

WILL ETHANOL PLANTS GO BUST?



Measuring Local Impacts of the Bioeconomy
2008 Biobased Industry Outlook Conference

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by

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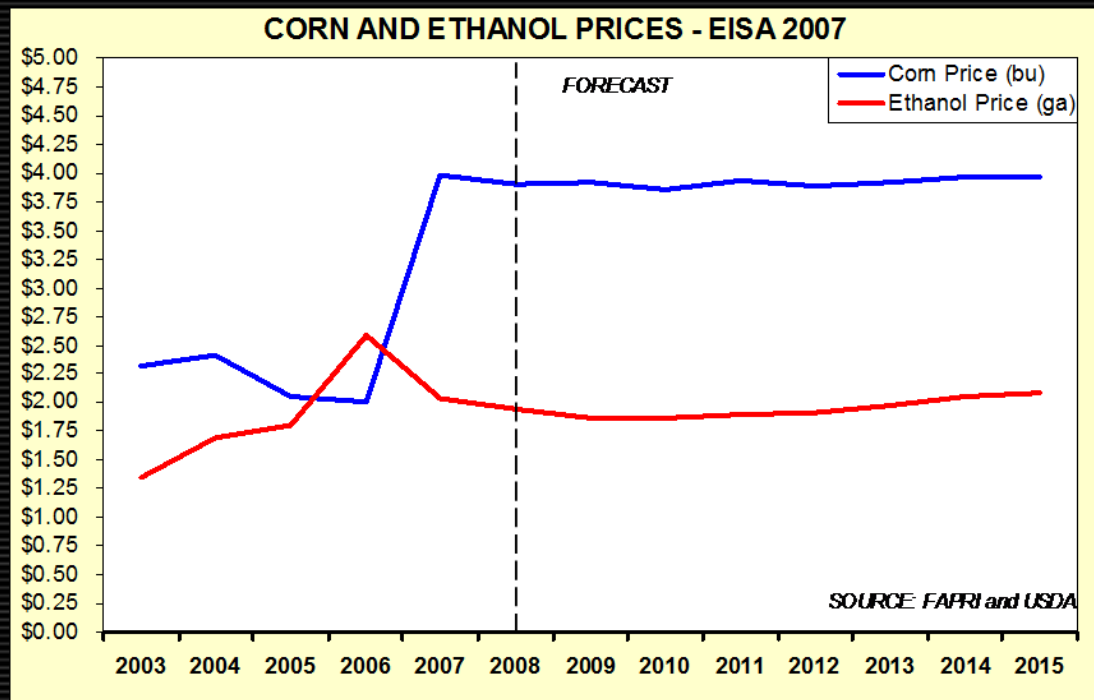
INTRODUCTION

Midwest is at the tail end of an ethanol boom.

- driven by a combination of high oil prices, favorable government policy, and cheap corn (until recently).
- generated unprecedented amount of industrial investment in rural communities and economic opportunities.

WILL THE BOOM TURN BUST?

You don't need a Ph.D. to understand the ethanol boom and the potential bust!





100-MGY ETHANOL PLANT – OLDER PLANTS

In 2006 ...

- Low input costs & high revenues
- Large net profit and equity returns
- Debt retired early

Between 2007-2010...

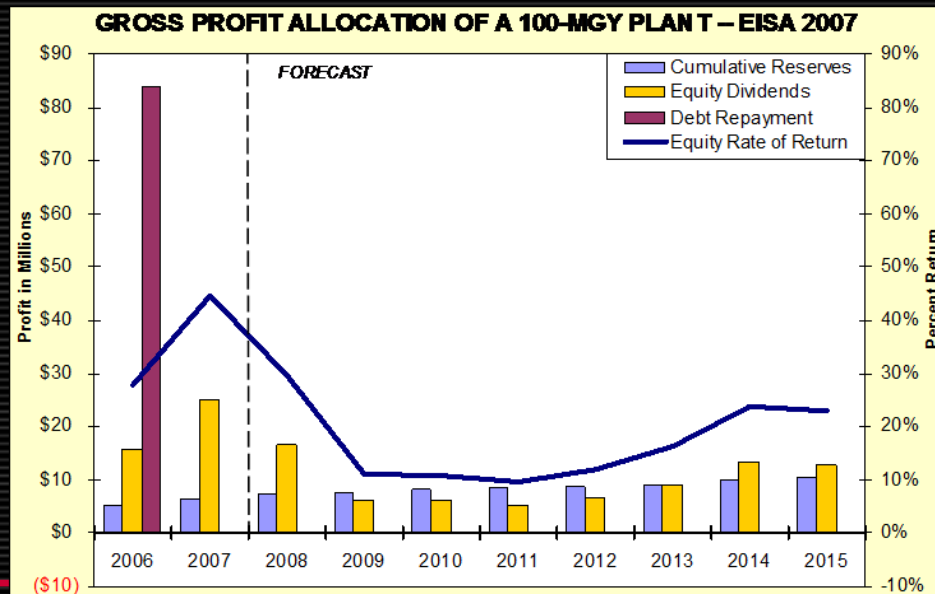
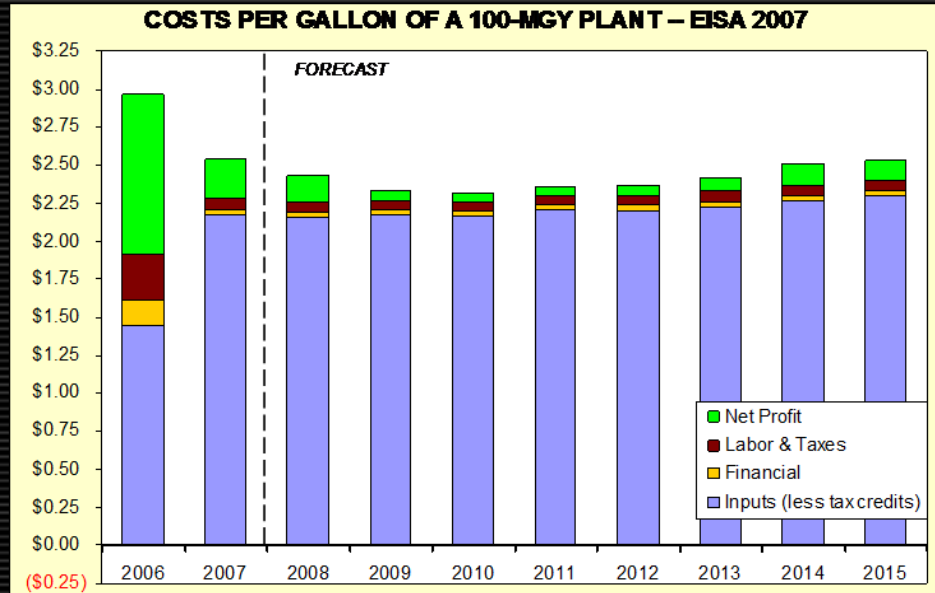
- High input costs & falling revenues
- Falling net profit and equity returns

Between 2011-2015 ...

- Stable input costs & rising revenues
- Growing net profits and returns

Reasons for profits ...

- Debt retired early & large reserves
- Corn and ethanol prices stabilize
- Future looks good!



100-MGY ETHANOL PLANT – NEWER PLANTS

In 2008 ...

- High input costs and high revenues
- Small net profits, returns, reserves

Between 2009-2013 ...

- Stable yet high input costs
- Falling revenues
- Net losses and returns, no reserves

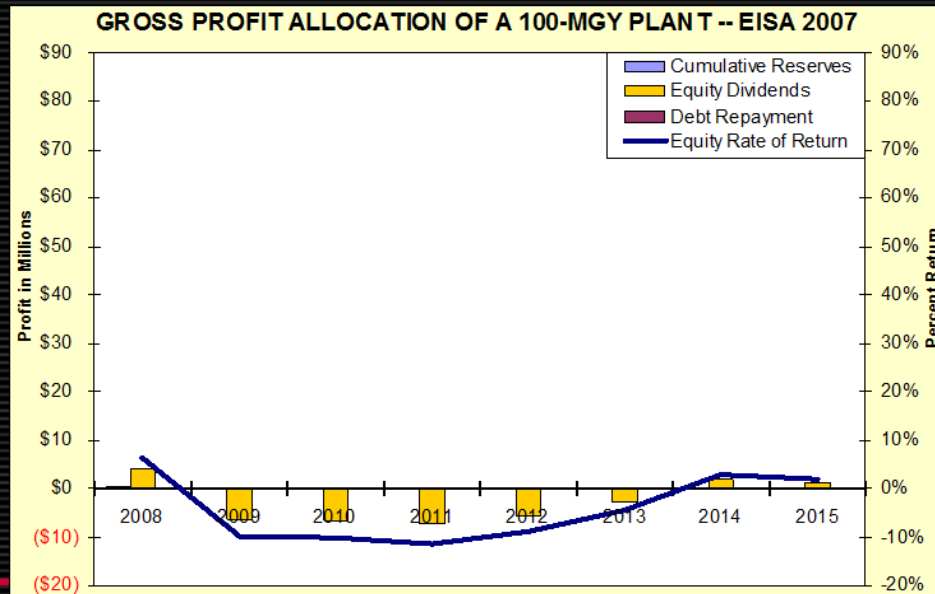
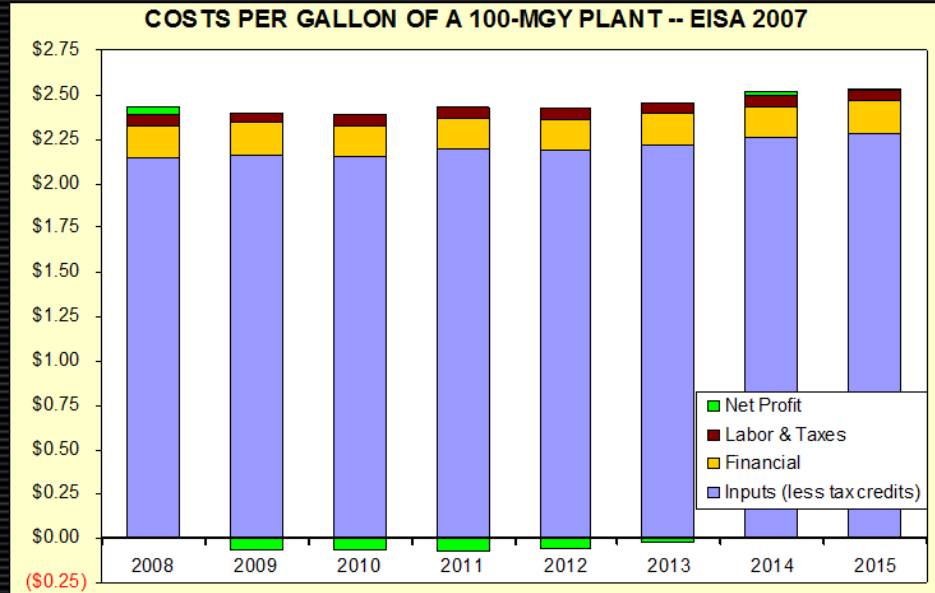
Between 2014-2015 ...

- Break-even point!
- Rising revenues & stable costs

Reasons for losses ...

- High debt costs!
- Profitable after debt paid

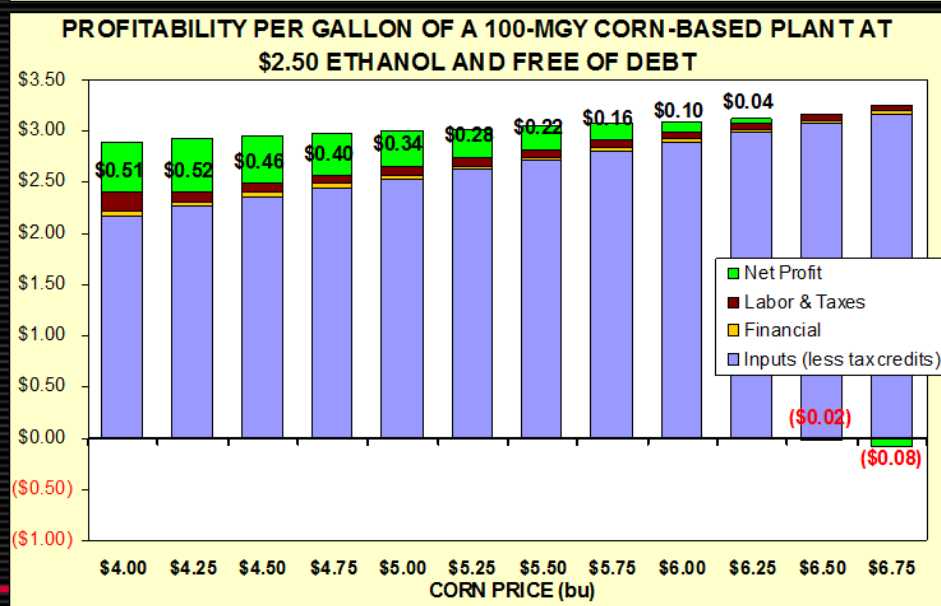
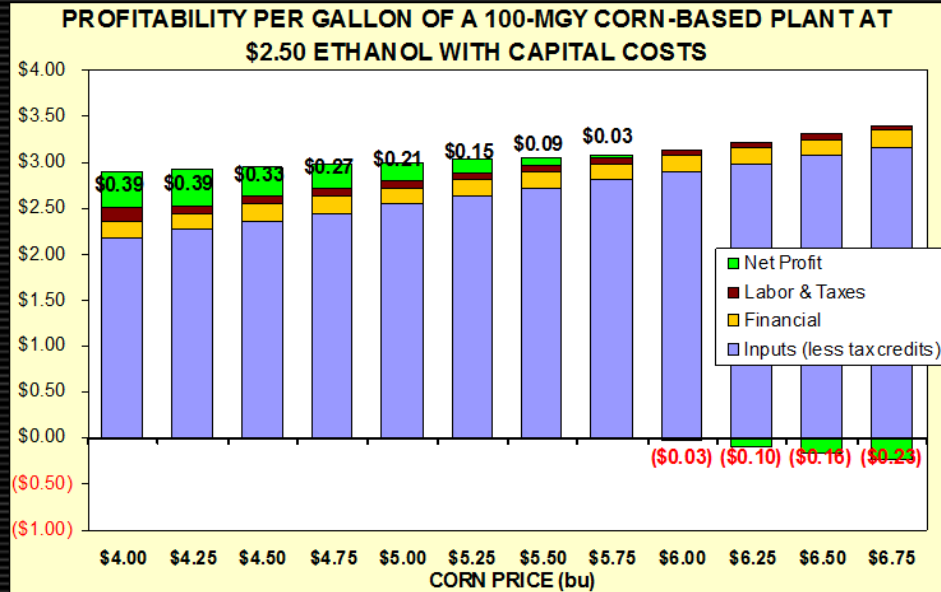
Reason for slow-down in plant construction!



SENSITIVITY ANALYSIS AT \$2.50 ETHANOL

At \$2.50/ga ethanol ...

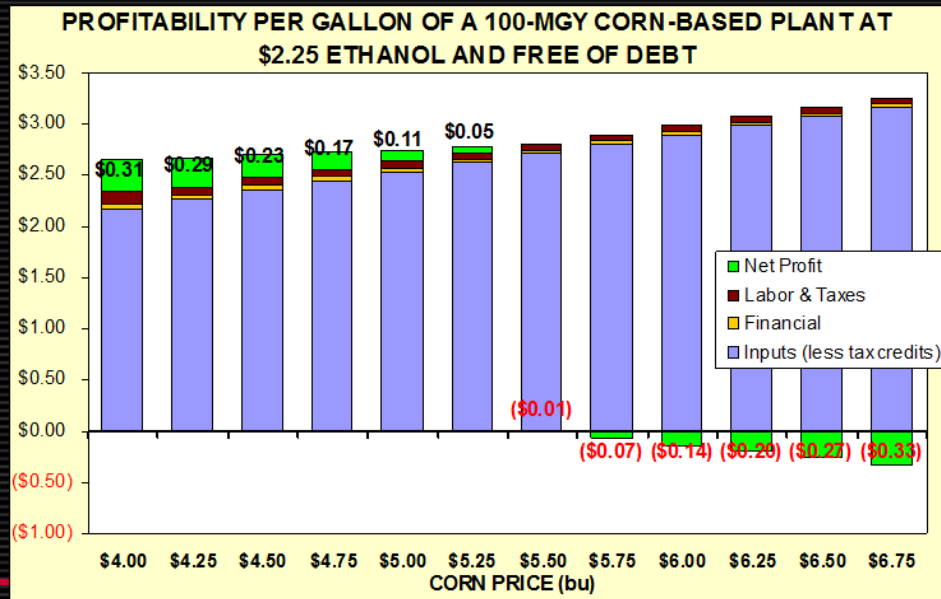
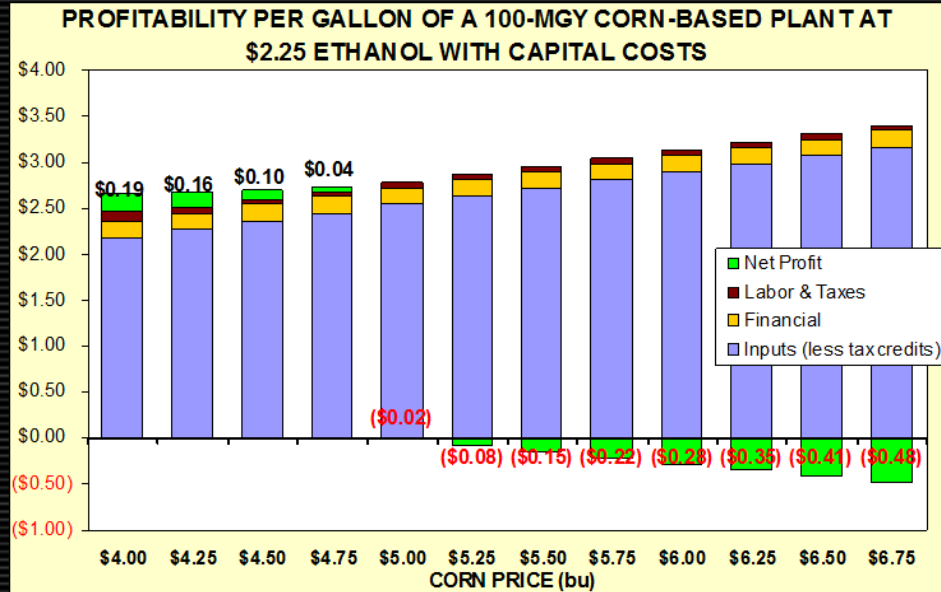
- Current spot market price.
- Well below futures price.
- Losses at \$6.25 corn for plants with debt
- Losses at \$6.75 corn for plants with no debt



SENSITIVITY ANALYSIS AT \$2.25 ETHANOL

At \$2.25/ga ethanol ...

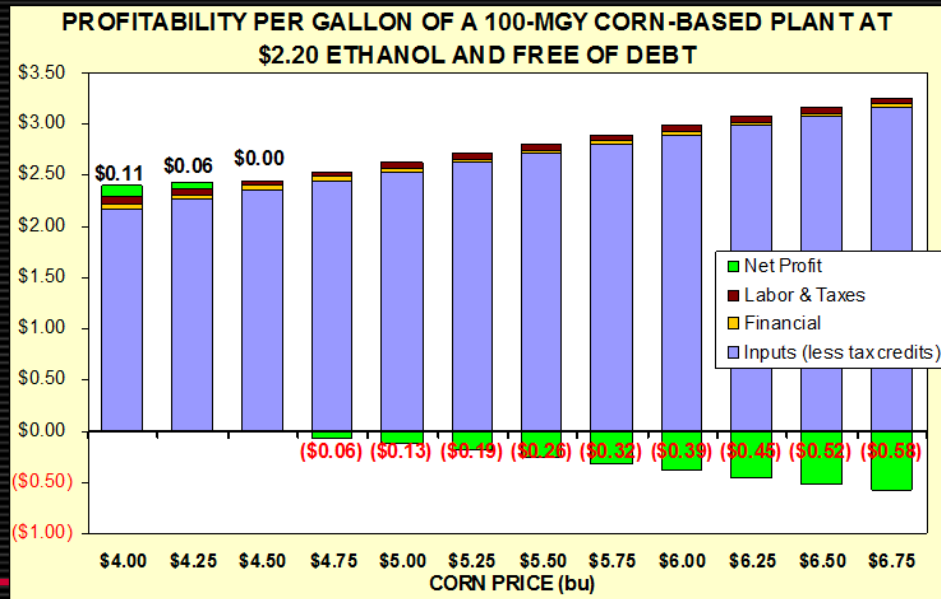
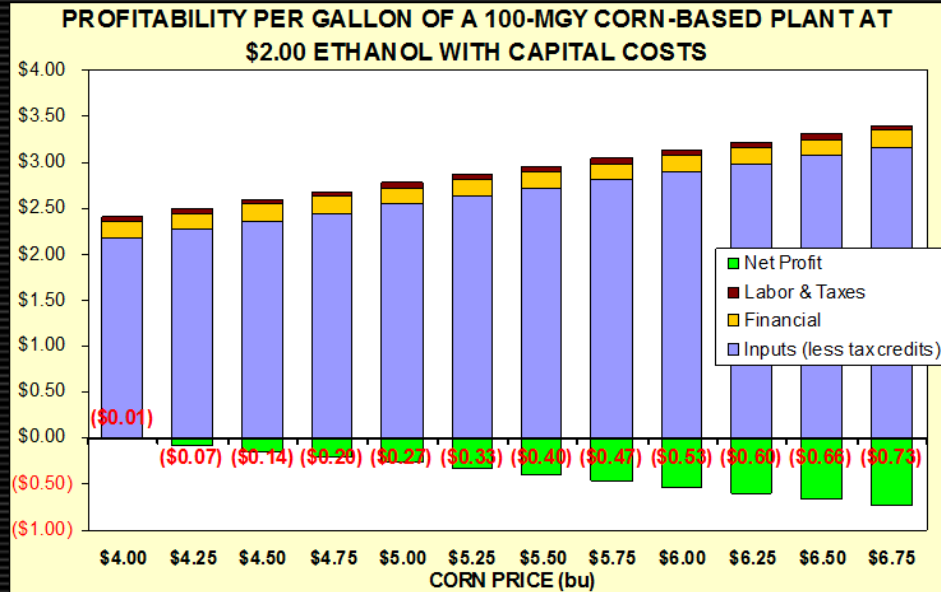
- Current futures price.
- Losses at \$5.25 corn for plants with debt
- Losses at \$5.75 corn for plant with no debt



SENSITIVITY ANALYSIS AT \$2.00 ETHANOL

At \$2.00/ga ethanol ...

- Long-term forecast price.
- Lower with policy changes?
- Losses at \$4.25 corn for plants with debt
- Losses at \$4.75 corn for plant with no debt



The Bullish News ...

- EISA doubled renewable fuel standard & state mandates
- Only commercially proved technology
- Clearing transport logistics will increase demand
- High oil prices keeps ethanol competitive
- Tax incentives and trade barriers extended
- Clean air still a compelling argument

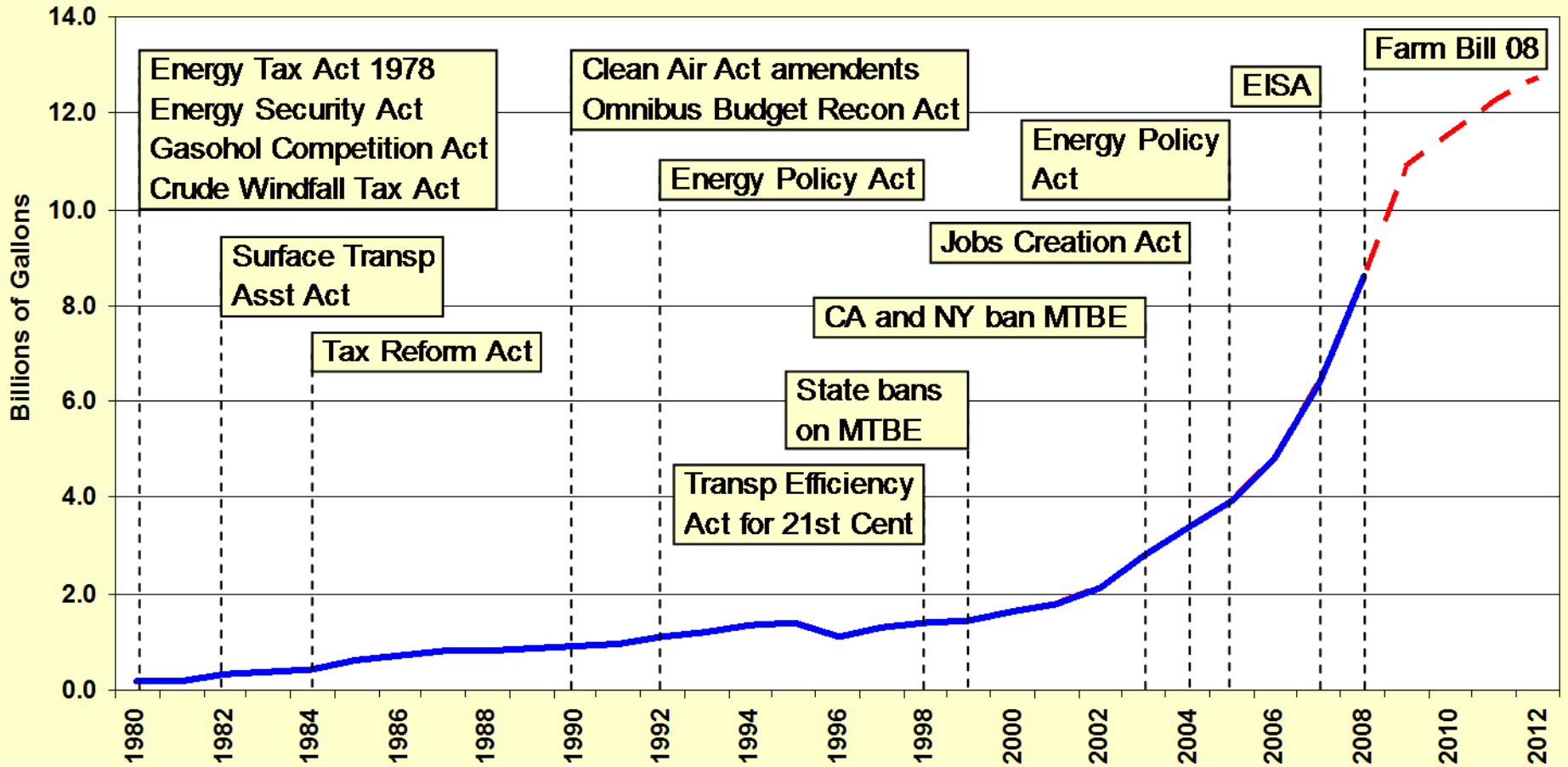
The Bearish News ...

- New plants will not be as profitable until debt is paid
- High corn and energy prices will affect profits
- Waiver of RFS and political pressure (2008 election)
- Advanced biofuels may hurt Midwest plants
- Negative public perception
- Industry still at whim of federal policy



ETHANOL -- POLICY NEXUS

U.S. ETHANOL PRODUCTION AND POLICY 1980-2008



POLICY SUMMARY

Expanded RFS ...

- Doubling of corn-based standard
- Creation of advanced demand, mostly cellulosic
- EPA controls mandate

Changes in tax credits and tariffs ...

- Small reduction in "blenders" credits
- New sizable production credit for cellulosic biofuels
- Extension of import tariff through 2010

Cellulosic ethanol is the priority ...

- Heavy investments in cellulosic R&D and commercialization.
- Over \$4.5 BILLION in spending through FY2014



THANK YOU!

For more information



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Sociology at Iowa State delivers teaching, research and extension programs in rural sociology, community studies and development, and food systems and the environment.