ETHANOL INDUSTRY UPDATE

Renewable Fuels Association

November, 2007

Renewable Fuels Association

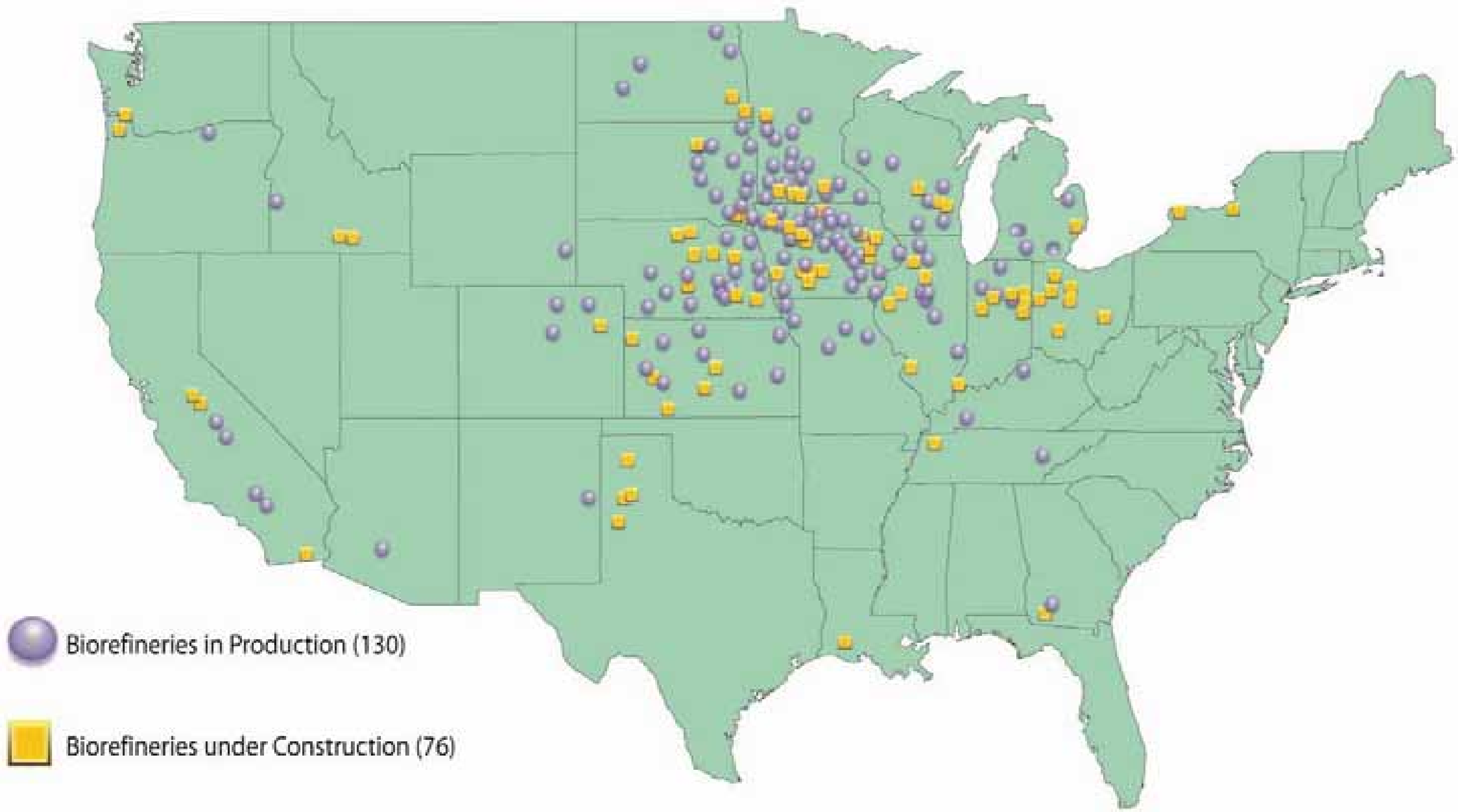
TODAY'S TRANSPORTATION FUELS

- Gasoline - 140 billion gallons
- Ethanol- 7.02 billion gallons
  - E10- 50% of nation's gasoline
- E85 – ~50 million gallons
  - 1300 fuel stations offer E85
  - 170,000 fuel stations in US
- Diesel - 45 billion gallons
- Biodiesel-~500 million gallons

ETHANOL SUPPLY

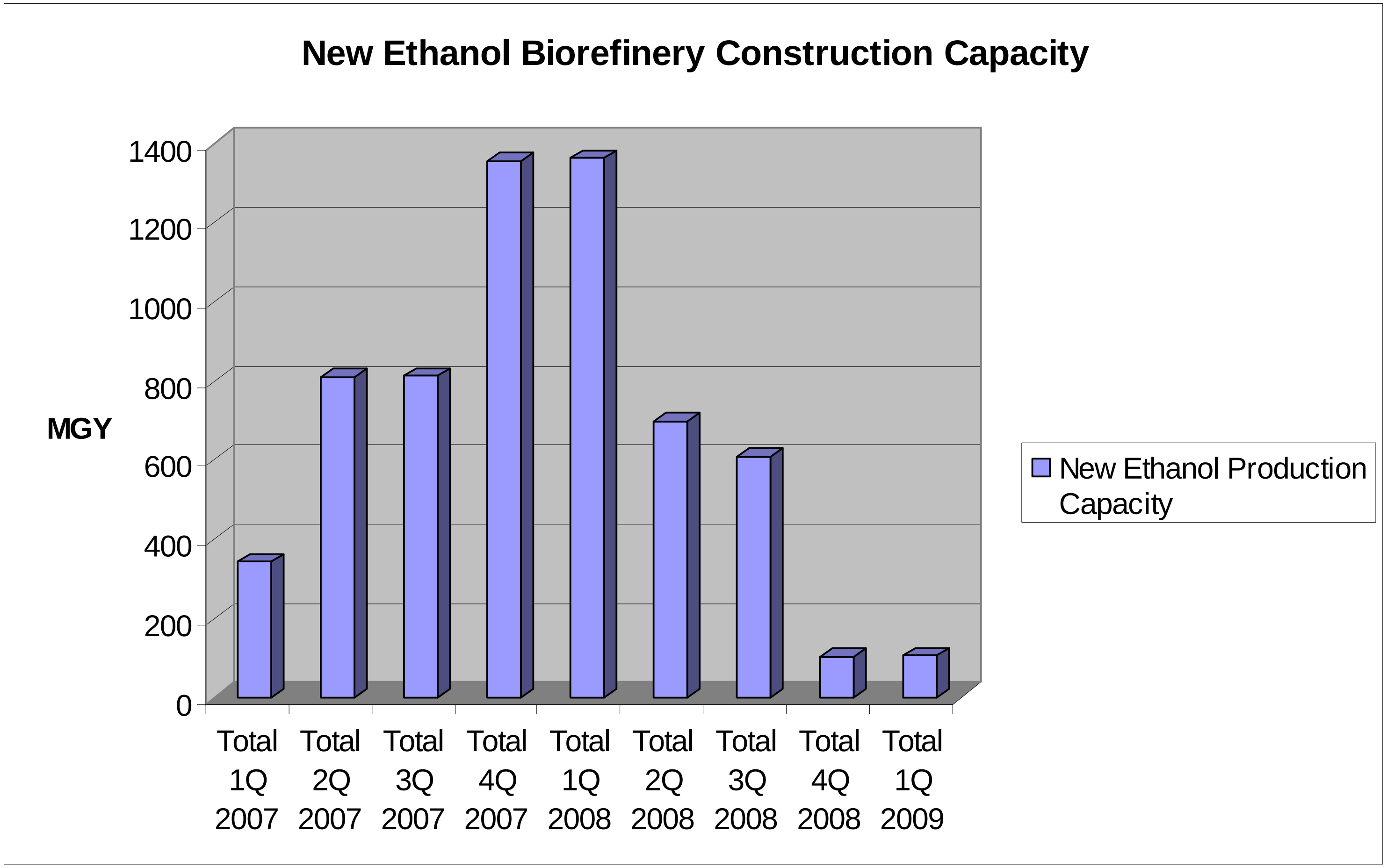
- 2006 Production of 5.3 billion gallons/ yr
  - Actual 2006 production 4.9 billion
- November 2007, Production 7.02 billion gallons/ yr
  - 131 Plants in 21 States
- 72 plants still under construction
  - Additional 6.4 billion gallons/ yr
- Estimating 13.4 billion gallons/ yr 2009

U.S. Ethanol Biorefinery Locations



Source: Renewable Fuels Association
10.4.07

ETHANOL PRODUCTION INCREASE



MARKET CONDITIONS

- Price of Crude Oil is higher than ever in history.
- Gasoline price had dipped and is rebounding.
- Price of Corn is higher than expected with the largest crop in history.
- Ethanol price had dipped and rebounding.

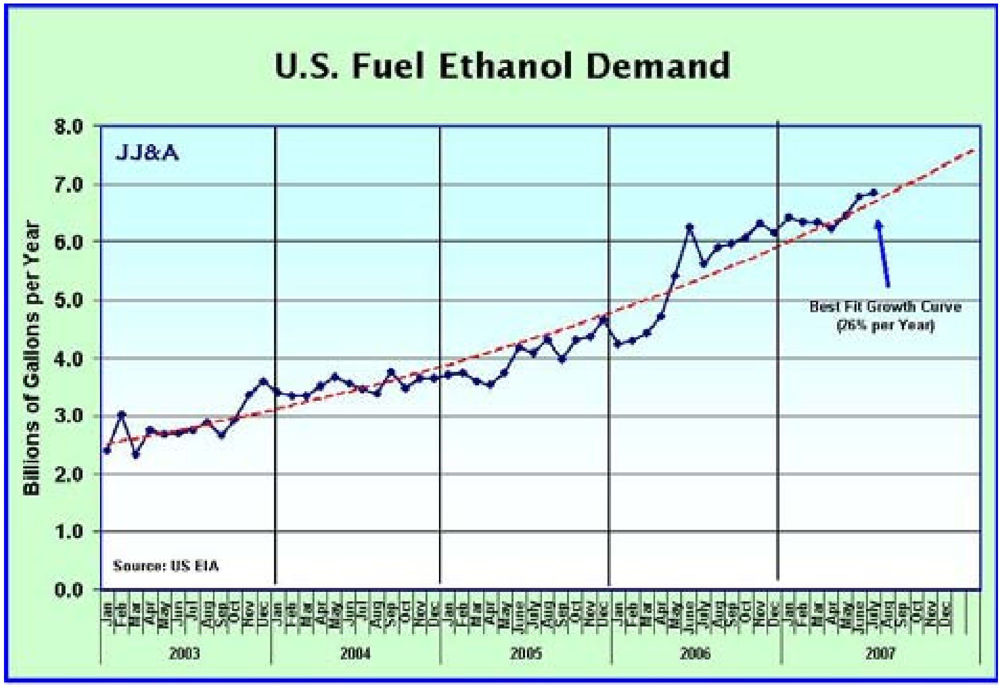
- There is NO Glut!

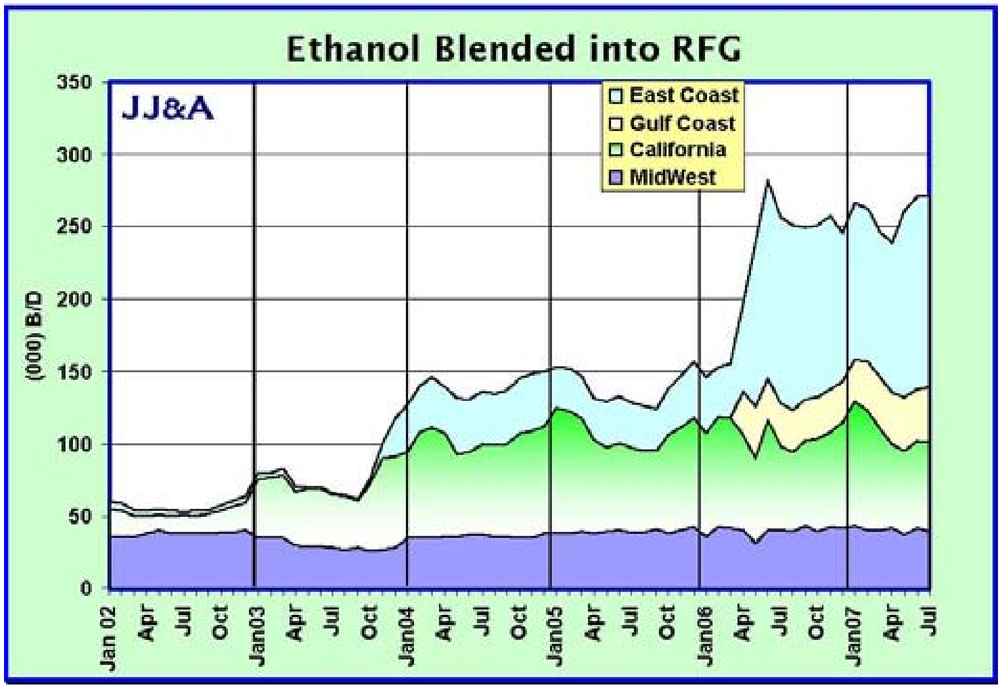
ETHANOL DEMAND

- 2005- 3.75 billion gallons per year
- 2006- 5.42 billion gallons per year
- 2007- 6.47 billion gallons per year

Demand increasing at ~20%/ year

JJ&A Oxygenate Data, August 2007


U.S. Fuel Ethanol Demand
JJ&A
Billions of Gallons per Year
Best Fit Growth Curve
(26% per Year)
Source: US EIA
2003
2004
2005
2006
2007

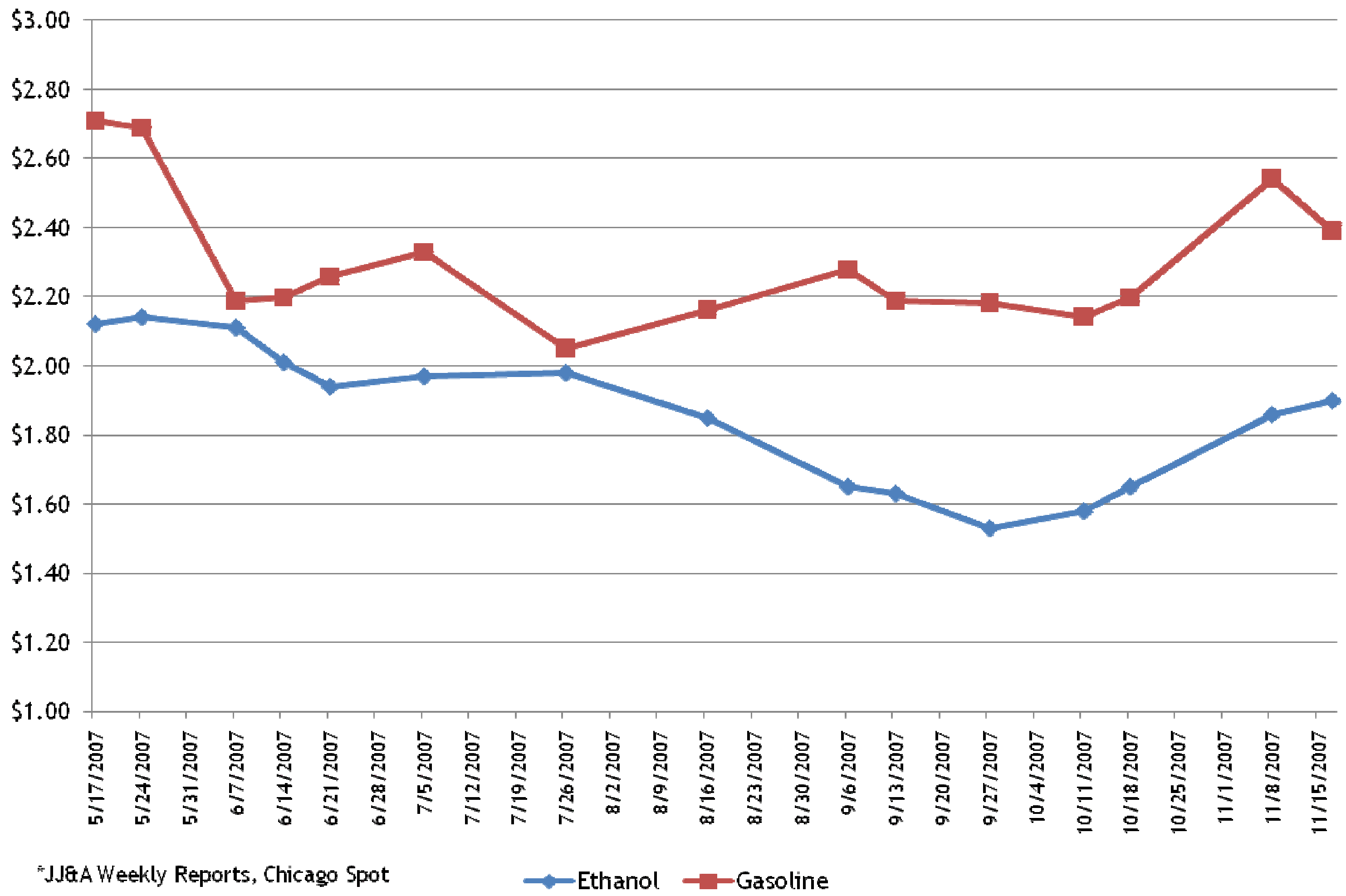

Ethanol Blended into RFG
JJ&A
East Coast
Gulf Coast
California
MidWest
(000) B/D

UNITED STATES GASOLINE DEMAND

Gasoline Stream	July 2006	July 2007
Conventional	4,996	4,746
Conventional w/ Ethanol	1,409	1,702
RFG w/ Ethanol	3,096	3,123
RFG no Ethanol	74	53
Totals	9,585	9,624

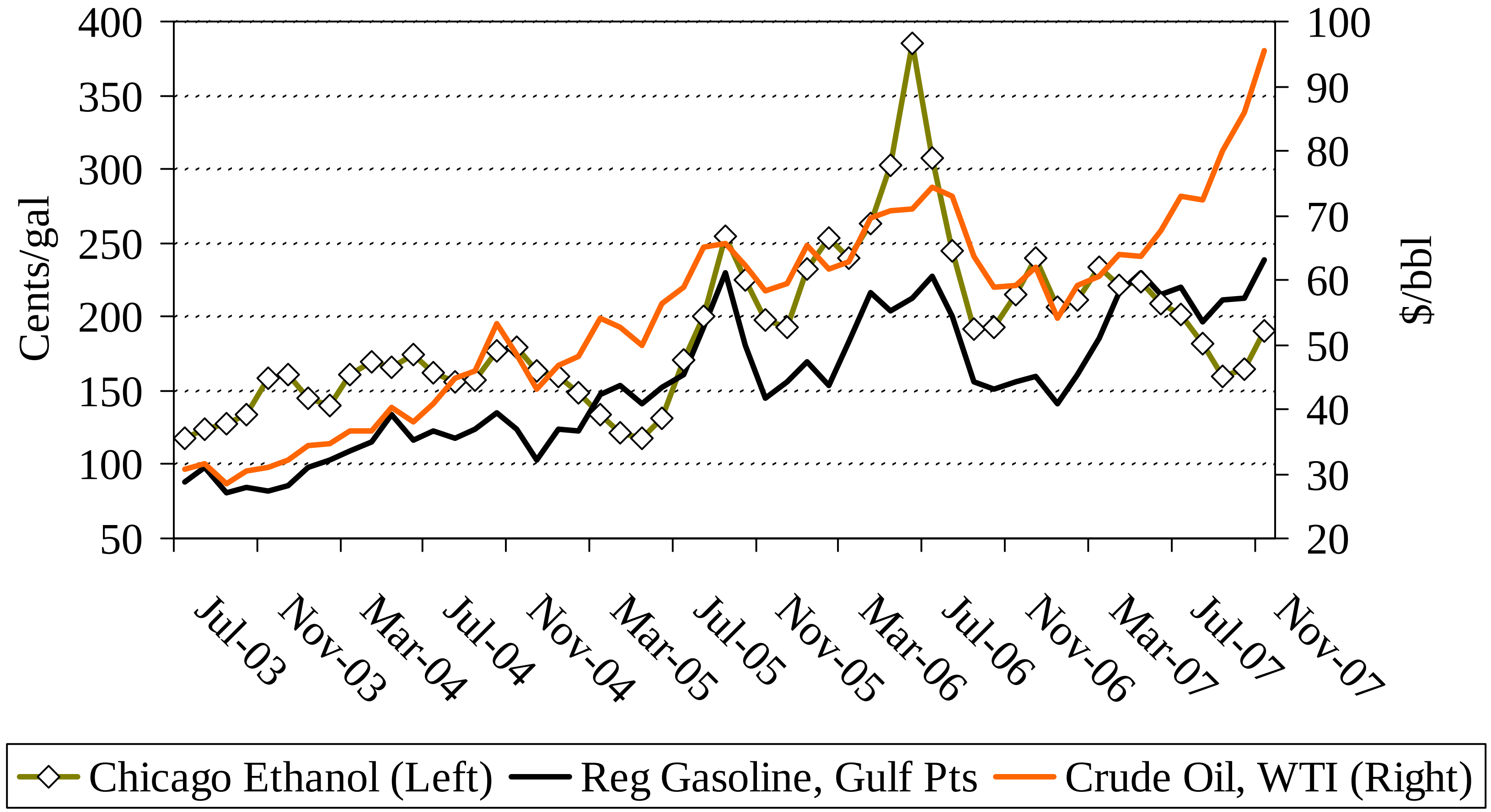
•JJ&A EIA Oxygenates- Gasoline Data for July 2007

GASOLINE ETHANOL PRICING

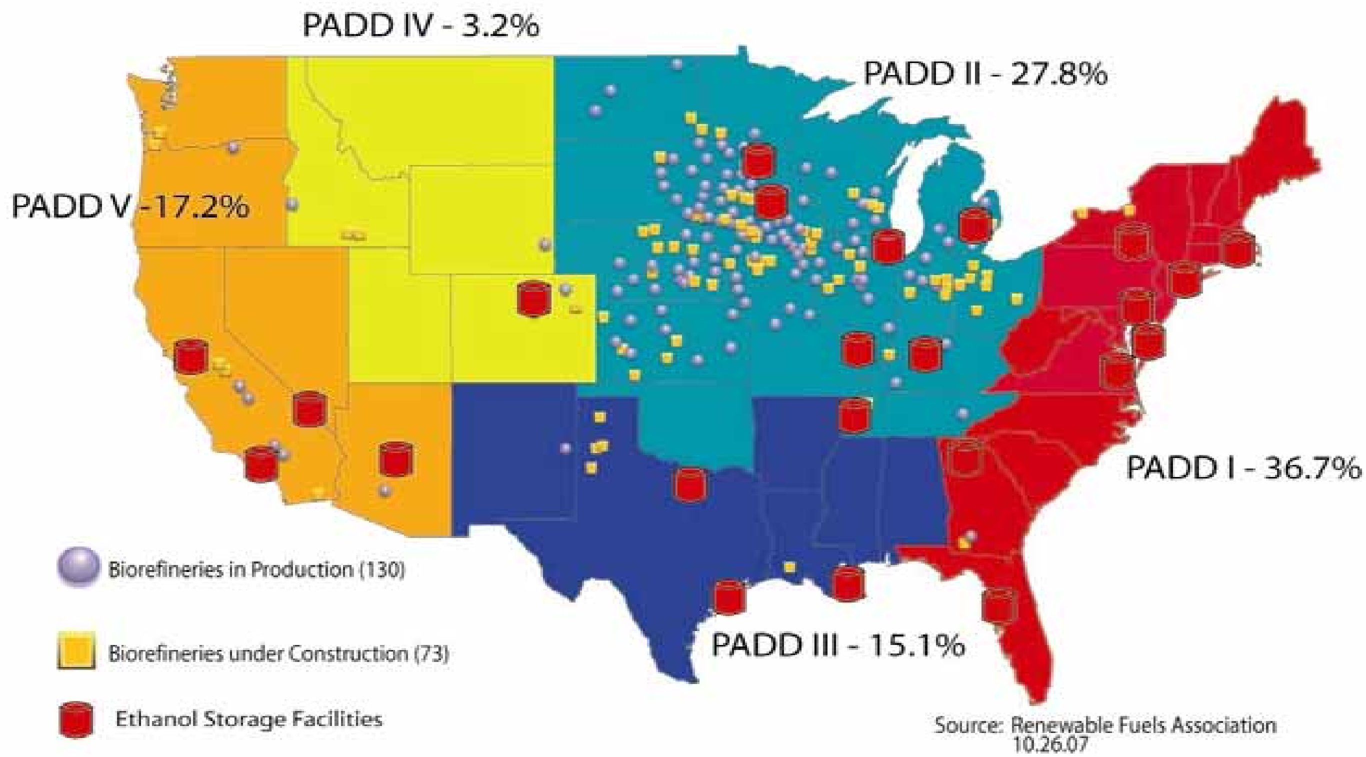


*JJ&A Weekly Reports, Chicago Spot

Monthly Average Spot Market Prices



Gasoline Consumption



EXPANDING ETHANOL MARKET

- Components needed for expansion:
  - Favorable fuel regulations
  - Supply
  - Infrastructure
  - Positive economics

MIDWEST REGS: A CLOSER LOOK

- Ohio, Illinois, Indiana, Kentucky, South Dakota, Wisconsin- no regulatory issues
- Minnesota, Missouri (2008)-10% state mandate, no issues
- Iowa, North Dakota, Nebraska- possible volatility issues

- Only 75% of Iowa gasoline is blended with 10%
- Only 62% of Nebraska gasoline is blended with 10%, up from only 42% blending two years ago

FOCUS ON SOUTHEAST STATES

- Proposed regulation
  - Tennessee- September 2007
  - Georgia- December 2007
  - South Carolina- October 2007
  - North Carolina- 2Qtr 2008
- Under consideration
  - Florida

OTHER EFFORTS

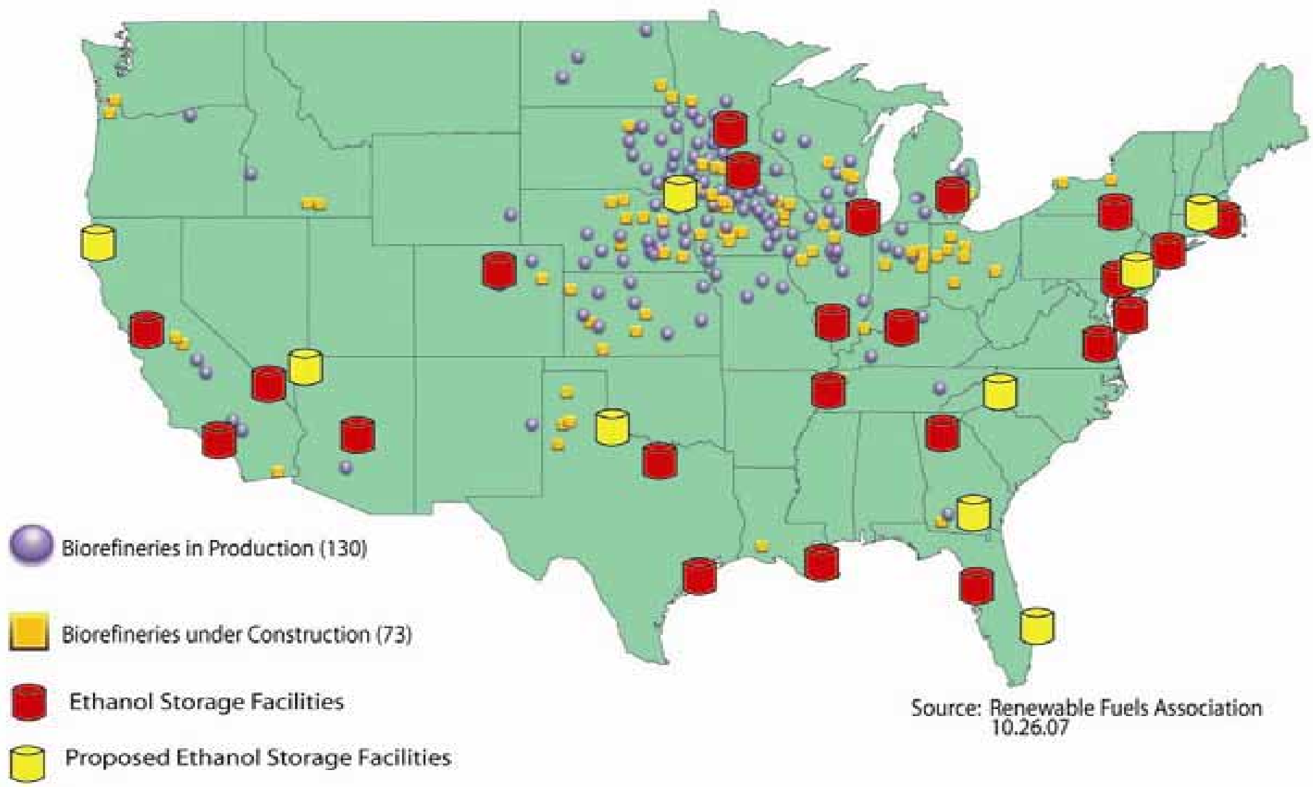
- Southwest
  - Arizona
  - Nevada
- Northeast
  - New York
  - Pennsylvania
  - Maryland
- West
  - California moving to 10% blends
  - Oregon passed 10% mandate

INFRASTRUCTURE BUILD

- Transportation
  - Expanded Truck access
  - Expanded Rail access
  - Expanded Barge access
- Terminals
  - 1352 terminals in US Petroleum and Chemicals

- Ethanol is clean non toxic product, easy storage commodity

Major Ethanol Storage Terminals



Sewaren, New Jersey Ethanol Terminal

Sewaren, New Jersey Ethanol Terminal

Ethanol Terminal Development

- Motiva
- Kinder Morgan
- US Development
- Magellan
- Exxon-Mobil
- Marathon
- Sunoco
- Numerous Smaller Terminals

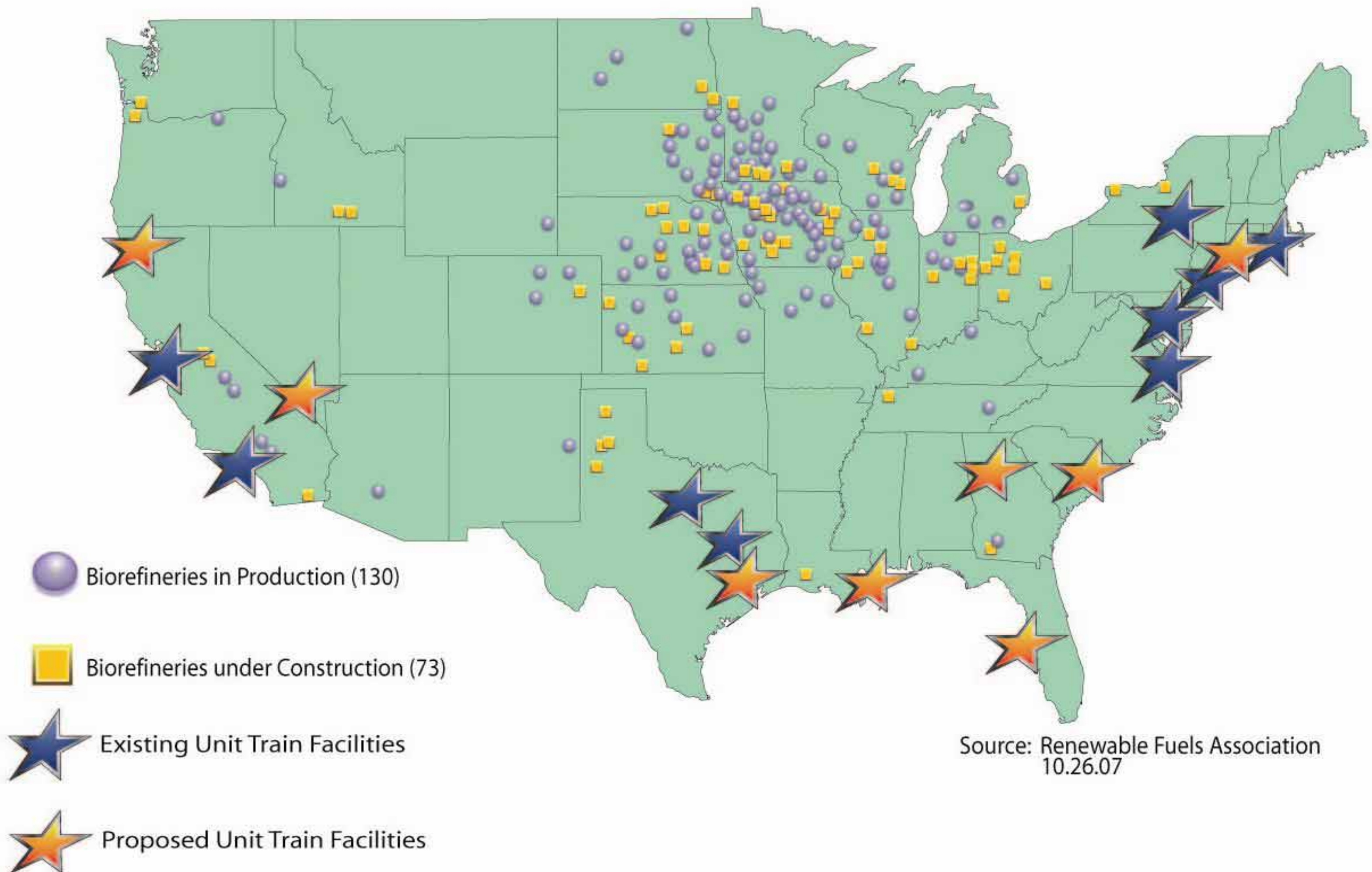
WHAT IT TAKES TO KEEP PRODUCT MOVING..

- Transportation is 3rd Highest Cost at a Plant
  - Behind Raw Material and Energy
- Typical Ethanol Plant capacity:
  - 100 Million Gal./ Year
    - Logistics needs per year
      - 3448 railcars of Fuel Ethanol
        10 tank cars per day
      - 9867 railcars of Corn
        60% by Rail, 17 railcars per day
      - 3048 railcars of DDGs
        9 hopper cars per day

THE VIRTUAL PIPELINE

- Ethanol in Unit Trains
  - "Ethanol Express"
  - Based on coal unit train success
- Shipment volumes ~3 million gallons
  - Similar to traditional pipeline movements
- Single trains consisting of 65, 75, 95 ethanol cars
  - Unit Train building sites expanding
- Origination in Midwest- Destination all coasts

Unit Train Landing Locations



Building a Unit Train

- 4 mile track loop to hold up to 100 railcars

- Multiple Major Railroad Access:
  - All Class I Railroads: UP, BNSF, NS, CSX, CN

- Ethanol Plants with train build capability:

Heron Lake	Aurora
Ashton	Albion
Charles City	Fort Dodge
Columbus	

Energy Bill Driving Cellulose

- Senate Energy Bill increases RFS to 36 BGY by 2022, w/ 15 BGY from Corn, 21 BGY from Cellulose
- House Offer increases RFS to ~ 20 BGY by 2015, w/ further growth determined by EPA
- CAFÉ & Conservation Measures Included
- Leadership wants bill on the floor in December.

- Chances of Passage?

RFA AND MINNESOTA E20

- Research work complete- final reports being written
- Pilot Study- not a waiver effort
  - What would a waiver effort entail?
- Designed with input from Auto and Oil
- Presently 3 Major Components
  - Materials Compatibility
  - Fleet Demonstration
  - Emissions Testing

SUMMARY

- Ethanol Demand Expanding Rapidly.
- Supply able to sustain larger, more consistent market.
- Ethanol Supply/Demand Balanced, price is recovering.
- State Regulatory Environment Improving.
- Infrastructure build – both terminals and rail - progressing.
- Energy Legislation promises to stimulate similar expansion in cellulosic ethanol.