Clean Coal Refining Corporation

Direct Coal Hydrogenation

Indiana
The Company

• The Merle Family has been in the Coal industry for 6 generations.

• Clean Coal Refining Corporation was created in 2006 to explore the best options for bringing coal into the 21st century.
The Opportunity and strategy

- We are located in Western Indiana
- The DCH process produces readily marketable fuel (ULSD) and Naphtha.
- Feedstocks are Coal and Hydrogen (from natural gas)
- The production cost is $48 per barrel
- Should coal prices become too high for profitability, facility is readily convertible to work with other feedstocks
4.79 Million Barrels per year
<10 ppm Sulfur in Diesel (ULSD is <15 ppmw)

2.45 Million Barrels per year
Technology and Key Features

- About 4,800 metric tons per day of coal will be converted every day into 21,700 barrels of ultra-clean liquid hydrocarbon products.

- The DCH Project Key Features are:

<table>
<thead>
<tr>
<th>Design Capacity</th>
<th>21,700 Barrels per Standard Day (BPSD).</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output</td>
<td>4.79 Million Barrels of Ultra Low Sulfur Diesel (ULSD) (66%) and 2.45 Million Barrels of Naphtha (34%) per year</td>
</tr>
<tr>
<td>Coal Feed Rate:</td>
<td>1.76 MM tons/year</td>
</tr>
<tr>
<td>Profitability</td>
<td>Competitive with a crude oil refinery as long as crude oil remains above $48/Barrel</td>
</tr>
<tr>
<td>Timing</td>
<td>Begin construction early 2015, first barrel produced: 2018</td>
</tr>
<tr>
<td>Capital Expenditure</td>
<td>$1.415 Billion</td>
</tr>
<tr>
<td>Direct Jobs Created</td>
<td>300</td>
</tr>
</tbody>
</table>
The DCH process itself is Carbon neutral because it does not involve combustion or gasification of Coal.

DCH takes advantage of the Natural Gas revolution since 48% of the feedstock is hydrogen from natural gas.

The coal used has high sulfur content, while the Diesel produced is ULSD.

All byproducts are marketable.
In Memoriam

• James F. McAvoy Direct Carbon Hydrogenation Project
Thank You

- Clean Coal Refining Corporation
  - Gregory Merle
  - G.MERLE@COAL2L.COM
  - 203 979 3993