

Federal Biofuel Policy: Energy and Farm Bills

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EESI: *Advancing Innovative Solutions!*



- Dedicated to promoting sustainable societies through innovative policies on energy, climate, transportation, agriculture, buildings, and smart growth
- A non-profit organization founded in 1984, by a bipartisan Congressional Caucus
- Provides timely information regarding science, policy, and technologies
- Conducts ~20 Congressional briefings a year
- Builds coalitions and networks
- Publishes 3 electronic newsletters
 - *BCO – Bioenergy, Climate Protection & Oil Reduction*
 - *Climate Change News*
 - *Clean Motion*
- EESI Associates Program allows companies and individuals to participate

Broad Biomass Policy Objectives



- Climate Change
- Environmental Stewardship
- National Energy and Security
- Public Health
- International Competitiveness
- Economic Development through Local Ownership
- Diversify and Sustainably Grow the Domestic Agriculture Portfolio while Decreasing Dependence on Export Markets



Overview

- Energy Independence and Security Act of 2007 (P.L. 110-140)
 - Renewable Fuel Standard
 - Ethanol Specific Provisions
- Food, Conservation, and Energy Act of 2008
 - Overview
 - Energy Title Summary

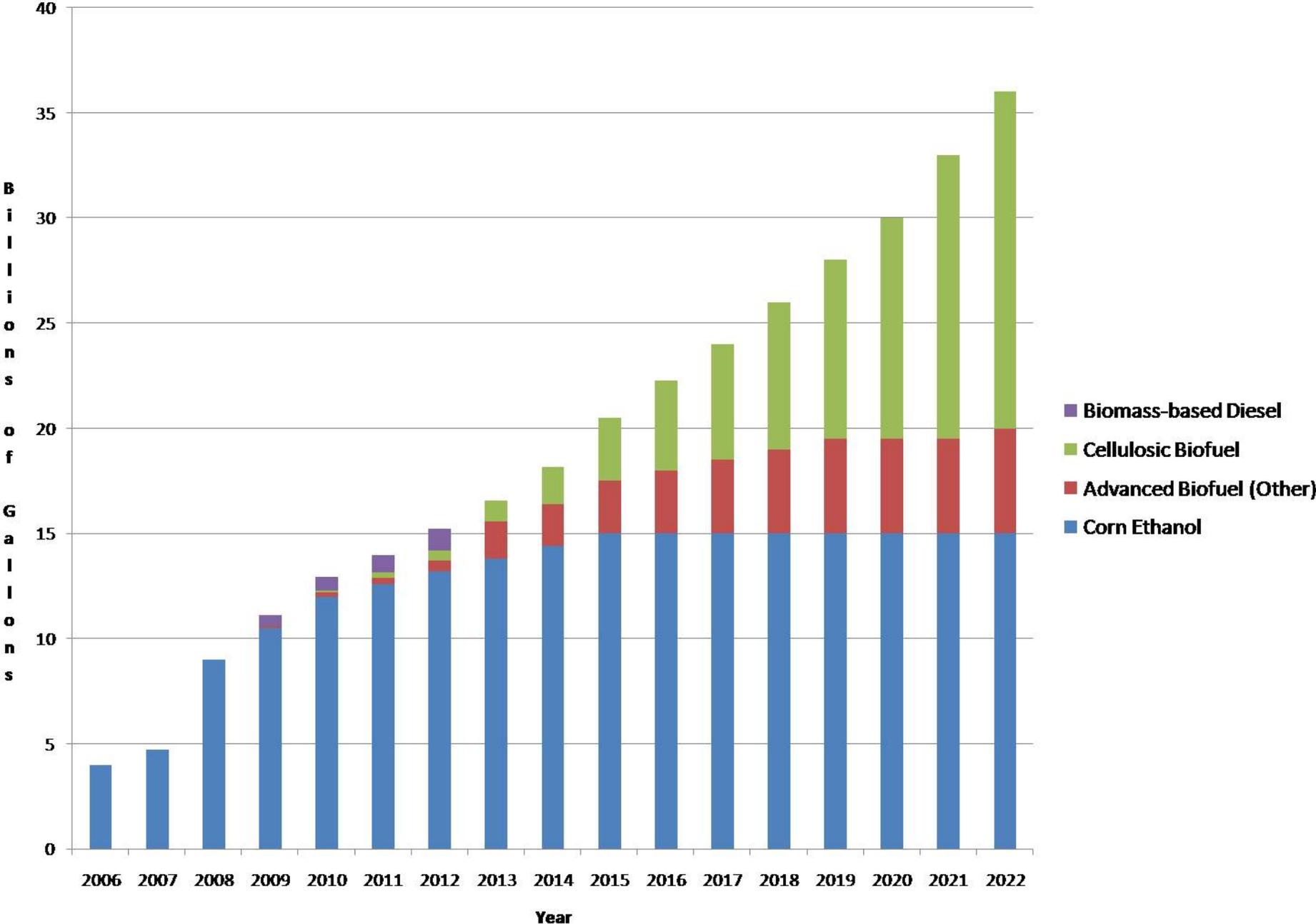
Renewable Fuel Standard (RFS)

New target of 36 billion gallons by 2022 (9 billion in 2008)

- Up to 15 billion gallons of conventional biofuel (ethanol from corn starch) – Lifecycle GHG emissions from new fuel production must be 20% less than 2005 baseline
- 21 billion gallons from advanced biofuels: 50% less GHG than baseline
 - Biomass-based diesel
 - 50% less GHG than baseline
 - Cellulosic biofuel
 - 60% less GHG than baseline



Federal Renewable Fuel Mandate by Fuel Type and Year (2006-2022)





RFS: Lifecycle Greenhouse Gas Emissions

- Aggregate quantity of greenhouse gas emissions related to the full fuel lifecycle, including:
 - All stages of fuel and feedstock production and distribution
 - Feedstock generation or extraction through the distribution
 - Delivery and use of the finished fuel to the ultimate consumer
- **Including direct emissions and significant indirect emissions such as significant emissions from land use changes.**



RFS: Modification of Greenhouse Gas Reduction Percentages

- Adjustment may be made to reduce the required percentage of GHG by not more than 10 percent for each fuel
 - (E.g. from 20 to 10, from 50 to 40 and from 60 to 50 percent)
- Reductions may be made for each category based on commercial feasible fuels made using a variety of feedstocks, technologies, and processes to meet the applicable reduction



RFS: Waivers to Reduce the Volumes of Renewable Fuel

- Volumes of cellulosic biofuel or biomass-based diesel may be reduced by EPA given certain circumstances
 - **Cellulosic biofuel** may be reduced if the projected volume of cellulosic biofuel production is less than the minimum applicable volume
 - **Biomass-based diesel** may be reduced if it is determined that there is “significant renewable feedstock disruption or other market circumstances that would make the price of biomass-based diesel fuel increase significantly”
 - **Renewable fuel and Advanced biofuels** may also be reduced to adjust for any reductions that were made above



RFS: Other Sustainability Provisions

- Study of Impact of Renewable Fuel Standard
 - Industry oriented: feed grains, livestock, food etc.
- Environmental and Resource Conservation
 - Future impacts of the requirement, dealing with: environment, resource conservation, and invasives
 - May not supersede Clean Air Act
- Anti-Backsliding Language
 - Study on the impact of renewable fuels on air quality



RFS: Land Safeguards?

Definition of 'renewable biomass'

- Feedstocks may be used only from “land cleared or cultivated at any time prior to the enactment of this sentence”
- Excluded from definition
 - Slash and precommercial thinnings from Federal lands
 - Naturally grown trees on private land

But no sustainability requirement for private forests!



Ethanol Production Incentives (?)

- Is it just ethanol?
 - Fuel diversification is critical
 - Biodiesel, biobutanol, renewable diesel, green diesel etc.
- Is it just biofuel (liquid transportation fuel)?
 - Integrated biorefinery development
 - Biofuel
 - Bioenergy
 - Biobased Products
- Is policy headed in a new direction?
 - Climate change



Biomass Related Provisions

- Biomass-based diesel (or biodiesel) Labeling (Sec.205)
 - Less than 5% blend needs NO label
 - Greater than 5% must be labeled
- Credits for Renewable Electricity in Electric Vehicles (Sec.206)
 - Report on feasibility of issuing credits under the RFS
- Grants for Production of Advanced Biofuels that reduce GHG by more than 80% (Sec.207) - \$500 M over FY08-15
- Grants for Biofuel Production R&D for Certain States (Sec.223) - \$75 M over FY08-10
 - Only for states with low rates of ethanol or cellulosic ethanol production



Biomass Related Provisions (cont.)

- Biorefinery Energy Efficiency: 2 new DOE R&D programs (Sec. 224)
 - Increase energy efficiency and reduce energy consumption in biorefineries
 - Retrofit technologies for the development of Ethanol from Cellulosic materials, only for corn-based ethanol facilities
- Study of the Optimization of Flexible Fueled Vehicles to Use E85 (Sec.225)
- Biofuels & Biorefinery Information Center (Sec.229)
- Cellulosic Ethanol and Biofuel Research (Sec.230) for 10 institutions



Biomass Related Provisions (cont.)

- Environmental Research and Development (New goals for DOE Systems Biology Program) (Sec.232)
 - Cellulosic and other feedstocks that are less resource and land intensive and that promote sustainable use of resources, including soil, water, energy, forests, and land, and ensure protection of air, water, and soil quality
 - Sustainable production systems that reduce greenhouse gas emissions
- Biomass Research and Development Initiative (to include in technical areas) (Sec.232)
 - Analytical tools to facilitate the analysis of life-cycle energy and greenhouse gas emissions, including emissions related to direct and indirect land use changes
 - Systematic evaluation of the impact of expanded biofuel production on the environment, including forest lands, and on the food supply for humans and animals



Biomass Related Provisions (cont.)

- Establishes 7 Bioenergy Research Centers (Sec.233)
- Prohibition on Franchise Agreement Restrictions Related to Renewable Fuel Infrastructure (Sec.241)
- Ethanol Pipeline Feasibility Study (Sec.243)
- Renewable Fuel Infrastructure Grant (Sec.244)
 - Infrastructure Development Grants to retailers and others for storage and dispensing equipment
 - Competitive grant pilot program for up to 10 state and local authorities to create Refueling Infrastructure Corridors
 - \$200 M per FY08-14



RFS – A Step Forward, But More is Needed

- From feedstock production to end-use consumption, infrastructure is needed to make renewable fuels work
- There are authorizations for a number of R&D programs and studies – but much more is needed
- Regional/state-by-state biomass assessments not addressed
- RFS mandates fuel production, but EISA does not provide adequately for fuel infrastructure and vehicles

Biomass can be a part of the Clean Energy and Climate Solution

- **There is No Silver Bullet**
- New Policies
- New Technologies
- New Feedstocks (including wastes)
- Conservation & Efficiency Efforts
- Decreased Petroleum for Transportation Needs
 - Flex-Fuel Vehicles/Plug-In Hybrids
 - Biobased products and renewable energy can reduce fossil energy use/ greenhouse emissions





2008 Farm Bill

Food, Conservation, and Energy Act of 2008

- Farm bill agreement, passage, veto, and override, but still no farm bill...
 - **Clerical Error:** one of the titles was missing from the bill the President vetoed
 - Congress will wait until after the recess and pass a new bill that is exactly the same with a new number (H.R. 6124) and the President will veto the bill again



2008 Farm Bill

Food, Conservation, and Energy Act of 2008

- \$289 billion bill (over 5 years)
 - Provides funds for commodity, rural development, nutrition (close to 2/3 of the bill), conservation, and energy programs
- \$1 billion in funds for Energy Title
 - Renewable energy
 - Feedstock production
 - Biomass research and Development



Food, Conservation, and Energy Act of 2008

Mandatory Funding for 5 Years

- Biobased Products (\$9 mil)
- Biorefinery Assistance (\$320 mil)
- Repowering Assistance (\$35 mil)
- Bioenergy Program for Advance Biofuels (\$300 mil)
- Biodiesel Education (\$5 mil)
- Rural Energy For America (\$255 mil)*
- Biomass Research and Development (\$118 mil)
- Biomass Crop Assistance (such sums)**

*Both Senate and House summaries have this program funded at \$250 million. **CBO scored this program at \$70 million.



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