Alternative Fuels 101

Georgia Environmental Facilities Authority
U.S. Oil Demand by Region (2002)

Finished Petroleum Product Consumption by U.S. Region, 2002

- East Coast
- Midwest
- Gulf Coast
- Rockies
- West Coast

Thousand Barrels per Day

Daily Barrels per Thous. Pop.

Fuel Use - Non-Fuel Use

Fuel Use per Capita (right scale)
## Estimated Crude and Products Imports to the U.S. from Leading Supplier Countries

<table>
<thead>
<tr>
<th>Countries</th>
<th>August 2006 Imports (Thousand Barrels per day)</th>
<th>% of Total Imports</th>
<th>Domestic Product supplied</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canada</td>
<td>2,335</td>
<td>17.5%</td>
<td>11.0%</td>
</tr>
<tr>
<td>Mexico</td>
<td>1,560</td>
<td>11.7%</td>
<td>7.3%</td>
</tr>
<tr>
<td>Saudi Arabia</td>
<td>1,513</td>
<td>11.3%</td>
<td>7.1%</td>
</tr>
<tr>
<td>Venezuela</td>
<td>1,376</td>
<td>10.3%</td>
<td>6.5%</td>
</tr>
<tr>
<td>Nigeria</td>
<td>1,026</td>
<td>7.7%</td>
<td>4.8%</td>
</tr>
<tr>
<td>Algeria</td>
<td>794</td>
<td>6.0%</td>
<td>3.7%</td>
</tr>
<tr>
<td>Iraq</td>
<td>620</td>
<td>4.6%</td>
<td>2.9%</td>
</tr>
<tr>
<td>Angola</td>
<td>544</td>
<td>4.1%</td>
<td>2.6%</td>
</tr>
<tr>
<td>Russia</td>
<td>485</td>
<td>3.6%</td>
<td>2.3%</td>
</tr>
<tr>
<td>Virgin Islands*</td>
<td>377</td>
<td>2.8%</td>
<td>1.8%</td>
</tr>
<tr>
<td>Other</td>
<td>2,704</td>
<td>20.3%</td>
<td>12.7%</td>
</tr>
<tr>
<td>Total</td>
<td>13,334</td>
<td>100.0%</td>
<td>62.5%</td>
</tr>
</tbody>
</table>

| OPEC Countries     | 5,644                                         | 42.3%              | 26.5%                     |
| Persian Gulf Countries | 2,310                        | 17.3%              | 10.8%                     |

*Supplier of products made from crude oil*

Source: DOE, Petroleum Supply Monthly, October 2006
Estimated Crude and Products Imports to the U.S. from Leading Supplier Countries

Oil Reserves, Jan. 1, 2005

Source: Oil & Gas Journal, 1/1/2005
Georgia Fuel Usage Per Year

By the Gallon:

• Diesel - 1.7 billion
• Gasoline - 4.9 billion
What has Georgia accomplished?

- The State fleet has over 750 alternatively fueled vehicles
- Some State fueling stations have CNG & propane dispensers
- Biodiesel is available and is being used
- Legislation has been passed to reduce sales taxes on ethanol and biodiesel companies
- We are incubating companies that are working on alternative fuel technologies
- The State Energy Office has completed a comprehensive state energy plan
- Many well attended meetings, conferences, seminars, etc
- We have educated the legislature and have developed a curriculum for school children
- The state has awarded grants that have moved the industry forward
- Our colleges have gained global recognition for their researching efforts
Georgia One Stop Shop

- Department of Revenue
- Department of Community Affairs
- Georgia Forestry Commission
- University of Georgia
- U.S. Department of Agriculture
- State Fire Marshall’s Office
- Georgia Department of Agriculture
- Department of Economic Development
- Georgia Environmental Facilities Authority
- Governor’s Agriculture Liaison
- Governor’s Office
- Georgia EPD Small Business Environmental Assistance Program
- Georgia EPD Air Protection Branch
- Herty Advanced Materials Development Center
- Georgia Tech
- Georgia Railroad Association
- UGA Small Business Development Center
- Agriculture Innovation Center
- EPA
Monthly Meetings

Each company has a minimum of one hour to present plans

Questions & Answers

Contact information provided concerning all participants
Biofuels are emerging as a more viable alternative to gasoline. This is the future of energy.

Companies like Range Fuels, Bulldog Biodiesel, First United Ethanol and Alterra have pledged a total of over $460 million to process an astounding 215 million gallons of biofuel every year in Georgia.
Georgia’s oldest and largest industry is agriculture. It employs one out of every six Georgians and is valued at about $50 billion a year.
What does Georgia have to offer an alternative fuels producer?
Feedstocks

- Wood
- Soybean Oil
- Canola Oil
- Cottonseed Oil
- Chicken Fat
- Corn
- Grasses
- Landfill Waste
- Switchgrass
- Hay
- Plants
- Sugar Cane
- Sugar Beets
- Sweet Potatoes
GEORGIA CLEAN CITIES COALITION

MAP OF PUBLIC B20 AND E85 STATIONS IN GEORGIA

Please note that additional stations will be opening in 2007 and we are currently working on an interactive map that will show locations throughout the State of Georgia Ethanol and Biodiesel Production Map will be distributed soon.

Please distribute map to federal, state, and local fleets. Support this growing initiative in Georgia!

For more information on converting your station/fleet and membership opportunities contact Charise Stephens at (478) 803-2506 or Charise.Stephens@mason.gsa.gov or Phil Clark (478) 751-4160. Special thanks to the Middle Georgia Clean Cities Coalition, Southeast Clean Cities Coordinators, Georgia Environmental Facilities Authority (State Energy Office) and our many state, regional and national partners for their support!

The mission of the Clean Cities Program is to advance the nation’s economic, environmental, and energy security by supporting local decisions to adopt practices that contribute to the reduction of petroleum consumption. Clean Cities carries out this mission through a network of more than 90 volunteer coalitions, which develop public/private partnerships to promote alternative fuels and vehicles, fuel blends, fuel economy and commuter strategies, hybrid vehicles, idle reduction and other clean air strategies. We are your one-stop shop for program deployment!
Current Biodiesel Factories

- US Biofuels, Rome Georgia, is designed to produce more than 10 million gallons of biodiesel per year.

- Soymet, Rome Georgia, is designed to produce 2 million gallons of Biodiesel per year.

- Middle Georgia Biofuels, Dublin Georgia, is designed to produce 2 million gallons of Biodiesel per year.

- Sunshine Biofuels, Camilla Georgia, is designed to produce 4 million gallons of Biodiesel per year.
• Bulldog Biodiesel, Ellenwood Georgia, is being designed to produce 10 million gallons of Biodiesel per year.

• Inland Oil, Bainbridge Georgia, is being designed to produce over 10 million gallons of Biodiesel per year.

• Dec 2007 – Alterra Biofuels, Plains Georgia, is being designed to produce 25 million gallons or more of Biodiesel per year.

• Sept 2007 - Alterra Biofuels, Gordon Georgia, is being designed to produce 10 million gallons or more of Biodiesel gallons per year.
Windgap Farms, Baconton Georgia, produces around 500,000 gallons of Ethanol from waste yeast per year.
US Ethanol, Cordele Georgia, will be capable of producing 4 – 10 million gallons of Ethanol per year.
First United Ethanol, Camilla Georgia, will produce 100 million gallons of Corn Ethanol per year.
Range Fuels, Soperton Georgia, will produce 20 – 100 million gallons of Cellulosic Ethanol per year.
Georgia’s Ethanol Future

• By 2010 we could be producing 400 million gallons per year

• More positive ethanol legislation is very likely

• Tree farmers will be selling trees to produce fuel
Georgia’s Biodiesel Future

• By 2010 we could be producing 100 million gallons per year

• More positive biodiesel legislation is very likely

• Farmers will be growing new oil crops

• Poultry producers will find new ways to generate more fat during the processing of chickens
F. W. THORLA,
MANUFACTURER OF
PURE RYE WHISKY & GIN,
RENROCK,
NOBLE COUNTY, OHIO.