Our Business

Biomass Feedstock

Conversion to Biofuel

Heating Oil

Fuel Oil

Refinery Coprocessing

20-100 million litre/year RFO production facilities

Renewable Crude For Refineries
A 30+ Year Development Story

- Four Commercial RTP units processing woody biomass in operation today
- 44 years in aggregate commercial operations
- Production exceeding 40 million gallons
Strategic Relationships

Conversion to RFO

RFO Coprocessing

RFO Heating

Institutional Shareholders

Fibria

UOP (A Honeywell Company)

Envergent (A Honeywell Company)

Sprague

CleaverBrooks

PETROBRAS

TRANE

NREL

GLOBAL

Credit Suisse

Impax Asset Management

Chevron Technology Ventures

investecocapital

FPI

FELDA PALM INDUSTRIES
RFO Heating Applications

- Over 25 years of combustion of RFO on an industrial scale
- Approximately 20 million gallons combusted in industrial boilers
- Now demonstrated across a range of applications
  - Large commercial/institutional
  - District Heating
  - Mining (indurating furnace)
RFO Heating Sales & Contracts

- Memorial Hospital, New Hampshire
  - 100% conversion to RFO over last 14 months
  - Generating D-7 RINs
- Valley Regional Hospital, New Hampshire
- Youngstown, Ohio District Heating
- ArcelorMittal, Quebec
- Strategic Alliances with infrastructure/heating oil suppliers
RFO Coprocessing leverages on existing refinery infrastructure

- Lowers total CAPEX & OPEX
- Facilitates implementation

ASTM spec fuels NOT blends
Refinery Coprocessing vs traditional approaches

Crude Oil -> RFO

→ Diesel / Gasoline

Traditional biofuels
Ethanol, biodiesel (Blends)
NREL, Petrobras & Ensyl in a Collaborative R&D Agreement

Refinery Coprocessing

Petrobras processed Ensyl’s RFO & produced 800 gallons of diesel & gasoline

Results presented March 25, 2015 at DOE Bioenergy Technology Office (BETO)

Confirmed Ensyl’s RFO Coprocessing yields
## Coprocessing Yields

<table>
<thead>
<tr>
<th>Weight %</th>
<th>100% VGO</th>
<th>95% VGO + 5% RFO</th>
<th>90% VGO + 10% RFO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dry Gas</td>
<td>3.5</td>
<td>2.8</td>
<td>2.8</td>
</tr>
<tr>
<td>LPG (C3-C4)</td>
<td>13.8</td>
<td>13.8</td>
<td>12.5</td>
</tr>
<tr>
<td>Gasoline (C5-220°C)</td>
<td>39.9</td>
<td>40.6</td>
<td>38.8</td>
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<tr>
<td>Diesel (220-344°C)</td>
<td>20.3</td>
<td>19.6</td>
<td>19.2</td>
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<tr>
<td>Bottoms (+ 344°C)</td>
<td>16.1</td>
<td>14.4</td>
<td>14.4</td>
</tr>
<tr>
<td>Coke</td>
<td>6.4</td>
<td>6.0</td>
<td>6.5</td>
</tr>
<tr>
<td>CO</td>
<td>0.0</td>
<td>1.0</td>
<td>1.7</td>
</tr>
<tr>
<td>CO₂</td>
<td>0.0</td>
<td>0.4</td>
<td>0.6</td>
</tr>
<tr>
<td>Water</td>
<td>0.0</td>
<td>1.4</td>
<td>3.5</td>
</tr>
</tbody>
</table>
Part 79

- Part 79 process taken place over the past 12-18 months
  - Anchored off of the NREL/Petrobras CRADA trials
  - Petrobras shipped 800 gallons of RFO renewable diesel & gasoline to a major oil co in the US for initial testing
  - Final testing carried out at Southwest Research (SwRI) in San Antonio

- Part 79 approval for Ensyn’s renewable diesel granted in August 2015

- Results for renewable gasoline anticipated by year-end
RFO Production Facilities & Projects
Ontario Production Facility

- 3 million gallons/year
- Commissioned in 2006 as chemicals/fuels merchant facility
- Enhanced in 2014 as Ensyn’s anchor fuels facility
- Facility is qualified by the EPA under RFS program
- Sales to qualified users in the US are generating D-7 RINs
Aracruz Project - Brazil

- Partnership with Fibria Celulose S.A., (NYSE: FBR), the world’s largest market pulp producer
- First project in Brazil announced – sited at Fibria’s pulp mill in Aracruz, Espirito Santo
- Permitting and engineering in progress
- Initiation of construction in early 2016
2015+ Production Build-out
Thank You ABLC!