I-75 Green Corridor Project – Helping America Diversify its Fuels

Charise Stephens & Jonathan Overly – Clean Cities Coordinators
DTF Congressional Briefing Series – 5/13/11
U.S. DOE Clean Cities - 100 Coalitions

Clean Cities
U.S. Department of Energy
I-75 Project – Overview

• Funded through 2009 U.S. DOE “Clean Cities” Program
• $1.8M project; $800k+ in federal funding
• **Purpose** – Establish I-75 as the nation’s longest biofuels corridor by adding enough E85 and B20 pumps to allow travel from Sault Ste. Marie, MI to Miami, FL on those fuels
• **Gist** – Fill-in gaps first, then add urban & high-FFV locations
• **Plan** – Add 25 B20 and E85 pumps at current C-stores, or truck stops *(we are adding pumps)*
• **Recipient** – Univ. of TN at Knoxville
• **Project PI** – Jonathan Overly, ETCleanFuels

### Originally Planned Pump Additions

<table>
<thead>
<tr>
<th>State</th>
<th>Miles of I-75</th>
<th>B20</th>
<th>E85</th>
</tr>
</thead>
<tbody>
<tr>
<td>MI</td>
<td>396</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>OH</td>
<td>211</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>KY</td>
<td>192</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>TN</td>
<td>162</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>GA</td>
<td>355</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>FL</td>
<td>471</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
Clean Cities coalition “Corridor Leaders” for the project
I-75 Project – Overview (cont’d)

• 4 stations completed: Lexington, Atlanta, Gainesville, Miami
• 10 NEPAs submitted; stations somewhere in the process of getting paperwork finished/completed to site work
• Not yet half way there; biodiesel tax credit lapse set us back considerably
• Possibility of adding 1-2 truck stops that will offer B20, working to build out class-8 truck refueling for that biofuel

Major Partners
Corridor State Energy Offices
Who is ETCleanFuels?

- Designated member of U.S. DOE “Clean Cities” Program
- 8-yr old nonprofit in East TN
- Focused on transportation sector change - diversify away from petroleum alone and use less!
- Direct fleet & fuel supplier assistance; various size projects; regional meetings & workshops; presentations to the comm./industrial/ gov’t sectors and to schools; media
- GRANTS – Writing, and building submission partnerships
Biodiesel Basics

- Nationwide = 600+ B20 stations; likely more than that in separate pumps that offer other blends, B5-B100

- Cleaner burning; reduces almost all emissions
- Can help extend life of a diesel engine; reduced maintenance
- Puts $$$ back in U.S. versus Iraq, Saudi Arabia, Venezuela...
- Renewable, and helps farming sector
- Nontoxic and biodegradable; 10x < toxic than table salt!
- Higher cetane number that petro-diesel (^40’s to 70’s)
- Reduces black smoke, smell, noise
Biodiesel Emissions Reductions  
(from NREL 2001)

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>B20</th>
<th>B100</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon dioxide (CO2) <em>life-cycle</em></td>
<td>-15%</td>
<td>-75%</td>
</tr>
<tr>
<td>Carbon monoxide (CO)</td>
<td>-13%</td>
<td>-43%</td>
</tr>
<tr>
<td>Hydrocarbons (VOCs)</td>
<td>-11%</td>
<td>-56%</td>
</tr>
<tr>
<td>Nitrogen oxides (NOx)</td>
<td>+1-2%*</td>
<td>+6%</td>
</tr>
<tr>
<td>Sulfur dioxide (SO2)</td>
<td>-19-20%</td>
<td>-99%</td>
</tr>
<tr>
<td>Particulate matter (PM)</td>
<td>-12-18%**</td>
<td>-55%</td>
</tr>
<tr>
<td>Carcinogenic compounds</td>
<td>-20%</td>
<td>-80-90%</td>
</tr>
<tr>
<td>Air toxics</td>
<td>-12-20%</td>
<td>-60-90%</td>
</tr>
</tbody>
</table>

* With a low-NOx additive, can be a 5-40% reduction. Additionally, studies show reductions in NOx in new engines w/o additives.  
** Over 90% of diesel PM is PM-2.5 or smaller, with about 70% being 1 micron or smaller in size.
Project Goals – Biofuels

- Raise awareness and use of the alternative fuels ethanol as E85 and biodiesel as B20
- Expand access to these American fuels
- Assist in building out corridor development along major U.S. interstates
- Assist in incentivizing biofuels production
- Through driving demand, create American jobs
- Supporting RFS II (Renewable Fuels Standard) – important!
Currently has major project information, including project & state Corridor Leader contacts

Printable, 2-page PDF summary is there

This summer, will add Google I-75 map that will

- highlight the locations added via the project,
- show all the biofuel refueling locations along the route, &
- ultimately show other alt-fuel refueling locations, too

(all sites will have station info at quick access)
I-75 Green Corridor Project

Project manager - Jonathan Overly, ETCleanFuels
- 865-974-3625; jgoverly@utk.edu

“Do not follow where the path may lead. Go, instead, where there is no path and leave a trail.”
- Ralph Waldo Emerson

Questions?