Today's U.S. Ethanol Industry

The Transportation Sector: Past, Present and Future

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Energy Markets in the 21st Century:
Competition Policy in Perspective

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U.S. Ethanol Industry Today

- Annual production capacity in 2006 of 5.3 bgy
  - Actual 2006 production of 4.9 bgy
  - 2006 demand of approx. 6 billion gallons
- 114 plants in 19 states with 5.6 bgy capacity today *(March 2007)*
- 80 plants under construction, combined with 8 expansions, will increase industry capacity by an additional 6 bgy *(March, 2007)*
- Dozens of additional plants in various stages of development

Today's Transportation Fuels

- Gasoline - 140 billion gallons
- Diesel - 45 billion gallons
- E85 – 50 million gallons

- Ethanol as an additive (E-10)
  - 5.6 billion gallons
  - Extends Gasoline – blended in 46% of gasoline
  - Adds 300,000 barrels of supply

RFS vs. RFA Projections

Year	RFS	RFA Projections
2006	4.0	5.3
2007	4.7	8.4
2008	5.4	11.1
2009	6.1	11.2 (1Q)
2010	6.8	
2011	7.4	
2012	7.5	

RFA Projections: Breakdown by Quarters

2007 (Millions of Gallons)

1Q:	671
2Q:	237
3Q:	814
4Q:	1354
Total:	3076

2008 (Millions of Gallons)

1Q	1362.5
2Q:	695
3Q:	610
4Q:	101
Total:	2768.5

2009 (Millions of Gallons)

1Q:	105

What's Leading Industry Growth?

- Renewable Fuels Standard
- Sustained high gas and oil prices
- State ethanol programs
- E-85 growth
- Concerns about MTBE contamination
- Need to expand U.S. fuel supply
- Environmentally-friendly profile

What about Cellulosic Ethanol?

- **Technology and cost are limiting factors.**
- **Current technology for cellulosic ethanol is the acid hydrolysis process.**
  - Capital costs are almost 4 times that of dry mill ethanol.
  - Operating costs are 50% above corn dry mill costs.
- **Enzymatic process holds promise for lower costs, but is not yet commercialized.**
- **Cellulose ethanol will happen, but large scale production not likely in the near term.**
- **Cellulose ethanol expected to first be commercialized by current producers who have cellulosic feedstocks at their grain-based facilities.**

Policies Driving Cellulosic Ethanol

President's Advanced Energy Initiative (2006 State of the Union Address)

2012 Goal: Fund additional research in cutting-edge methods of producing ethanol, not just from corn, but from wood chips and stalks, or switch grass.

Our goal is to make this new kind of ethanol practical and competitive within six years.

2030 Goal: Replace 30% of our current gasoline consumption with ethanol.

President's "Twenty in Ten" Proposal (2007 State of the Union Address)

Alternative fuel standard will be set at 35 billion gallons of renewable and alternative fuels in 2017.

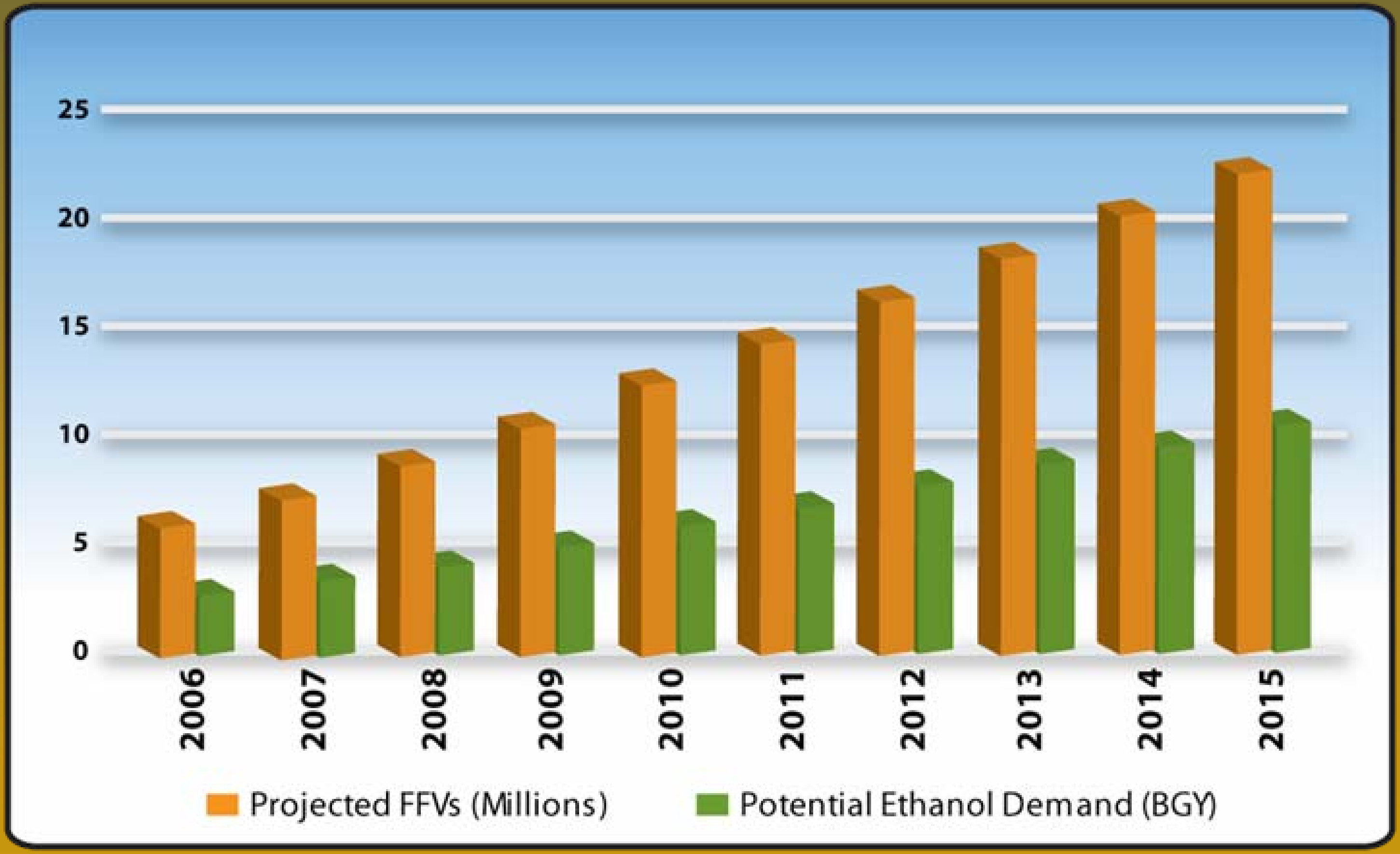
Alternative fuels would include: ethanol, biodiesel, methanol, biobutanol, hydrogen, and other alternative fuels.

Is there an Ethanol Blend Wall?

- Ethanol is blended in 46% of the nation's fuel today
- Near Term Market Opportunities
  - California 10% blends?
  - SE U.S.
  - Higher RFS?
- U.S. gasoline demand ~ 140 billion per year
- When ethanol nears 14 billion gallons per year, new markets will be needed
- Longer Term Market Opportunities
  - Higher level blends?
  - E-85

U.S. FFVs Could Exceed 22 Million by 2015

Creating potential E-85 Demand in Excess of 11 BGY



(1) Currently 6.0 million flex fuel vehicles (FFVs); assumed growth of 1.4 million in 2007, 1.6 million in 2008, 1.8 million in 2009 and by 2.0 million per year after 2010 (2010 and beyond data according to public statements made by Ford, General Motors and Chrysler)

(2) Calculated assuming 600 gallons of E85 used each year per FFV. (Source: EIA projects 500 gallons of gasoline per year per vehicle assumes 20% mileage loss compared to conventional)

Ethanol Industry 2007 Legislative Priorities

- Maintain and Extend VEETC (Blenders' Tax Incentive)
  - Maintain and Extend Credit Offset (Secondary Tariff)
- Increase Ethanol Market Opportunities
  - Higher Ethanol Blend Levels
  - E-85
    - Optimized FFV & Infrastructure Incentives
- Cellulosic Ethanol Commercialization
  - Fully fund and/or increase funding for EPAct 2005 programs
  - Research & Development and Deployment and Commercialization
  - Grants and Loan Guarantees
  - Incentives
- RFS

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