The Renewable Fuel Standard in the The Energy Policy Act of 2005

Presentation to the

Mobile Source Technical Review Subcommittee

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Overview

- There are many fuel-related provisions in EPAct that must be implemented over the next few years
  - 15 required and potential rulemaking actions
  - 9 studies, reports, and assessments
  - 4 grant programs
  - Development of a new emissions model for fuel effects
  - Ongoing implementation activities
- The most immediate and significant is the Renewable Fuel Standard and removal of the RFG oxygen mandate

Rulemaking Actions Related to the Renewable Fuel Standard

- Setting the standard as a percent of gasoline
- Applicabilty of the standard
- Credit trading program
  - Appropriate credits for various renewable fuels
  - Who generates credits, how credits are transfered
  - Deficit and credit carryover to next year
- Small refinery exemptions
  - Temporary and extensions
- Noncontiguous state opt-in provisions
- 25% minimum seasonal volume usage
- Cellulosic ethanol mandate for 2013+
- Waive RFS in whole or in part based on state requests

Setting the Annual RFS Standard

- Act specifies gallons of renewable fuel use in gasoline
  - 2006: 4.0 billion
  - 2007: 4.7
  - 2008: 5.4
  - 2009: 6.1
  - 2010: 6.8
  - 2011: 7.4
  - 2012: 7.5
  - 2013+: Constant percentage

- The applicable RFS "standard" for each party is generated by converting these volumes into percent of gasoline production
  - Each year EIA predicts gasoline consumption for the following year by Oct 31

Setting the Annual RFS Standard

- The applicable standard must also account for…
  - Blenders of gasoline from blendstocks
  - Small refiner exemptions and participation
  - State waivers if any
  - Carryovers from one year to the next

Credit Program

- A credit program forms the fundamental structure of the RFS
- Liable parties are refiners, blenders, and importers "as appropriate"
- Ethanol blending often is outside of a refiner’s control
- This structure introduces a lot of questions and issues
  - How do refiners know ahead of time who has/will have credits available?
  - Should ethanol producers be certified?

Credit Program (cont)

- Cellulosic ethanol receives 2.5:1 credit thru 2012
- Renewable fuels include biodiesel and biogas which must be given “appropriate” credit
- The credit program must include provisions for trading, expiration, and deficit carryovers

How are Gallons of Renewable Fuel Counted?

- The Act specifically says that various types of renewable fuels should play a role in the credit program
  - Cellulosic ethanol, biodiesel, and biogas specifically mentioned
  - Others meeting the definition of renewable fuel should also play a role

- The Act does not specify the mechanism for valuing credits for various kinds of renewable fuel
  - Exception is cellulosic ethanol at 2.5:1

- Also need to account for renewable portion of ETBE, MTBE, Fischer-Tropsch diesel made from biogas

Small Refinery Exemption

- Small refineries are exempt from the RFS requirements until 2011
- Small refineries are defined by the energy bill
  - <75,000 bpd crude oil, determined annually by thruput
- Small refinery exemption means all other refineries must carry the RFS burden through 2010
  - The total volume of renewable fuel must be the same regardless of how many small refineries are exempted
- Small refineries may choose to “opt out” of exemption and comply with RFS; in so doing, they are eligible to generate credits
- If exempt refineries use renewables in gasoline, that amount is used to adjust the RFS for the following year
- Requires annual monitoring of and adjustments to the program

25% Minimum Seasonal Renewable Fuel Requirement

- Once the RFS is in place, EIA must determine the fraction of renewable fuels used in the winter or summer season
- If <25% if renewable fuel is used in either season, by regulation liable parties must show that at least 25% of RFS is met in both seasons
- Requirement is triggered based on nationwide levels of RFS use
- California is exempt from minimum seasonal requirement.

Cellulosic Ethanol Mandate

- Beginning in 2013 the 2.5:1 credit goes away
- Replaced by a 250 million gallon mandate
- Requires a similar standard and credit program structure as for the RFS
- Regulatory provisions/penalties if production capacity not sufficient to meet minimum requirements
- Provisions by which EPA can increase minimum cellulosic volumes

RFS Rulemaking Analyses That Will Be Required

- What will the fuel pool look like?
- Feasibility assessments
- Emission impacts
- Inventory impacts
- Air quality
- Cost & cost-effectiveness
- Energy and GHG impacts
- Small business impacts

Grant Programs

- Resource Center for Biomass-Based Energy ($12M)
- Renewable Fuel Production R&D grants ($125M)
- Advanced Biofuels Technology Program ($550M)
- Sugar Cane Ethanol Program ($36M)