Surface Transportation Board
RETAC Meeting

Ethanol Discussion

June 12, 2008
<table>
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<tr>
<th>Year</th>
<th>Renewable Biofuel</th>
<th>Advanced Biofuel</th>
<th>Cellulosic Biofuel</th>
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Historical Ethanol Demand

![Historical Ethanol Demand graph]

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Ethanol Industry Capacity

![Graph showing the production capacity of ethanol, total renewable fuels standard, and the RFS for ethanol from 2007 to 2022. The graph indicates a steady increase in production capacity and total renewable fuels standard, with the RFS for ethanol remaining relatively consistent.](image-url)
Ethanol Modes of Transportation

- Trucks (8,000 Gallons)
- Railcars (29,000 gallons)
  - Single rail car
  - Unit Train (65, 75, or 95 railcars)
  - Major infrastructure build
- Barges (420,000 gallons)
  - 10,000 bbl capacity
- Pipeline
100 Million Gal./Year Plant Example

Transportation Impacts:

- 3448 railcars of Fuel Ethanol per year
- 10 tank cars per day
- 9867 railcars of Corn per year
- 60% by Rail, 17 railcars per day
- 3048 railcars of DDGs per year
- 9 hopper cars per day
Market Penetration By State
(10% Ethanol Blends as Share of 2007/2008 State Gasoline Sales)
Note: 2008 Market Share Projections to the right or below 2007 Market Percentage


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Ethanol Demand by PADD

Ethanol Production
PADD II 7.9 MM

<table>
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<tr>
<th>PADD I  (East Coast)</th>
<th>PADD II (Midwest)</th>
<th>PADD III (Gulf Coast)</th>
<th>PADD IV (Rocky Mountain)</th>
<th>PADD V (West Coast)</th>
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<td>Current Ethanol Demand</td>
<td>Projected Ethanol Demand 10%</td>
<td>Current Ethanol Demand</td>
<td>Projected Ethanol Demand 10%</td>
<td>Current Ethanol Demand</td>
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MM Gallons

0 1,000 2,000 3,000 4,000 5,000 6,000

PADD I  (East Coast)  PADD II  (Midwest)  PADD III  (Gulf Coast)  PADD IV  (Rocky Mountain)  PADD V  (West Coast)
Ethanol Railcar Shipments

- 2004: 65,372 Loads
- 2005: 72,677 Loads
- 2006: 116,224 Loads

Ethanol Industry Projection

- 2007: 156,900 est. Loads
  - (6.5 BGY est. 70% Rail with 29,000 gal/ car)
- 2008: 217,250 est. Loads
  - (9.0 BGY est. 70% Rail with 29,000 gal/ car)
Ethanol Logistics

• Unit Train Facilities
  – Lomita (Carson), CA, Sewaren, NJ, Albany, NY, Linden, NY, Dallas, TX, Providence, RI
• Additional Train Facilities being added
• Ethanol Origination Facilities
  – Manley Terminal