BIOMASS POLICY FOR LIQUID FUELS UPDATE

Scott Fenwick
Technical Director
National Biodiesel Board
July 21, 2016
Regardless of who wins the election, what single issue or challenge are you most interested in having the next president address when he or she takes office next January? [OPEN-ENDED]

<table>
<thead>
<tr>
<th>Issue</th>
<th>Mentioning</th>
</tr>
</thead>
<tbody>
<tr>
<td>The economy</td>
<td>19%</td>
</tr>
<tr>
<td>Immigration</td>
<td>14%</td>
</tr>
<tr>
<td>Healthcare/Healthcare costs/Healthcare reform</td>
<td>10%</td>
</tr>
<tr>
<td>Defense/National Defense/Homeland security</td>
<td>9%</td>
</tr>
<tr>
<td>Education</td>
<td>8%</td>
</tr>
<tr>
<td>The federal deficit/The budget</td>
<td>7%</td>
</tr>
<tr>
<td>Wages/Earning a decent wage/Decline of middle class</td>
<td>6%</td>
</tr>
<tr>
<td>Jobs/Unemployment</td>
<td>6%</td>
</tr>
<tr>
<td>Terrorism</td>
<td>5%</td>
</tr>
</tbody>
</table>

May 18-22, 2016

Gallup
RENEWABLE FUEL STANDARD
NATIONAL BIODIESEL BOARD 2016
Renewable Fuel Standard (RFS)

- Congress created the Renewable Fuel Standard (RFS) in an effort to reduce greenhouse gas emissions and expand the nation’s renewable fuels sector while reducing reliance on imported oil.
RFS FUEL CATEGORIES

- Advanced Biofuel
- Biomass-based Diesel
- Cellulosic Biofuel
- Renewable Fuel
RFS FUEL CATEGORIES/VOLUMES

NBB’s Focus Under RFS:

- Biomass-based Diesel category
- Overall Advanced category

<table>
<thead>
<tr>
<th>Year</th>
<th>Cellulosic Biofuel</th>
<th>Biomass-Based Diesel</th>
<th>Advanced Biofuel</th>
<th>Total Renewable Fuel</th>
<th>&quot;Conventional&quot; Biofuel</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>NA</td>
<td>0.5</td>
<td>0.6</td>
<td>11.1</td>
<td>10.5</td>
</tr>
<tr>
<td>2010</td>
<td>0.1</td>
<td>0.65</td>
<td>0.95</td>
<td>12.95</td>
<td>12.0</td>
</tr>
<tr>
<td>2011</td>
<td>0.25</td>
<td>0.8</td>
<td>1.35</td>
<td>13.95</td>
<td>12.6</td>
</tr>
<tr>
<td>2012</td>
<td>0.5</td>
<td>1.0</td>
<td>2.0</td>
<td>15.2</td>
<td>13.2</td>
</tr>
<tr>
<td>2013</td>
<td>1.0</td>
<td>*</td>
<td>2.75</td>
<td>16.55</td>
<td>13.8</td>
</tr>
<tr>
<td>2014</td>
<td>1.75</td>
<td>*</td>
<td>3.75</td>
<td>18.15</td>
<td>14.4</td>
</tr>
<tr>
<td>2015</td>
<td>3.0</td>
<td>*</td>
<td>5.5</td>
<td>20.5</td>
<td>15.0</td>
</tr>
<tr>
<td>2016</td>
<td>4.25</td>
<td>*</td>
<td>7.25</td>
<td>22.25</td>
<td>15.0</td>
</tr>
<tr>
<td>2017</td>
<td>5.5</td>
<td>*</td>
<td>9.0</td>
<td>24.0</td>
<td>15.0</td>
</tr>
<tr>
<td>2018</td>
<td>7.0</td>
<td>*</td>
<td>11.0</td>
<td>26.0</td>
<td>15.0</td>
</tr>
<tr>
<td>2019</td>
<td>8.5</td>
<td>*</td>
<td>13.0</td>
<td>28.0</td>
<td>15.0</td>
</tr>
<tr>
<td>2020</td>
<td>10.5</td>
<td>*</td>
<td>15.0</td>
<td>30.0</td>
<td>15.0</td>
</tr>
<tr>
<td>2021</td>
<td>13.5</td>
<td>*</td>
<td>18.0</td>
<td>33.0</td>
<td>15.0</td>
</tr>
<tr>
<td>2022</td>
<td>16.0</td>
<td>*</td>
<td>21.0</td>
<td>36.0</td>
<td>15.0</td>
</tr>
</tbody>
</table>

*Statute sets 1 billion gallons minimum, but EPA may raise requirement

Note: There is no statutory volume requirement for “conventional” biofuel. The conventional volumes in the table are calculated (total - advanced) and are certain biofuels that do not qualify as advanced.

Source: US EPA; www.epa.gov/renewable-fuel-standard-program/
U.S. Biodiesel and Renewable Diesel Market
(millions of gallons)
Source: EPA EMTS

Domestic Consumption in 2016

*EPA estimated volume
**Proposed
## VOLUMES FOR RFS (IN GALLONS)

<table>
<thead>
<tr>
<th></th>
<th>2015</th>
<th>2016</th>
<th>2017*</th>
<th>2018*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cellulosic Biofuel</td>
<td>123M</td>
<td>230M</td>
<td>312M</td>
<td>N/A</td>
</tr>
<tr>
<td>Biomass-based Diesel</td>
<td>1.73B</td>
<td>1.9B</td>
<td>2.0B</td>
<td>2.1B</td>
</tr>
<tr>
<td>Advanced Biofuel</td>
<td>2.88B</td>
<td>3.61B</td>
<td>4.0B</td>
<td>N/A</td>
</tr>
<tr>
<td>Conventional Ethanol</td>
<td>14.05B</td>
<td>14.5B</td>
<td>14.8B</td>
<td>N/A</td>
</tr>
<tr>
<td>Total Renewable Fuel</td>
<td>16.93B</td>
<td>18.11B</td>
<td>18.8B</td>
<td>N/A</td>
</tr>
</tbody>
</table>

*Includes proposed volumes. EPA released its proposals for the 2018 Biomass-based Diesel volume and 2017 standards May 18, 2016.
### 2016 VOLUMES

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Biodiesel &amp;</td>
<td>141</td>
<td>144</td>
<td>183</td>
<td>215</td>
<td>233</td>
<td>916</td>
<td></td>
</tr>
<tr>
<td>Renewable Diesel</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Domestic Product</td>
<td>96</td>
<td>106</td>
<td>142</td>
<td>145</td>
<td>153</td>
<td>642</td>
<td>70%</td>
</tr>
<tr>
<td>Imported Product</td>
<td>45</td>
<td>38</td>
<td>40</td>
<td>70</td>
<td>80</td>
<td>273</td>
<td>30%</td>
</tr>
</tbody>
</table>
Goals:

- 2017 Advanced volume of 4.75 billion RIN gallons
- 2018 Biomass-based diesel of at least 2.5 billion gallons

2016 Production - Industry Growth

- According to the EPA’s 2014-2016 Final Rule –EPA is projecting the supply of biodiesel and renewable diesel use to be as much as 2.5 billion gallons in 2016.
- Under the new proposed rule EPA is projecting the supply of biodiesel and renewable diesel to be as much as 2.7 billion gallons in 2017.
- Proves that RFS and tax incentive are working to stimulate production
MAKING THE CASE FOR HIGHER VOLUMES …

- Ongoing efforts to inform and educate EPA on the ability of the market to supply biodiesel and renewable diesel.

- Update Feedstock Analysis by LMC International

- Update Economic Impact Methodology – WAEES
  - Alan Weber / John Kruse

- Update Information on Distribution, Infrastructure and Use

- EPA Hearing June 9 in Kansas City, Kansas
July 11 – RFS Comment Period Closes
- NBB Submitted Comments to EPA on RFS Proposal
  - NBB advocating for at least 2.5 billion gallons for Biomass-based Diesel in 2018.
  - NBB advocating for at least 4.75 billion gallons for Advanced Biofuels in 2017.

November 30 – EPA Intends to Publish Final RFS Rule
RENEWABLE FUEL STANDARD

- Under statute, Renewable Fuel Standards to be finalized by November 30

- RVO Working Group
  - NBB advocating for at least 2.5 billion gallons for Biomass-based Diesel in 2018
  - NBB advocating for at least 4.75 billion gallons for Advanced Biofuels in 2017
RFS Overview

» RFS Supporters Have Been Successful
  • RFS Amendments have Not been Considered in the House or Senate
  • No RFS Amendments are Included in the Pending Energy Bill

» Courts
  • Lawsuits Create Hesitancy in Congress and in Marketplace

» Coalitions Advocating RFS Reform
  • Continue to Advocate for Reform and/ or Repeal Legislation
  • API and AFPM are Frustrated with the Lack of Congressional Action

» Congress
  • Allies are Growing Wearing of Defending the RFS
  • House RFS Supporters are Discussing RFS Reform
RFS ADVOCACY

- Meeting with Administration and Congress, including White House, EPA, USDA, DOE, State Department and others

- Testifying before House Energy and Commerce Committee hearing on RFS implementation
Two dozen supporters, including NBB staff, biodiesel producers and experts testified at EPA hearing in Kansas City promoting additional biodiesel growth.

- Working on full NBB comments addressing all aspects of EPA proposal.
- Coordinating supportive comments — less than 1,000 so far.
Congressional Opponents to the RFS are Determined

- House and Senate Committee Hearings Finished for 2016
- Amendments Will Continue to be Championed by RFS Opponents
  - EPA Appropriations
  - Pending Energy Bill
- Anticipate Opponents of RFS to Make a Late Year Effort to Freeze RFS at Current Levels

Keys to Successful Defense of RFS

- Maintain United Biofuel Industry
- Focus on 2016 Senate Elections to Retain and Cultivate New Allies
- Sharpen Industry Message
  - Job Economy
  - GHG Reduction
NBB is working aggressively to secure media coverage on biodiesel’s benefits:

- Earned media from events such as Kansas City EPA hearing, House Energy & Commerce Committee hearing, today’s fly-in, jobs study
- Op-eds and letters
- Broadcast and radio interviews, including E&E’s OnPointTV
- Promotional advertising campaign
NBB Calls for Increased Biodiesel RVOs in RFS Hearing Testimony

NBB letter writing campaign encourages people to support biodiesel in RFS

NBB to Congress: Biodiesel is advanced biofuel success story

RFS Standards Beyond 2017--Biodiesel or Bust?
We have until July 11 to generate a strong showing of comments to EPA to win a stronger final rule – will need everyone to participate!
In the House, Reps. Noem (R-SD) and Pascrell (D-NJ) have introduced HR 5240, which would extend the biodiesel tax incentive from 2017-2019 AND reform it to a producer’s credit.

In the Senate, Sens. Grassley (R-Iowa) and Cantwell (D-Wash.) are advancing the same bill in the Senate.

We need a strong showing of cosponsors on both bills to show Congressional leadership that this is a bill that warrants action this year.

Make the direct ask to your lawmakers to support this bill by signing on as a cosponsor.
H. R. 5240

To amend the Internal Revenue Code of 1986 to modify the incentives for biodiesel.

IN THE HOUSE OF REPRESENTATIVES

MAY 13, 2016

Mrs. Noem (for herself, Mr. Pascrell, Mr. Peterson, Mr. Loebsack, Mr. Smith of Nebraska, Mr. Blum, and Mr. Smith of Missouri) introduced the following bill; which was referred to the Committee on Ways and Means

Bill Co-Sponsors

Rep. Collin Peterson [D-MN]
Rep. David Loebsack [D-IA]
Rep. Adrian Smith [R-NE]
Rep. Rod Blum [R-IA]
Rep. Jason Smith [R-MO]
Rep. Mark Takai [D-HI]
Rep. Sanford Bishop [D-GA]
Rep. Ann Kuster [D-NH]
Rep. Steve King [R-IA]
Rep. David Young [R-IA]
Rep. Brett Guthrie [R-KY]
State and Local Policy Update

July 21, 2016
NY, OR, IA, PA, RI.

1 Billion Gallons!
State Legislative Update

• **Missouri:**
  – $9.9 million for producer incentive fund.

• **New Hampshire:**
  – Biodiesel included in state RPS program.

• **New York State:**
  – Bioheat® consumer tax credit extended to December 31, 2020.
Councilman Costa Constantinides joins environmental groups in calling for more sustainable heating.

By Bill Farley
State Legislative Update

• Iowa:
  – Production incentive extended to January 1, 2025 (2 cpg).
  – Consumption incentive extended to January 1, 2025.
    • Reformulated to 3.5 cpg on B5 and 5.5 cpg on B11.
State Legislative Update

• Defeated attempts to terminate statewide requirements.
  – Oregon.
  – New Mexico.
What to Watch (short-term)

• New York City
  – B20 citywide Bioheat® requirement.
• New York State
  – B5 statewide Bioheat® requirement.
• California
  – Verification & Enforcement regulation.
  – Sustainability regulation.
  – NOx additive certification.
What to Watch (longer term)

- **Illinois**

- **Minnesota**
  - Requirement increases to B20 May 1, 2018.
  - Lawsuit.
California

- **Alternative Diesel Fuel Regulation (ADF)**
  - Restricts biodiesel to:
    - B5 in high ozone season (summer);
    - B10 in low ozone season (winter);
    - Animal fat biodiesel can be B10 year-round.
  - Regulation sunsets in 2023.
  - Pathway included for additive certification, which would allow sales of blends up to B20.
Carbon Intensity Values

Biodiesel CI Values
- UCO: 19.87
- Corn Oil: 28.68
- Tallow: 32.83
- Canola: 50.23
- Soy: 51.83

Competitor CI Values
- Cane Ethanol: 48.06
- CNG: 79.46
- Corn Ethanol: 80.09
- ULSD: 102.76
LCFS Credit Prices


$.78 to $1.10 premium for biodiesel.

Source: Progressive Fuels Ltd.
2015 LCFS Credit Generation

Ethanol: 38%
Biodiesel: 22%
Renewable Diesel: 18%
CNG: 9%
Electric: 6%
Misc.: 7%
## California LCFS
### Implementation Schedule

<table>
<thead>
<tr>
<th>Year</th>
<th>Implementation Schedule</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>1.0%</td>
</tr>
<tr>
<td>2016</td>
<td>2.0%</td>
</tr>
<tr>
<td>2017</td>
<td>3.5%</td>
</tr>
<tr>
<td>2018</td>
<td>5.0%</td>
</tr>
<tr>
<td>2019</td>
<td>7.5%</td>
</tr>
<tr>
<td>2020</td>
<td>10.0%</td>
</tr>
</tbody>
</table>
Thank you!

Shelby Neal
Director of State Governmental Affairs
National Biodiesel Board
sneal@biodiesel.org
@ShelbyBiodiesel on Twitter