Biodiesel and the Advanced Biofuel Market

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Objectives

› Context – The goal that we collectively share
› Biodiesel defined
› How did we get here?
› Impact of biodiesel to economy and consumers
› Next steps
Diversification = Energy Affordability

Source: Energy Information Administration Data Compiled by Edison Electric Institute
Biodiesel = Feedstock Diversity

- Recycled Cooking Oil
- Animal Fats
- Soybean Oil
- Inedible Corn Oil
- Algae
- Canola Oil
Biodiesel Reduces Pollutants including Greenhouse Gas Emissions by 57-86%
Biodiesel = Nationwide Production
Biodiesel = American Jobs

<table>
<thead>
<tr>
<th>Year</th>
<th>Employment (Jobs)</th>
<th>Income (Mil 2009$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>21,284</td>
<td></td>
</tr>
<tr>
<td>2010</td>
<td>12,407</td>
<td></td>
</tr>
<tr>
<td>2011</td>
<td>31,227</td>
<td></td>
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<tr>
<td>2012</td>
<td>39,027</td>
<td></td>
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<tr>
<td>2013</td>
<td>50,725</td>
<td></td>
</tr>
<tr>
<td>2014</td>
<td>62,421</td>
<td></td>
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<tr>
<td>2015</td>
<td>74,118</td>
<td></td>
</tr>
</tbody>
</table>

Note: Employment and income data are for the years 2009 to 2015.
Manufacturers Support Biodiesel
Biodiesel Users

- BIOHEAT
- Disney
- UPS
- United States Marine Corps
- National Park Service
- NASA
- CLIF Bar & Company
- United States Postal Service
- Cranmore Mountain Resort
- Method
Biodiesel = RFS Success Story

2012 Advanced Volume Requirement

- Biodiesel: 87%
- Other: 13%

› Filling most of Advanced Bucket
Policy Support

› RFS: Establishes annual volume requirements
   › Minimum of 1 billion gallons per year for Biomass-based Diesel
   › Annual volume increases based on feedstock supply, industry capacity, economics, etc.

› Biodiesel Tax Incentive
   › $1 per gallon blending credit
   › Also applies to renewable diesel and biojet
US Biodiesel Production

Billion Gallons

2005 2006 2007 2008 2009 2010 2011 2012 2013

2005
2006
2007
2008
2009
2010
2011
2012
2013
Takeaways

› Fuel diversity is critical to energy affordability
› Federal policy & regulatory support remains important
› Manufacturing partnerships are key
› Biodiesel is uniquely positioned
  ▪ Feedstock diversity is an advantage
  ▪ Nationwide constituency of producers / employers