



EISA 2007: Focus on Renewable Fuels Standard Program

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Presentation Overview

- **Overview of Renewable Fuels Standard Provisions In EISA 2007**
- **Reflection on Current Renewable Fuel Standard (RFS Program) as Established under EPCA 2005**
- **Influencing Factors and the Drive Towards Renewable Sustainable Fuels**
- **Highlights - Energy Independence and Security Act of 2007**
 - **The New RFS (RFS2) – What’s New and Important**
 - **Overview of other Key Related Studies, Reports and Processes**
- **What’s Next**


Energy Independence & Security Act - RFS 2

A General Timeline and Process

- **EISA signed by the President December 19, 2007**
- **EISA - Final RFS 2 Rule required by December 19, 2008**
 - Currently evaluating multiple development and implementation options
- **EISA also increases volume under RFS1 for 2008**
 - Volume changed from 5.4 to 9.0 bill gal
 - Implemented administratively thru new Federal Register Notice (Feb 2008)
 - No rule changes for 2008 – Use RFS 1
- **Major modifications to the current RFS program beginning in 2009**
- **RFS 2 – Plan to build off of the foundation of RFS1**
 - Rule development process similar to RFS 1
 - Engage early / often with stakeholders throughout the process
 - Continue w/close consultation – DOE, USDA, Other federal partners
- **Proposal expected this Fall, Final Rule Making Next Summer**
 - Proposal will include request for comment on alternative approaches

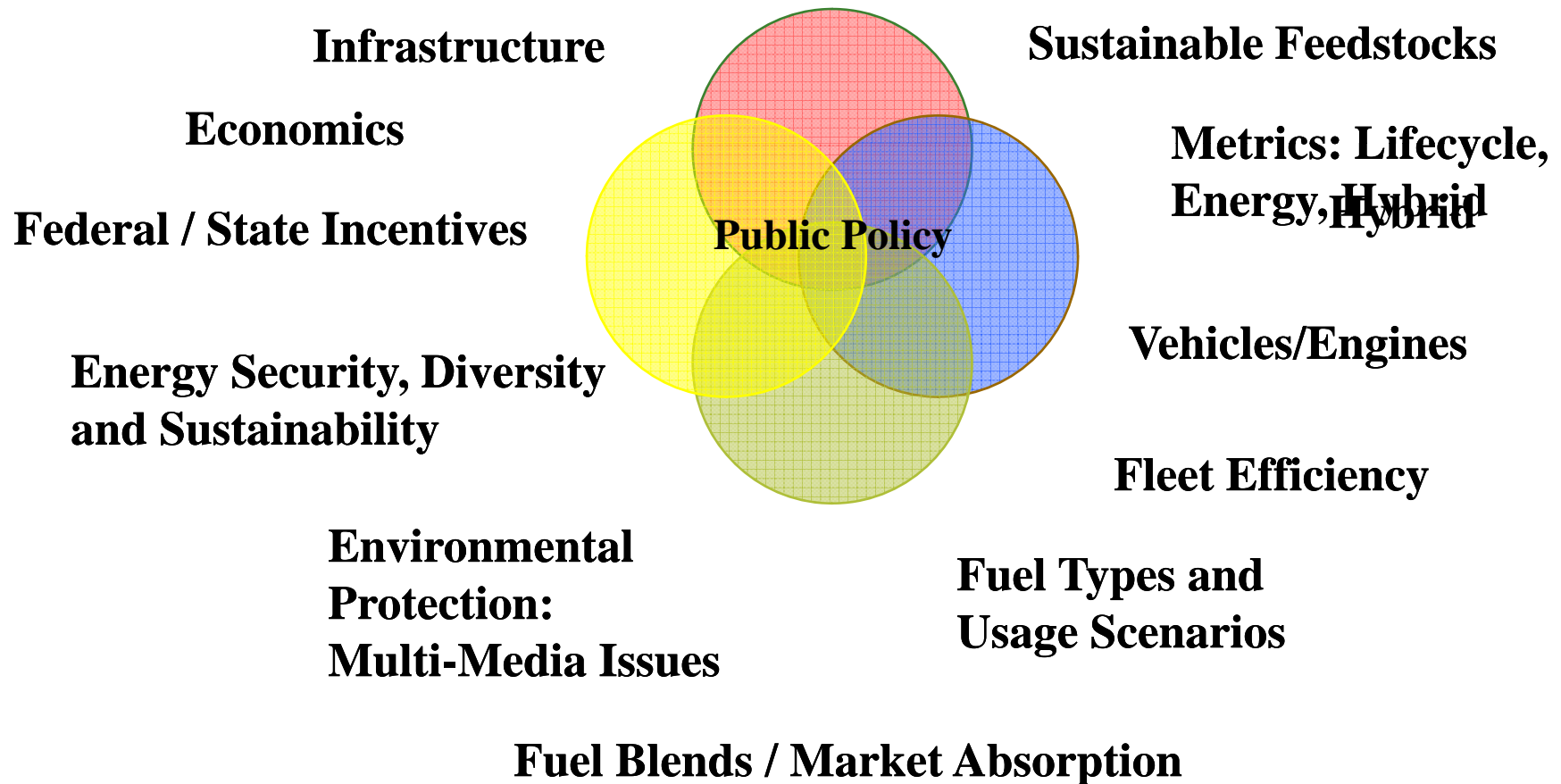
First Successful High Impact Public Policy Set for Renewable Fuels: EAct 2005 RFS Program

- **Final Renewable Fuel Standard (RFS)**
 - Final Rule Published May 2nd 2007
 - Official Program Start - Sept 1, 2007
- **EPA converts RFS into percent of gasoline production**
 - Obligation Applies to refiners, importers, gasoline blenders
 - 4.0 billion gallons/yr in 2006 -- growing to 7.5 bgy in 2012
- **Major Compliance Element - Trading and Banking Provisions**
 - Flexible Program - Based on a RIN – Renewable Identification Number (i.e. credits)
 - Allows for compliance when, where, and how it makes the most sense
- **Renewable values based on volumetric energy content compared to corn ethanol**

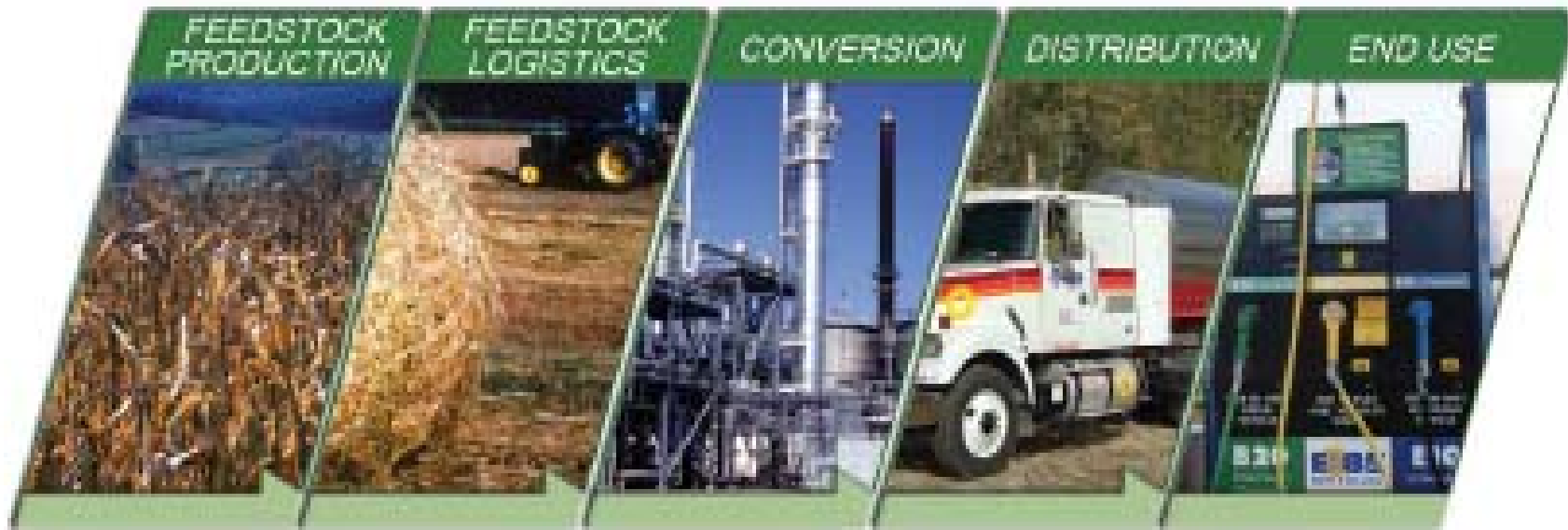
□ Corn-ethanol:	1.0	
□ Biodiesel (alkyl esters):	1.5	
□ Cellulosic biomass ethanol: (As specified in EAct)	2.5	

**Multiple Inputs -- Multiple Parties --
Multiple Perspectives -- Varying Interests**

Production Technologies



Program Considerations Throughout the Supply Chain

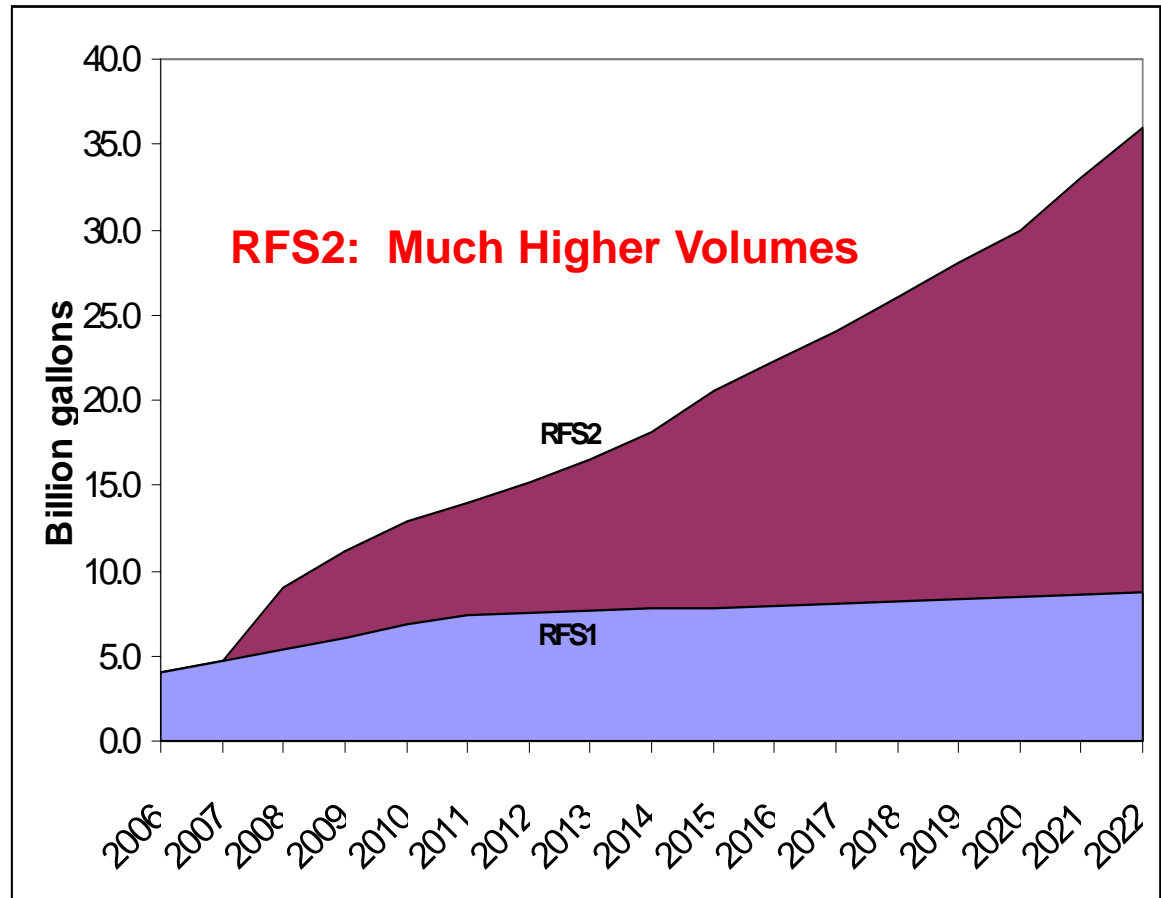


What's our baseline?

EISA of 2007: New Challenges and Direction

Modifies Current RFS program beginning in 2008

- Volumes increase to 9 Bgal/yr in 2008 – escalating to 36 Bgal/year by 2022
- Establishes new renewable fuel categories and eligibility requirements, including GHG reduction thresholds!
- Provides new waivers and paper credit provisions
- Includes new obligation for fuels
- Includes new studies and reports



RFS2: 4 Nested Standards (bill gal)

	Total Renewable Fuel			
	Total Advanced Biofuel			
	Biomass-Based Diesel	Cellulosic Biofuel		
2008				9.0
2009	0.5		0.6	11.1
2010	0.65	0.1	0.95	12.95
2011	0.80	0.25	1.35	13.95
2012	1.0	0.5	2.0	15.2
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2022	1.0	16.0	21.0	36.0

Key New Obligations and Definitions

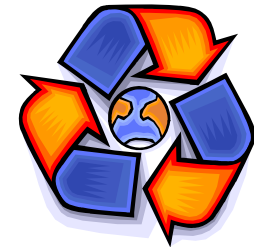
- **Standard extended from Gasoline to Gasoline and Diesel - Nonroad fuel in addition to highway**
- **Jet fuel and heating oil aren't covered, but renewable fuel sold into these markets can generate RINs**
- **Definitions significantly changed from RFS1 and / or now include new elements**
 - Lifecycle Defined and Thresholds Established
 - Facility Grandfathering Provisions
 - New Renewable Biomass Definition
- **Creates new categories of renewable fuel with greenhouse gas thresholds**

A Critical Element of EISA: Lifecycle Assessment

- **Each fuel category required to meet mandated GHG performance thresholds (reduction compared to 2005 baseline petroleum fuel replaced)**
 - **Conventional Biofuel** (ethanol derived from corn starch)
 - Must meet 20% lifecycle GHG threshold
 - Only applies to fuel produced in new facilities
 - **Advanced Biofuel**
 - Essentially anything but corn starch ethanol
 - Includes cellulosic biofuels and biomass-based diesel
 - Must meet a 50% lifecycle GHG threshold
 - **Biomass-Based Diesel**
 - E.g., Biodiesel, “renewable diesel” if fats and oils not co-processed with petroleum
 - Must meet a 50% lifecycle GHG threshold
 - **Cellulosic Biofuel**
 - Renewable fuel produced from cellulose, hemicellulose, or lignin
 - E.g., cellulosic ethanol, BTL diesel, green gasoline
 - Must meet a 60% lifecycle GHG threshold
- **EISA language permits EPA to adjust the lifecycle GHG thresholds by as much as 10%**

Lifecycle Analysis – What's Considered?

- Domestic agricultural sector
- International agricultural sector
 - Direct GHG emissions from producing feedstock, indirect impacts on other crops (e.g., less rice production), animals (fewer cattle), land use change
- Fuel production
 - Energy use and GHG emissions at production facility
- Fuel / feedstock distribution
 - Transporting feedstock to plant
 - Transporting fuel to end use
- Tailpipe emissions
 - Vehicle GHG emissions
- Baseline petroleum fuel
 - GHG emissions associated with producing gasoline and diesel fuel



Analyses for Rulemaking – Expect This and Much More

- **Renewable fuel production and use projections, technology and cost assessments**
- **GHG Lifecycle Modeling, Inventory, and Benefits**
- **Other Pollutant Inventory, Air Quality and Benefits**
- **Agricultural Sector Impacts**
- **Water and Soil Impacts**
- **Macroeconomic Impacts**
- **Energy Security**

Status of Proposed Rulemaking

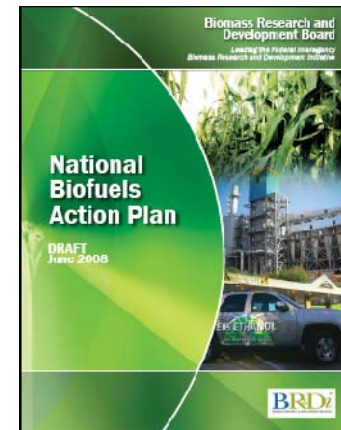
- Package is undergoing inter agency review
- Next steps
 - Revised per comments from interagency process
 - Signature by EPA Administrator
 - Package Published in Federal Register
 - Public Comment Process
- Final Planned for Summer 2009
- Implementation Planned for 2010

Two Key Air / Environmental Impact Studies/Reports in EISA

Authority / Section	Action (Reg, Research or Report)	Title	Overview of Requirement	Lead / Timing
Sec. 204 (Primary)	Study/ Report	Env. and Resource Conservation Impacts	EPA shall assess and report to Congress on the impacts to date and likely future impacts of Section 211(o) of CAA.	EPA - Within 3 years and every 3 years after.
Sec. 209 (Primary)	Study/ Report/ Potential for Regulatory Action	Anti-backsliding	Study whether renewable fuel volumes adversely affect air quality as result of changes in vehicle emissions. Includes study of different blend levels. Requires promulgation of fuel regs to mitigate to greatest extent possible any adverse impacts.	EPA - Study within 18 months. Promulgate regulations within 3 years.

Other Issues and Activity

- RFS Program Waiver Request/s
- The Blend Wall - Gasoline Pool Ethanol Blending Restrictions and Intermediate Blends
- International Discussions
 - Lifecycle Modeling Framework
 - Food versus Fuel
- EPA Intra Agency Biofuels Strategy
- US Biomass Research and Development Board
 - National Biofuels Action Plan
- Farm, Ranch and Rural Communities Federal Advisory Committee
- National Advisory Council for Energy Policy and Technology



Questions



Thank you