

# Today's U.S. Ethanol Industry

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Biofuels Standards Needs: Stakeholders Perspectives  
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# U.S. Ethanol Industry Today

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- Annual production capacity in 2006 of 5.4 bgy
  - Actual 2006 production of 4.9 bgy
  - 2006 demand of approx. 6 billion gallons
- 121 plants in 19 states with 6.3 bgy capacity today (*June, 2007*)
- 76 plants under construction, combined with 8 expansions, will increase industry capacity by an additional 6.2 bgy (*June, 2007*)
- Hundreds of additional plants in various stages of development

# Today's Transportation Fuels

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- **Gasoline - 140 billion gallons**
- **Diesel - 45 billion gallons**
- **E85 – 50 million gallons**
  
- **Ethanol as an additive (E-10)**
  - **6.3 billion gallons**
  - **Extends Gasoline – blended in 50% of gasoline**
  - **Adds 300,000 barrels of supply**

# Where Do We Go from Here?

■ Year	RFS	RFA Projections	
		Capacity	Production
■ 2006	4.0	5.3	4.9
■ 2007	4.7	8.4	7.1
■ 2008	5.4	11.2	10.0
■ 2009	6.1	12.0	10.8
■ 2010	6.8		12.0
■ 2011	7.4		
■ 2012	7.5		

# RFA Projections: Breakdown by Quarters

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## 2007 (Millions of Gallons)

1Q: 342

2Q: 486

3Q: 657

4Q: 1359

Total: 2502

## 2008 (Millions of Gallons)

1Q 1597.5

2Q: 696.4

3Q: 610

4Q: 201

Total: 3104.9

## 2009 (Millions of Gallons)

1Q: 105

# What's Leading Industry Growth?

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- Renewable Fuels Standard and Other Federal Policies
- Sustained high gas and oil prices
- State ethanol programs
- E85 growth
- Concerns about MTBE contamination resulting in new East Coast markets
- Need to expand U.S. fuel supply
- Environmentally-friendly profile

# What about Cellulosic Ethanol?

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- **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.**

# The Future is Now for Cellulose Ethanol

## ■ **Abengoa**

- Demonstration-scale (1 mgy) cellulose ethanol facility under construction in Salamanca, Spain (wheat straw)
- Pilot cellulose ethanol plant planned in York, Nebraska
  - ❖ Co-located with grain-based ethanol facility

## ■ **Broin**

- Commercial-scale (125 mgy) biorefinery planned in Emmetsburg, Iowa (corn fiber and corn stover)
- Convert a 50 mgy grain-ethanol facility
- Utilize advanced corn fractionation and lignocellulosic conversion technologies

## ■ **logen**

- Built and operates demonstration-scale (1 mgy) cellulose ethanol facility in Ottawa, Ontario (wheat, oat and barley straw)
- Proposed commercial-scale cellulose ethanol facility in southeastern Idaho (wheat straw)



# Increase Ethanol Market Opportunities

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The industry is looking forward to new market opportunities such as higher ethanol blends (15-20%) and E-85.

Federal policies should, at a minimum, maintain:

- extend existing tax incentives for E-85 to allow for continued growth,
- expand tax incentives for E-85 refueling infrastructure, and
- increase new consumer-based tax incentives to encourage flexible fuel vehicles.

# 110<sup>th</sup> Congress

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2007 Farm Bill

Energy Bill

Climate Change Bill

# Contact Information

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