America’s Most Experienced Biodiesel Company

www.biodiesel.com
Think globally, act locally!

Pacific Biodiesel – Maui, Hawaii  USA, 1996
MISSION STATEMENT

To promote a clean, sustainable energy future through the community-based production of renewable fuels
The Sustainable Biofuel Model

- Source feedstock locally
  - Sequester all waste oil and grease
  - Support local agriculture (Food and Fuel)
- Expand processing capacity with increase in local oil supply
- Develop co-products and high value sidestreams
- Develop local training for industry jobs
- Distribute all fuel locally to displace imported petroleum

www.biodiesel.com
The Pacific Biodiesel Ohana
Pacific Biodiesel Technologies

Process Technology
- Multi-feedstock biodiesel process technology
- Process utilities and tank farm equipment
- Feedstock collection and rendering equipment
- Facility retrofits

Laboratory Services
- ASTM fuel testing
- QC Program development
- Process verification and optimization

Research and Development
- Contract R&D projects
- Feedstock development
- Pilot Plant verification
TECHNOLOGY INSTALLATION

12 Biodiesel plants completed

Maui 1996

Japan 1998

Nevada 2005

Virginia 2004

Oahu 2002

Oregon 2005
• SCOPE
  • New 5.5 million gallons per year Biodiesel manufacturing plant
  • New processing technology
  • Multi-feedstock capability
  • Projected start date Spring 2012
FEEDSTOCK:
Experienced trucking companies
Biofuel Crop Demo Project – Oahu*

100 Days from “Soil to Oil”

*included in APEC brochure
# Hawaii’s Biomass Potential

<table>
<thead>
<tr>
<th>Estimated Available Acreage for Biomass Production (Acres)</th>
<th>Maui</th>
<th>Kauai</th>
<th>Oahu</th>
<th>Hawaii</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stillwater/Kinoshita estimates</td>
<td>26,000</td>
<td>7,000</td>
<td>25,500</td>
<td>27,000</td>
<td>85,500</td>
</tr>
<tr>
<td>Land currently used for sugar production</td>
<td>36,700</td>
<td>11,100</td>
<td>0</td>
<td>0</td>
<td>47,800</td>
</tr>
<tr>
<td><strong>Sub-total</strong></td>
<td>62,700</td>
<td>18,100</td>
<td>25,500</td>
<td>27,000</td>
<td>133,300</td>
</tr>
<tr>
<td>Additional available prime farmland</td>
<td>0</td>
<td>35,500</td>
<td>15,300</td>
<td>30,000</td>
<td>80,800</td>
</tr>
<tr>
<td><strong>Sub-total</strong></td>
<td>62,700</td>
<td>53,600</td>
<td>40,800</td>
<td>57,000</td>
<td>214,200</td>
</tr>
<tr>
<td>Existing non-sugar agricultural production</td>
<td>9,300</td>
<td>3,000</td>
<td>17,300</td>
<td>11,800</td>
<td>41,400</td>
</tr>
<tr>
<td><strong>Max potential (exclusive of non-sugar ag land)</strong></td>
<td>53,400</td>
<td>50,600</td>
<td>23,500</td>
<td>45,200</td>
<td>172,800</td>
</tr>
</tbody>
</table>

*2007 Hawaii Energy Strategy Report (Draft), 2/07*
### Table 17.16-- LIQUID FUEL TAX BASE, BY COUNTY: 2007

<table>
<thead>
<tr>
<th>Type of fuel</th>
<th>State total</th>
<th>City and Co. of Honolulu</th>
<th>County of Maui</th>
<th>County of Hawaii</th>
<th>County of Kauai</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>1,018,233</td>
<td>623,765</td>
<td>152,301</td>
<td>153,875</td>
<td>88,292</td>
</tr>
<tr>
<td>Gasoline</td>
<td>480,632</td>
<td>299,311</td>
<td>62,629</td>
<td>82,118</td>
<td>36,575</td>
</tr>
<tr>
<td>Diesel oil, non-hwy.</td>
<td>215,503</td>
<td>163,333</td>
<td>12,560</td>
<td>15,665</td>
<td>23,944</td>
</tr>
<tr>
<td>Diesel oil, hwy. use</td>
<td>66,030</td>
<td>39,091</td>
<td>9,019</td>
<td>13,079</td>
<td>4,841</td>
</tr>
<tr>
<td>Liq. pet. gas, off hwy.</td>
<td>2,106</td>
<td>2,106</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Liq. pet. gas, hwy. use</td>
<td>108</td>
<td>88</td>
<td>7</td>
<td>7</td>
<td>5</td>
</tr>
<tr>
<td>Small boats, gasoline</td>
<td>262</td>
<td>186</td>
<td>-</td>
<td>62</td>
<td>13</td>
</tr>
<tr>
<td>Small boats, diesel oil</td>
<td>626</td>
<td>17</td>
<td>61</td>
<td>373</td>
<td>175</td>
</tr>
<tr>
<td>Aviation fuel</td>
<td>235,653</td>
<td>118,017</td>
<td>67,643</td>
<td>32,722</td>
<td>17,270</td>
</tr>
<tr>
<td>Other fuel</td>
<td>17,314</td>
<td>1,616</td>
<td>382</td>
<td>9,848</td>
<td>5,468</td>
</tr>
</tbody>
</table>

Land required to meet HCEI Goal for on-road diesel fuel

- 66 million total gallons
- 40% renewable fuel / 30% efficiency
- 26 million gallons of renewable diesel
- 86,000 acres needed
- 300,000 tons of presscake generated
Big Island Biodiesel

- 5 million gallons oil
- 50,000 tons meal
- 170 tons/day
- 17,000 acres
Processing Equipment

• Planting
• Harvesting
• Crushing
Feed Value of Presscake Protein

- Soybean Meal 46.4%
- Coconut Meal 7.3%
- Kukui Meal 7.5%
- Jatropha Meal 19.9%
- Sunflower Meal 25.1%
- Safflower Meal 23.9%
Biodiesel By-products

By-product Uses
- Animal feed
- Soap and Oleochemical
- Fertilizer
- Energy
`Aina Mo’ Project - Maui
A SUSTAINABLE FUEL FUTURE

Sustainable source – Energy Security
Environmental impact – Healthy future
Diversified Ag – Crops not Condos
Community-based – Local Business

All Sustainability is Local