Coalcos Put Eggs in the Export Basket
U.S. Coal Market Overview

Ted O’Brien
President
Doyle Trading Consultants
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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: An illuminating and entertaining interview with Steve Doyle on relevant market catalysts as well as his investment portfolio
- 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; company-specific priced positions; company-specific 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.
Overview

• Changes in Domestic Utility Demand
• International Prices Incentivize Exports
• Evolution of Seaborne Demand
• Seaborne supply overview
• Role of the U.S.

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U.S. Demand Adjusts to New Normal

- 2007: 1.05 billion
- 2008: 1.04 billion
- 2009: 935 mm
- 2010: 980 mm
- 2011: 935 mm
- 2012: 827 mm
- 2013F: 865 mm
Coal Loses Market Share

Dec 2012: Coal @ 40%, NatGas @ 25%
# Exports a Small Piece of U.S. Market…

<table>
<thead>
<tr>
<th>Year</th>
<th>Coking Coal</th>
<th>Thermal Coal</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>58.92%</td>
<td>1.06%</td>
</tr>
<tr>
<td>2008</td>
<td>66.08%</td>
<td>1.70%</td>
</tr>
<tr>
<td>2009</td>
<td>71.00%</td>
<td>1.29%</td>
</tr>
<tr>
<td>2010</td>
<td>72.82%</td>
<td>1.67%</td>
</tr>
<tr>
<td>2011</td>
<td>74.42%</td>
<td>2.37%</td>
</tr>
<tr>
<td>2012</td>
<td>77.05%</td>
<td>5.76%</td>
</tr>
</tbody>
</table>
...But They ‘Save the Day’
US Exports Sensitive to Price

Capp Rail Netback Prices (Jan 08 - Feb 13)

Source: DTC Data, Evolution Markets, FIS

Positive Netback: Capp Rail is competitive in global markets

Negative Netback: Capp Rail is not competitive in global markets

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Monthly Chinese Imports

Monthly Chinese Coal Imports (2007-2013)

Source: TEX

mm MT

Jan-07 Aug-07 Mar-08 Oct-08 May-09 Dec-09 Jul-10 Feb-11 Sep-11 Apr-12 Nov-12

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...Taking a Step Back...

Quarterly Chinese Coal Imports
(2007 - 2012)

Source: DTC

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...And Again

Annual Chinese Coal Imports (2007 - 2012)

Source: DTC

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U.S. Share of Chinese Imports

- **U.S. Realizes Significant Growth**
  - 2009: 0.81 mm MT
  - 2010: 4.84 mm MT
  - 2011: 4.90 mm MT
  - 2012: 9.31 mm MT
Steel Output a Key Factor

Record met imports move in step with record steel output

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India is on Cusp of Major Growth...

...but Impact on U.S. Already Profound
Japan and S. Korea Imports Near Record

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Where Does U.S. Fit Into Global Supply?

“The more things change, the more they stay the same.”
Strong A$ Benefits RoW Suppliers

<table>
<thead>
<tr>
<th></th>
<th>Avg Met Price US$</th>
<th>Avg Met Price A$</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>$253</td>
<td>$290</td>
<td>+14.63%</td>
</tr>
<tr>
<td>2009</td>
<td>$173</td>
<td>$209</td>
<td>+20.54%</td>
</tr>
<tr>
<td>2010</td>
<td>$191</td>
<td>$206</td>
<td>+8.00%</td>
</tr>
<tr>
<td>2011</td>
<td>$289</td>
<td>$279</td>
<td>-3.34%</td>
</tr>
<tr>
<td>2012</td>
<td>$210</td>
<td>$202</td>
<td>-3.59%</td>
</tr>
</tbody>
</table>

ForEx Benefit: A$ vs US$ (2000-2012)

Source: Fed Reserve, DTC

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Growing Supply from New Basins

**Mongolia**

- **China Play**
  - CHALCO/TT

- **Sovereign Risk**
  - Oyu Tolgoi
  - CHALCO/SouthGobi

- **Delay, delay, delay**
  - Tavan Tolgoi IPO – 2013?

**Mozambique**

- **Rio’s $3B write down**
  - Infrastructure concerns
  - Recoverable volumes revised lower

- **Development takes time**

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Back in the USA

Annual U.S. Coal Exports

Source: DTC, USITC

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2012 Strength Begins to Fade

Monthly US Coal Exports

Source: DTC, USITC

mm tons

Jan-96 May-97 Sep-98 Jan-00 May-01 Sep-02 Jan-04 May-05 Sep-06 Jan-08 May-09 Sep-10 Jan-12

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U.S. Monthly Coal Exports
(Asia and Europe)

US Coal Exports to Asia
Source: DTC, USITC

US Coal Exports to Europe
Source: DTC, USITC

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What Next for the U.S.?

• U.S. producers betting on exports
  – Domestic thermal markets are undergoing fundamental change

• Supply chain is ready to accommodate

• Will mines be here when demand returns?
  – Q4 Capp output of just 32 mm tons!

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## East Coast Supply Chain Steps Up in 2012

<table>
<thead>
<tr>
<th></th>
<th>2012 Total (mm tons)</th>
<th>Peak 2012 Run Rate</th>
<th>Capacity Upside</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Lamberts Point</strong></td>
<td>18.53</td>
<td>26.70</td>
<td>44.06%</td>
</tr>
<tr>
<td><strong>Pier IX</strong></td>
<td>14.32</td>
<td>18.46</td>
<td>28.93%</td>
</tr>
<tr>
<td><strong>DTA</strong></td>
<td>15.16</td>
<td>20.54</td>
<td>35.50%</td>
</tr>
<tr>
<td><strong>Hampton Roads Total</strong></td>
<td>48.02</td>
<td>65.71</td>
<td>36.84%</td>
</tr>
<tr>
<td><strong>Chesapeake</strong></td>
<td>8.03</td>
<td>16.95</td>
<td>111.11%</td>
</tr>
<tr>
<td><strong>CNX</strong></td>
<td>12.16</td>
<td>18.42</td>
<td>51.54%</td>
</tr>
<tr>
<td><strong>Baltimore Total</strong></td>
<td>20.18</td>
<td>35.37</td>
<td>75.23%</td>
</tr>
</tbody>
</table>

**Source:** T. Parker Host
Capp Decline Accelerates

Quarterly Central App Production
(Q1 2000 - Q4 2012)

source: DTC, MSHA

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Conclusion

• Asia is here – time to adapt
  – Emerging markets drive demand growth
• U.S. maintains role as steady supplier
  – Invaluable for commodity as volatile as coal
• Export Forecast
DTC's Supply and Demand Forecast (2012 - 2014)
March 2013 (mm short tons)
(Sources: EIA historical data/Annual Energy Review; DTC in-house forecasts)

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<tbody>
<tr>
<td>Capp (EKY, SWV, VA)</td>
<td>224.03</td>
<td>231.92</td>
<td>192.08</td>
<td>183.53</td>
<td>182.38</td>
<td>146.00</td>
<td>131.00</td>
<td>127.00</td>
</tr>
<tr>
<td>Colo/Utah</td>
<td>60.69</td>
<td>56.40</td>
<td>49.98</td>
<td>44.46</td>
<td>46.67</td>
<td>45.00</td>
<td>40.00</td>
<td>39.00</td>
</tr>
<tr>
<td>Ill. Basin (IN, IL, WKY)</td>
<td>96.13</td>
<td>99.54</td>
<td>103.82</td>
<td>106.40</td>
<td>116.14</td>
<td>127.00</td>
<td>130.00</td>
<td>136.00</td>
</tr>
<tr>
<td>Napp (PA, OH, MD, NWV)</td>
<td>130.72</td>
<td>133.62</td>
<td>125.36</td>
<td>128.43</td>
<td>131.43</td>
<td>125.50</td>
<td>121.00</td>
<td>123.00</td>
</tr>
<tr>
<td>PRB (WY, MT)</td>
<td>496.96</td>
<td>512.43</td>
<td>470.16</td>
<td>487.25</td>
<td>480.06</td>
<td>438.00</td>
<td>441.00</td>
<td>457.00</td>
</tr>
<tr>
<td>Other Regions</td>
<td>138.12</td>
<td>137.39</td>
<td>131.36</td>
<td>135.20</td>
<td>137.66</td>
<td>135.00</td>
<td>127.00</td>
<td>123.00</td>
</tr>
<tr>
<td>Total US Production</td>
<td>1,146.65</td>
<td>1,171.30</td>
<td>1,072.76</td>
<td>1,085.27</td>
<td>1,094.34</td>
<td>1,016.50</td>
<td>990.00</td>
<td>1,005.00</td>
</tr>
<tr>
<td>Waste Coal</td>
<td>14.08</td>
<td>14.15</td>
<td>13.67</td>
<td>13.65</td>
<td>12.53</td>
<td>9.00</td>
<td>9.00</td>
<td>9.00</td>
</tr>
<tr>
<td>Imports</td>
<td>36.35</td>
<td>34.21</td>
<td>22.64</td>
<td>19.36</td>
<td>13.09</td>
<td>9.16</td>
<td>8.00</td>
<td>8.00</td>
</tr>
<tr>
<td><strong>Total Supply</strong></td>
<td><strong>1,197.08</strong></td>
<td><strong>1,219.66</strong></td>
<td><strong>1,109.07</strong></td>
<td><strong>1,118.28</strong></td>
<td><strong>1,119.96</strong></td>
<td><strong>1,034.66</strong></td>
<td><strong>1,007.00</strong></td>
<td><strong>1,022.00</strong></td>
</tr>
</tbody>
</table>

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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Utilities</td>
<td>1,046.80</td>
<td>1,042.34</td>
<td>934.68</td>
<td>979.68</td>
<td>934.94</td>
<td>826.70</td>
<td>865.00</td>
<td>879.00</td>
</tr>
<tr>
<td>Coking Coal/Domestic</td>
<td>22.72</td>
<td>22.07</td>
<td>15.33</td>
<td>21.09</td>
<td>21.43</td>
<td>21.00</td>
<td>22.00</td>
<td>22.00</td>
</tr>
<tr>
<td>Industrial</td>
<td>56.62</td>
<td>54.39</td>
<td>45.31</td>
<td>49.29</td>
<td>46.24</td>
<td>41.00</td>
<td>38.00</td>
<td>39.00</td>
</tr>
<tr>
<td>Residential/Commercial</td>
<td>3.53</td>
<td>3.51</td>
<td>3.21</td>
<td>3.08</td>
<td>2.79</td>
<td>2.00</td>
<td>3.00</td>
<td>3.00</td>
</tr>
<tr>
<td>Exports/CC (Incl. Can.)</td>
<td>32.59</td>
<td>43.00</td>
<td>37.54</td>
<td>56.50</td>
<td>69.92</td>
<td>70.46</td>
<td>60.00</td>
<td>62.00</td>
</tr>
<tr>
<td>Exports/Steam (ex. Can.)</td>
<td>12.12</td>
<td>19.64</td>
<td>13.58</td>
<td>17.44</td>
<td>34.88</td>
<td>53.13</td>
<td>43.00</td>
<td>43.00</td>
</tr>
<tr>
<td>Exports/Steam (Can.)</td>
<td>14.59</td>
<td>19.12</td>
<td>8.18</td>
<td>7.83</td>
<td>2.49</td>
<td>2.22</td>
<td>2.00</td>
<td>2.00</td>
</tr>
<tr>
<td><strong>Total Exports</strong></td>
<td><strong>59.30</strong></td>
<td><strong>81.76</strong></td>
<td><strong>59.30</strong></td>
<td><strong>81.77</strong></td>
<td><strong>107.29</strong></td>
<td><strong>125.81</strong></td>
<td><strong>105.00</strong></td>
<td><strong>107.00</strong></td>
</tr>
<tr>
<td><strong>Total Demand</strong></td>
<td><strong>1,188.97</strong></td>
<td><strong>1,204.07</strong></td>
<td><strong>1,057.83</strong></td>
<td><strong>1,134.91</strong></td>
<td><strong>1,112.69</strong></td>
<td><strong>1,016.51</strong></td>
<td><strong>1,033.00</strong></td>
<td><strong>1,050.00</strong></td>
</tr>
<tr>
<td><strong>Implied Surplus/(Deficit)</strong></td>
<td><strong>8.11</strong></td>
<td><strong>15.59</strong></td>
<td><strong>51.24</strong></td>
<td><strong>(16.63)</strong></td>
<td><strong>7.27</strong></td>
<td><strong>18.15</strong></td>
<td><strong>(26.00)</strong></td>
<td><strong>(28.00)</strong></td>
</tr>
<tr>
<td>January 1st Utility Inventories (mm tons)</td>
<td>140.96 Jan 1 ’07 (Actual)</td>
<td>151.22 Jan 1 ’08 (Actual)</td>
<td>161.59 Jan 1 ’09 (Actual)</td>
<td>189.47 Jan 1 ’10 (Actual)</td>
<td>174.92 Jan 1 ’11 (Actual)</td>
<td>172.39 Jan 1 ’12 (DTC Est.)</td>
<td>184.92 Jan 1 ’13 (DTC Est.)</td>
<td>168.0 Jan 1 ’14 (DTC Est.)</td>
</tr>
</tbody>
</table>
# U.S. Export Forecast

*(mm tons)*

<table>
<thead>
<tr>
<th>Category</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thermal Coal</td>
<td>55.35</td>
<td>45.00</td>
<td>45.00</td>
</tr>
<tr>
<td>Coking Coal</td>
<td>70.46</td>
<td>60.00</td>
<td>62.00</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>125.81</td>
<td>105.00</td>
<td>107.00</td>
</tr>
</tbody>
</table>
Thank you

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