
<tr>
<td>Napp (PA, OH, MD, WV)</td>
<td>128.43</td>
<td>131.43</td>
<td>124.55</td>
<td>123.06</td>
<td>132.14</td>
<td>116.12</td>
<td>94.00</td>
<td>96.00</td>
</tr>
<tr>
<td>PRD (WY, MT)</td>
<td>487.25</td>
<td>460.06</td>
<td>435.14</td>
<td>430.68</td>
<td>440.18</td>
<td>417.64</td>
<td>332.00</td>
<td>350.00</td>
</tr>
<tr>
<td>Other Regions</td>
<td>135.20</td>
<td>137.66</td>
<td>133.58</td>
<td>131.12</td>
<td>129.38</td>
<td>114.08</td>
<td>88.00</td>
<td>94.00</td>
</tr>
<tr>
<td>Total US Production</td>
<td>1,085.27</td>
<td>1,094.34</td>
<td>1,017.69</td>
<td>993.97</td>
<td>996.73</td>
<td>895.94</td>
<td>698.00</td>
<td>734.00</td>
</tr>
<tr>
<td>Waste Coal</td>
<td>13.65</td>
<td>13.21</td>
<td>11.00</td>
<td>10.20</td>
<td>11.18</td>
<td>9.50</td>
<td>8.00</td>
<td>8.00</td>
</tr>
<tr>
<td>Imports</td>
<td>193.38</td>
<td>133.09</td>
<td>9.16</td>
<td>8.61</td>
<td>13.35</td>
<td>11.32</td>
<td>10.00</td>
<td>10.00</td>
</tr>
</tbody>
</table>

### Demand

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Utilities</td>
<td>979.00</td>
<td>934.94</td>
<td>825.74</td>
<td>590.13</td>
<td>804.42</td>
<td>740.86</td>
<td>640.00</td>
</tr>
<tr>
<td>Coke/Coke/Industrial</td>
<td>21.06</td>
<td>21.43</td>
<td>20.75</td>
<td>21.47</td>
<td>21.30</td>
<td>18.90</td>
<td>19.00</td>
</tr>
<tr>
<td>Residential/Commercial</td>
<td>3.08</td>
<td>2.79</td>
<td>2.09</td>
<td>1.95</td>
<td>1.88</td>
<td>2.00</td>
<td>2.00</td>
</tr>
<tr>
<td>Export/Export (Inc. Can.)</td>
<td>96.50</td>
<td>96.92</td>
<td>79.46</td>
<td>67.03</td>
<td>60.36</td>
<td>39.00</td>
<td>37.00</td>
</tr>
<tr>
<td>Export/Export (Can.)</td>
<td>17.44</td>
<td>34.88</td>
<td>53.13</td>
<td>47.88</td>
<td>43.73</td>
<td>26.18</td>
<td>15.00</td>
</tr>
<tr>
<td>Total Exports</td>
<td>7.93</td>
<td>2.49</td>
<td>2.22</td>
<td>3.25</td>
<td>2.15</td>
<td>1.44</td>
<td>1.00</td>
</tr>
</tbody>
</table>

### Total Supply

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1,116.28</td>
<td>1,120.64</td>
<td>1,036.56</td>
<td>1,003.98</td>
<td>1,019.25</td>
<td>916.76</td>
<td>716.00</td>
<td>752.00</td>
</tr>
</tbody>
</table>

### Implied Surplus/Deficit

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>(16.83)</td>
<td>7.95</td>
<td>19.37</td>
<td>(42.30)</td>
<td>1.44</td>
<td>40.04</td>
<td>(36.00)</td>
<td>(62.00)</td>
</tr>
</tbody>
</table>

### Net Exports

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>62.41</td>
<td>94.20</td>
<td>116.65</td>
<td>109.26</td>
<td>85.91</td>
<td>62.64</td>
<td>42.00</td>
<td>45.00</td>
</tr>
</tbody>
</table>

### Jan 1 Utility Inventories (mm tons)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>189.47</td>
<td>174.92</td>
<td>172.39</td>
<td>185.12</td>
<td>147.88</td>
<td>151.55</td>
<td>170.00</td>
<td>170.00</td>
</tr>
</tbody>
</table>

### Jan 1st Coal inv (quadrillion lbs)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>10,062</td>
<td>10,038</td>
<td>10,024</td>
<td>10,037</td>
<td>10,100</td>
<td>9,973</td>
<td>10,000</td>
<td></td>
</tr>
</tbody>
</table>

Note: The relationship between inventories and implied surpluses/deficits. In a perfect world, our implied surplus or deficit would be seen in changes in the preceding year’s Jan 1 utility inventories. In the real world, the annual surplus or deficit can be partially reflected in changes in non-utility stockpiles (coal mines, industrials, steel mills, stockpiling yards, railroads and export terminals).
Coal-to-gas switching set to reverse

- Coal burn has fallen 117.29 mm tons over July ‘15 – June ‘16 due to gas displacement
  - PRB/down 55.05 mm tons
  - ILB/down 19.01 mm tons
  - NAPP/down 12.82 mm tons
- Losses from switching ease with natgas prices around ~$2.75/mmBtu and 2017 forward curve at $3.10/mmBtu
Better days ahead in 2017/2018

• Utility demand set to rebound as natgas price rally pushes coal units back ‘in the money’
• Utility stockpiles expected to normalize in 1H 2017
• Purchasing ahead of 2018 will reveal shortfall, and prices to respond accordingly
Global price rally opens export opportunities

• Efficient market in action
  • High prices incentivized supply growth, low prices force cuts

• China’s mandated capacity constraints having dramatic impact on global coal markets
  • Jan – Jul coal production of 1.89 billion MT down 11.92% YoY
  • Jan – Jul coal imports of 129.22 mm MT up 6.70% YoY

• Export economics have improved dramatically, but will coal be available?
Parabolic Gains in Seaborne Coking Coal

Physical Coking Coal Trades on globalCOAL

Source: DTC, globalCOAL

www.doyletradingconsultants.com
Leaner industry post Ch 11

• Highly levered coking coal acquisitions in 2010/2011 put industry in financial distress
  • Alpha/Massey (Dec 2010); Walter/Western (Jan 2011); Arch/Intl Coal Group (May 2011); Peabody/Macarthur Coal (Aug 2011)
• Restructuring process has changed little than capital structures and entity names
• Companies are leaner than ever; investors working to recoup capital from past 3 – 5 years
Wrap up

• Market expected to improve over 1–2 years, driven by aggressive supply cuts, stronger natgas prices, export opportunities

• Lack of new demand sources paints challenging long term outlook

• Global demand growth in Pacific Basin will support seaborne prices, but geographic disadvantage for U.S.
Thank You

Ted O’Brien – CEO, Doyle Trading Consultants
+1.646.840.1300
tobrien@doyletradingconsultants.com

www.doyletradingconsultants.com