

# Status of the 2007 Farm Bill and the Bio-Economy

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# Farm Bill Progress

- The House has passed its version (7/27/2007, Vote 231-191)
- The Senate Agriculture Committee has passed its version (10/25/2007), but the full Senate has not finished debate on it
- Leaders are still pushing to pass the farm bill this year
- Both proposed farm bills face veto threats

# Let's Start with the House Version

- Continues direct payment, counter-cyclical payment, and marketing loan programs
- Rebalances target prices and loan rates
- Opens up an optional revenue-based counter-cyclical program
- Modifies payments limits for commodity programs
- Extends the Milk Income Loss Contract Program until 2012



# House Target Price Changes

Crop	Unit	Current TP	Change
Corn	\$/bu.	2.63	0.00
Soybeans	\$/bu.	5.80	0.30
Barley	\$/bu.	2.24	0.49
Wheat	\$/bu.	3.92	0.23
Oats	\$/bu.	1.44	0.06
Cotton	\$/lb.	0.724	-0.024
Minor Oilseeds	\$/lb.	0.101	0.014

# House Direct Payments

Crop	Unit	Current DP
Corn	\$/bu.	0.28
Soybeans	\$/bu.	0.44
Wheat	\$/bu.	0.52
Oats	\$/bu.	0.024
Sorghum	\$/bu.	0.35
Cotton	\$/lb.	0.0667
Rice	\$/cwt.	2.35

# House Loan Rate Changes

Crop	Unit	Current LR	Change
Corn	\$/bu.	1.95	0.00
Soybeans	\$/bu.	5.00	0.00
Wheat	\$/bu.	2.74	0.19
Malt Barley	\$/bu.	1.85	0.65
Feed Barley	\$/bu.	1.85	0.05
Oats	\$/bu.	1.33	0.13
Minor Oilseeds	\$/lb.	0.093	0.014

# Revenue Counter-Cyclical Option

- Gives producers a one-time option to choose between revenue- or price-based counter-cyclical payments
- Actual revenue = National average yield  
\*Max(Season-average Price, Loan Rate)
- Target revenue determined by Congress



# House Per Acre Target Revenues

Crop	TR	Crop	TR
	(\$/acre)		(\$/acre)
Corn	344.12	Wheat	149.92
Soybeans	231.87	Oats	92.10
Sorghum	131.28	Cotton	496.93
Barley	153.30	Rice	548.06
Minor Oilseeds	129.18	Peanuts	683.83



# National Payment Rate

- $(\text{Target revenue per acre} - \text{Actual revenue per acre}) / \text{National payment yield}$
- Puts payment on a per yield unit basis
- Payments to producers are equal to  $\text{National payment rate} * \text{Current CCP payment acres} * \text{Current CCP payment yield}$

# House National Payment Yields

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Crop	PY	Crop	PY
Corn	114.4 bu.	Wheat	36.1 bu.
Soybeans	34.1 bu.	Oats	49.8 bu.
Sorghum	58.2 bu.	Cotton	634 lb.
Barley	48.6 bu.	Rice	5,128 lb.
Minor Oilseeds	1,167.6 lb.	Peanuts	1.496 tons

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# Revenue Counter-cyclical Example

- National Average Yield = 150 bu./acre
- Season-Average Price = \$2.10/bu.
  
- Actual Revenue = \$315/acre
- Revenue CCP Payment Rate = \$0.25/bu.  
$$(344.12 - 315.00)/114.4$$
  
- Current CCP Payment Rate = \$0.25/bu.



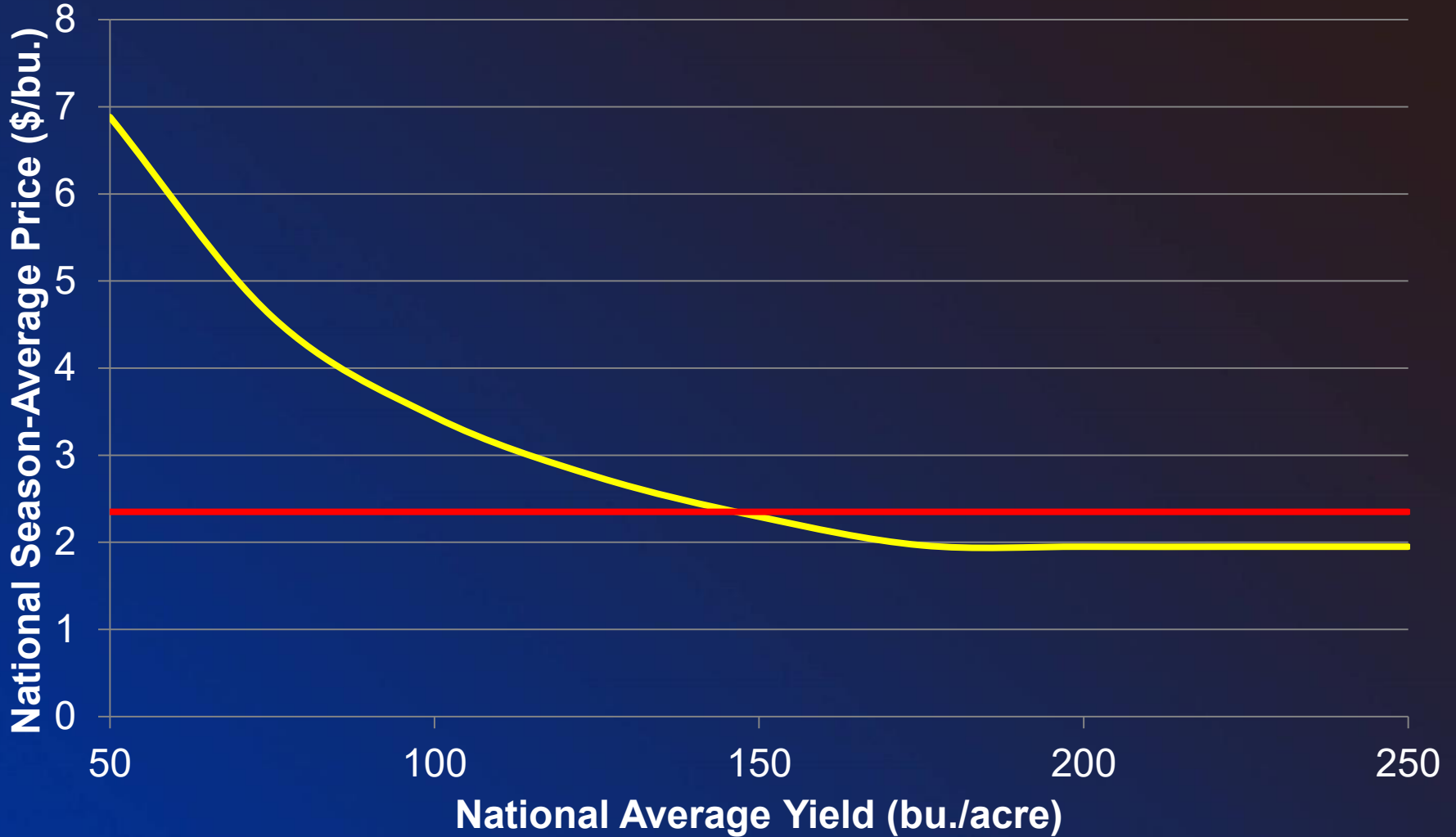
# But the Payments Will Differ

- National Average Yield = 145 bu./acre
- Season-Average Price = \$2.10/bu.
- Revenue CCP Payment Rate = \$0.35/bu.
- Current CCP Payment Rate = \$0.25/bu.

# But the Payments Will Differ

- National Average Yield = 155 bu./acre
- Season-Average Price = \$2.10/bu.
- Revenue CCP Payment Rate = \$0.16/bu.
- Current CCP Payment Rate = \$0.25/bu.

# Counter-cyclical Payout Regions



— Revenue CCP — Current CCP

# Marketing Loan Adjustments

- Separate loan rates for:
  - Long vs. short grain rice
  - Feed vs. malt barley
- Equalized county loan rates between corn and sorghum
- Changed definition of adjusted world price for cotton

# Payment Limitations

- Eliminates the 3-entity rule
- Direct attribution
- AGI cap of \$1 million (3-year average)
- If AGI > \$500K, 2/3 of income from agriculture
- Direct payment cap = \$60K
- Counter-cyclical payment cap = \$65K
- Marketing loan payment cap eliminated



# Other Provisions in Commodity Title

- No payments under \$25
- Extends MILC and sugar programs
- Mandates use of surplus sugar for ethanol
  - Surplus = Imports – U.S. food demand
- Pilot program in Indiana: allowing tomatoes on base acreage (payment base temporary reduced)

# Conservation Title

- Expand EQIP (\$1.9 billion over 5 years)
- Prohibit additional CSP signups until 2012
- Change CSP structure (no more tiers)
- Extend CRP, WHIP, and WRP

# Energy Title

- Renews Biobased products program
- Extends loan guarantees for biorefineries, along with many of the energy programs in the current farm bill
- Research money for alternative feedstocks
- Feasibility study of ethanol pipeline
- Creation of Biomass Inventory Report and Biomass Energy Reserve

# Miscellaneous Title

- Drop crop insurance administrative and operating expense rate to a max of 21.6%
- Raise fee for catastrophic coverage to \$200 per crop per county
- Target loss ratio moved from 1.075 to 1
- COOL by 2008 for red meats only

# CBO Projections for the House Version

Title	Change, 2008-12	Title	Change, 2008-12
	(\$ million)		(\$ million)
Commodity	-973	Research	265
Conservation	2,792	Forestry	41
Trade	601	Energy	2,429
Nutrition	4,205	Hort. and Organic	548
Credit	-378	Misc. and Additional	-6,130
Rural Dev.	114	Total	3,514



# Now on to the Senate Version

- Continues direct payment, counter-cyclical payment, and marketing loan programs
- Rebalances target prices and loan rates
- Opens up an optional revenue-based counter-cyclical program
- Modifies payments limits for commodity programs
- Extends the Milk Income Loss Contract Program until 2012



# Senate Target Price Changes

Crop	Unit	Current TP	Change
Corn	\$/bu.	2.63	0.00
Soybeans	\$/bu.	5.80	0.20
Barley	\$/bu.	2.24	0.39
Wheat	\$/bu.	3.92	0.28
Oats	\$/bu.	1.44	0.39
Cotton	\$/lb.	0.724	-0.0015
Minor Oilseeds	\$/lb.	0.101	0.0264

# Senate Direct Payments

Crop	Unit	Current DP
Corn	\$/bu.	0.28
Soybeans	\$/bu.	0.44
Wheat	\$/bu.	0.52
Oats	\$/bu.	0.024
Sorghum	\$/bu.	0.35
Cotton	\$/lb.	0.0667
Rice	\$/cwt.	2.35



# Senate Loan Rate Changes

Crop	Unit	Current LR	Change
Corn	\$/bu.	1.95	0.00
Soybeans	\$/bu.	5.00	0.00
Wheat	\$/bu.	2.74	0.20
Barley	\$/bu.	1.85	0.10
Oats	\$/bu.	1.33	0.06
Minor Oilseeds	\$/lb.	0.093	0.0079

# Average Crop Revenue Option

- Gives producers a one-time option (over a three year window) to choose a revenue-based counter-cyclical payment program
- Producers choose between the current stable of programs or Average Crop Revenue (ACR) with a fixed payment (\$15 per base acre for 100% of base) and recourse loans



# ACR

- State-level revenue counter-cyclical program starting in 2010
- Expected state yield based on linear trend yield per planted acre for state (1980-2006)
- ACR state pre-planting price is the average of revenue insurance planting prices for current year and previous 2 years



# ACR Structure

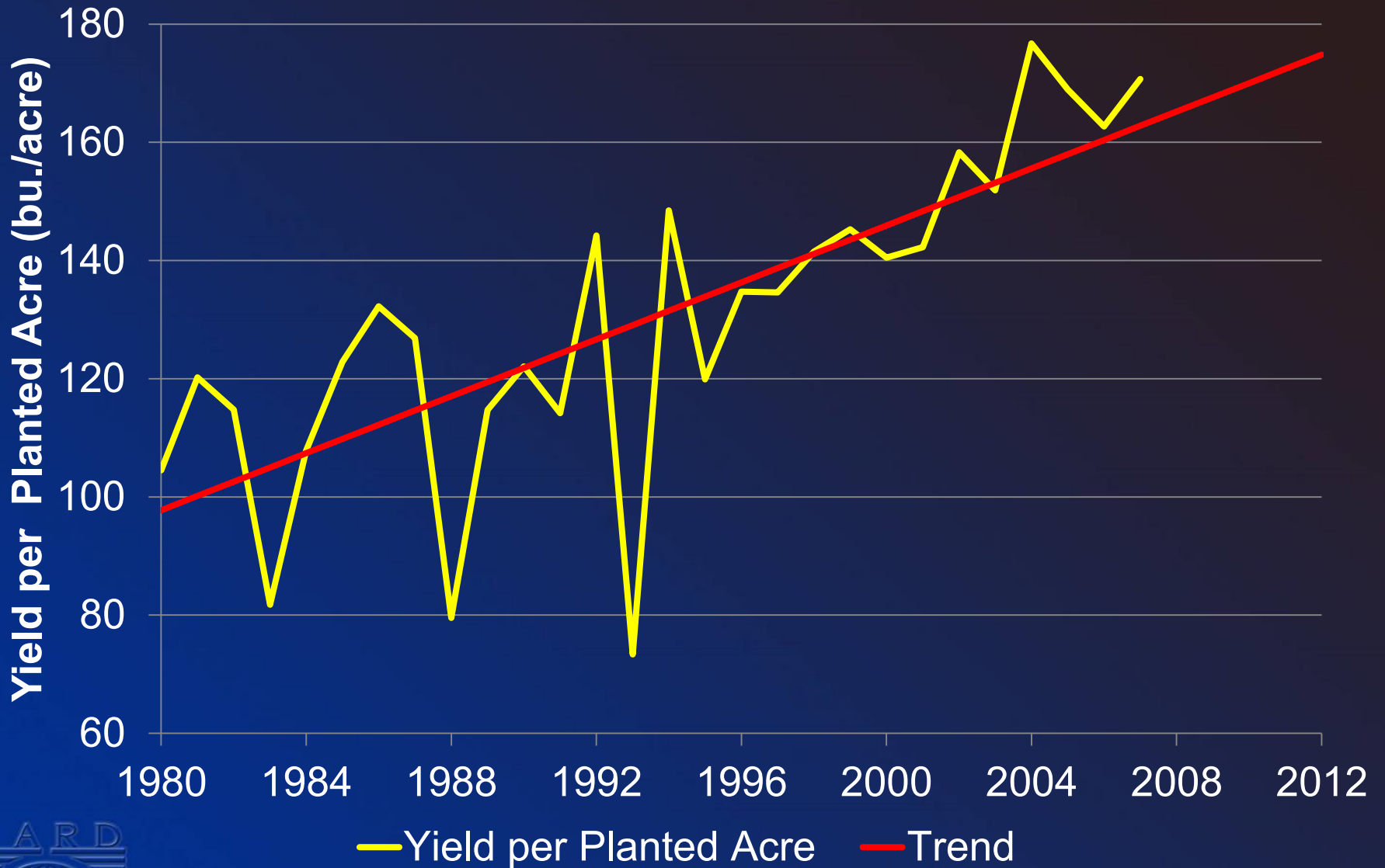
- Target Revenue =  $90\% \times \text{Expected State Yield} \times \text{ACR State Pre-Planting Price}$
- Actual State Revenue =  $\text{Actual State Yield per Planted Acre} \times \text{Revenue Insurance Harvest Price}$
- Payment triggered when actual revenue is below target revenue



# ACR Payments

- Payment Rate =  $90\% * (\text{Target Revenue} - \text{Actual State Revenue}) * \text{Ratio of Producer Insurance Yield to Expected State Yield}$
- Payments made on 85% of base acres

# ACR Yields for Iowa Corn



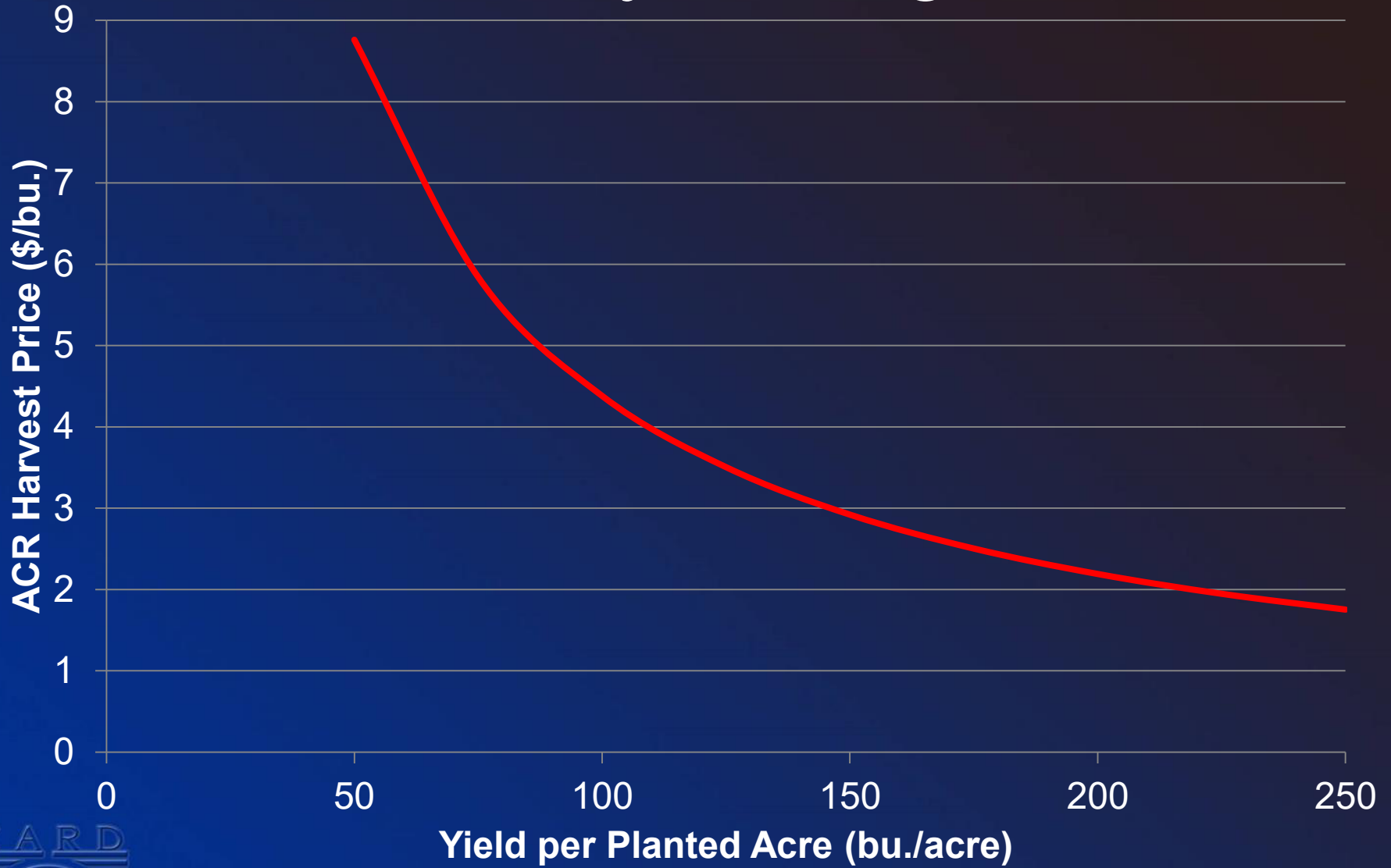
# ACR Parameters for Iowa Corn

Year	Trend Yield (bu/acre)	Year	Insurance Price (\$/bu)
2007	162.8	2005	2.32
2008	165.2	2006	2.59
2009	167.6	2007	4.06
2010	170.0		
2011	172.4	Average	2.99
2012	174.8		

For 2007, target revenue would be \$438.09 per acre



# ACR Payout Region





# Marketing Loan Adjustments

- Separate loan rates for:
  - Long vs. medium grain rice
- Equalized county loan rates between corn and sorghum
- Changed definition of adjusted world price for cotton

# Payment Limitations

- Direct attribution
- For 2009, AGI > \$1 million, 2/3 of income from agriculture
- For 2010 and beyond, AGI > \$750K, 2/3 of income from agriculture
- Direct payment cap = \$40K
- Counter-cyclical payment cap = \$60K
- Marketing loan payment cap eliminated
- No cap on ACR payments



# Other Provisions in Commodity Title

- Changed title name to Producer Income Protection (PIP)
- Extends MILC and sugar programs
- Mandates use of surplus sugar for ethanol
  - Surplus = Imports – U.S. food demand
- Pilot program in Indiana: allowing tomatoes on base acreage (payment base temporary reduced)

# Crop Insurance in PIP Title

- Reduced target loss ratio from 1.075 to 1
- Removes authority for Premium Reduction Plan
- Moves timing of producer-paid premiums (earlier) and insurance company reimbursements (later)
- Reduces administrative & operating expense reimbursement on area insurance plans
- Increases fees for catastrophic insurance and NAP

# Conservation Title

- Rename and expand CSP (targeting nearly 80 million acres by 2017)
- Combining CSP and EQIP in the Comprehensive Stewardship Incentives Program (CSIP)
- Extend EQIP (no additional funds)
- Extend CRP, WHIP, and WRP

# Energy Title

- Renews Biobased products program
- Extends loan guarantees for biorefineries, along with many of the energy programs in the current farm bill
- Research money for alternative feedstocks
- Feasibility study of ethanol pipeline

# Livestock Title

- COOL by 2008 for beef, pork, lamb, goat meat, fish, agricultural commodities, peanuts, and macadamia nuts

# CBO Projections for the Senate Version

Title	Change, 2008-12	Title	Change, 2008-12
	(\$ million)		(\$ million)
Producer Income Protection	-7,501	Research	-152
Conservation	4,424	Forestry	0
Trade	175	Energy	1,020
Nutrition	5,271	Livestock	1
Credit	-278	Misc.	-153
Rural Dev.	355	Total	3,163





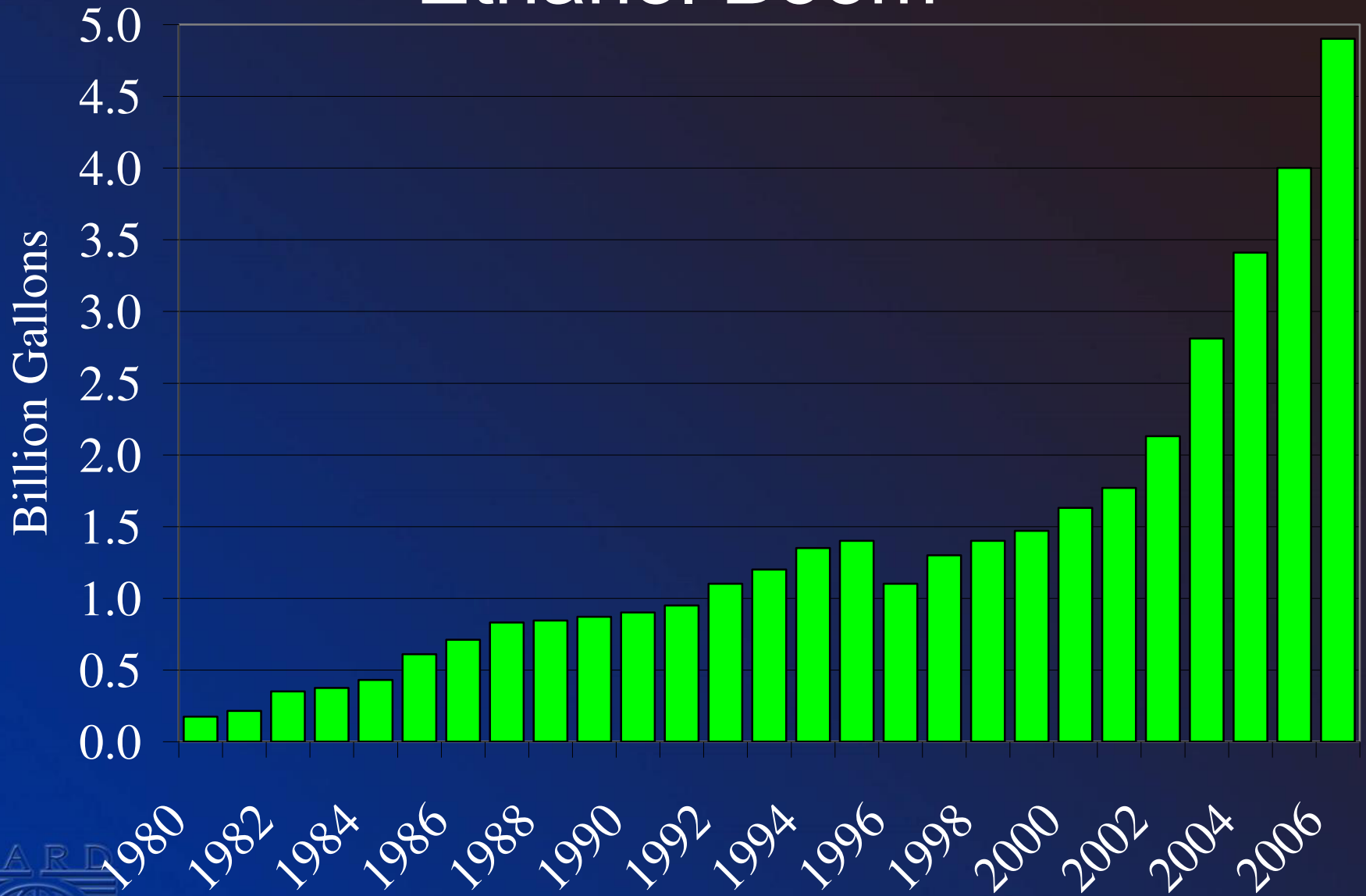
# Timing

- Right now, the farm bill is on the Senate floor
- Sides trying to reach agreement on the number and relevance of amendments
  - Nearly 100 amendments have been offered
- Sen. Reid may seek cloture to shorten time frame (would need 60 votes)

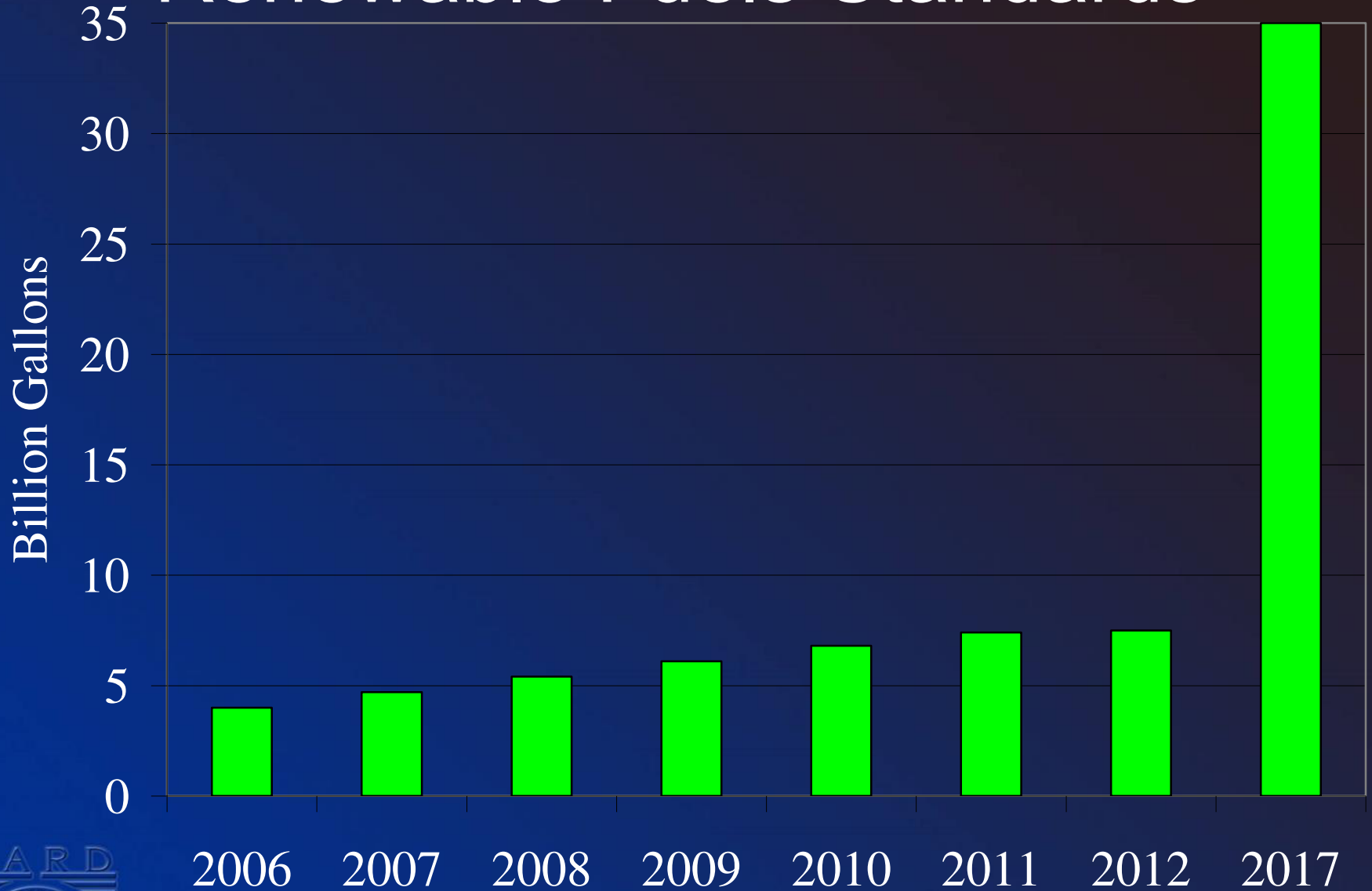
# Timing

- Could leave little time for House-Senate conference to pass a farm bill this year (more likely, early next year)
- Harkin will chair conference committee
- With money outside of agriculture used for offsets, conference committee will need to include members from other committees (Finance, Ways and Means)
- Both House and Senate bills face veto threats

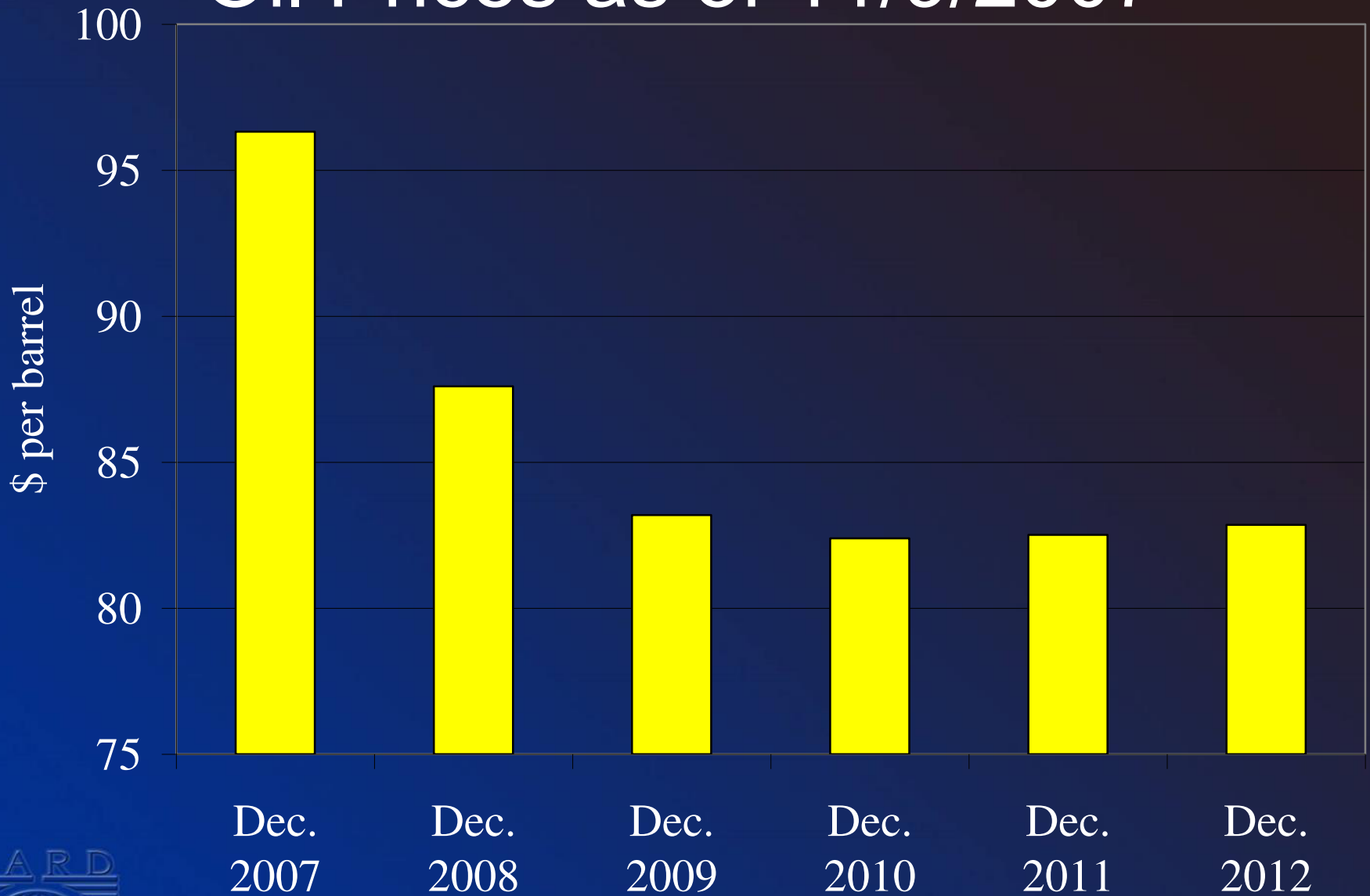
# Ethanol Boom



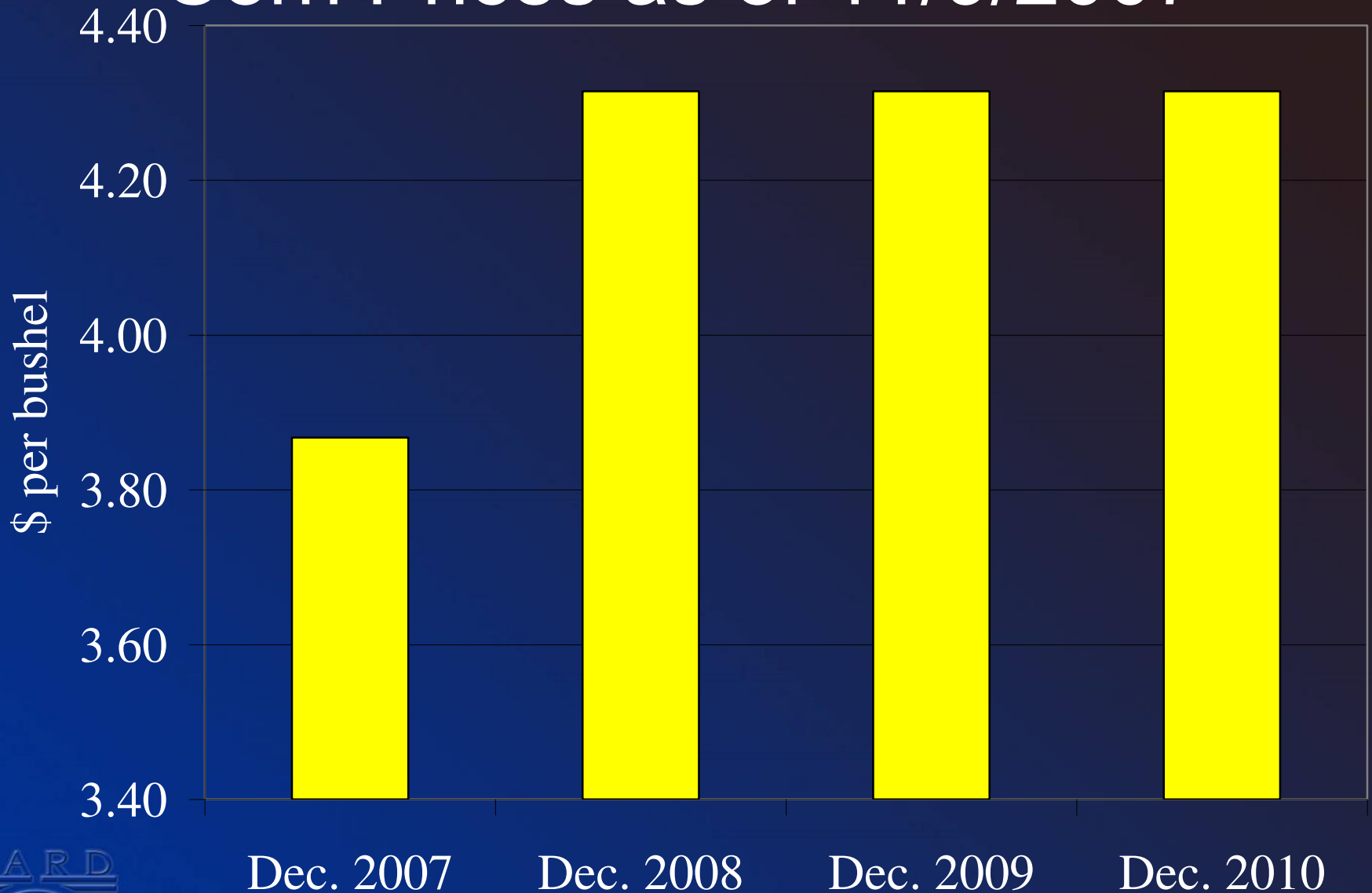
# Renewable Fuels Standards



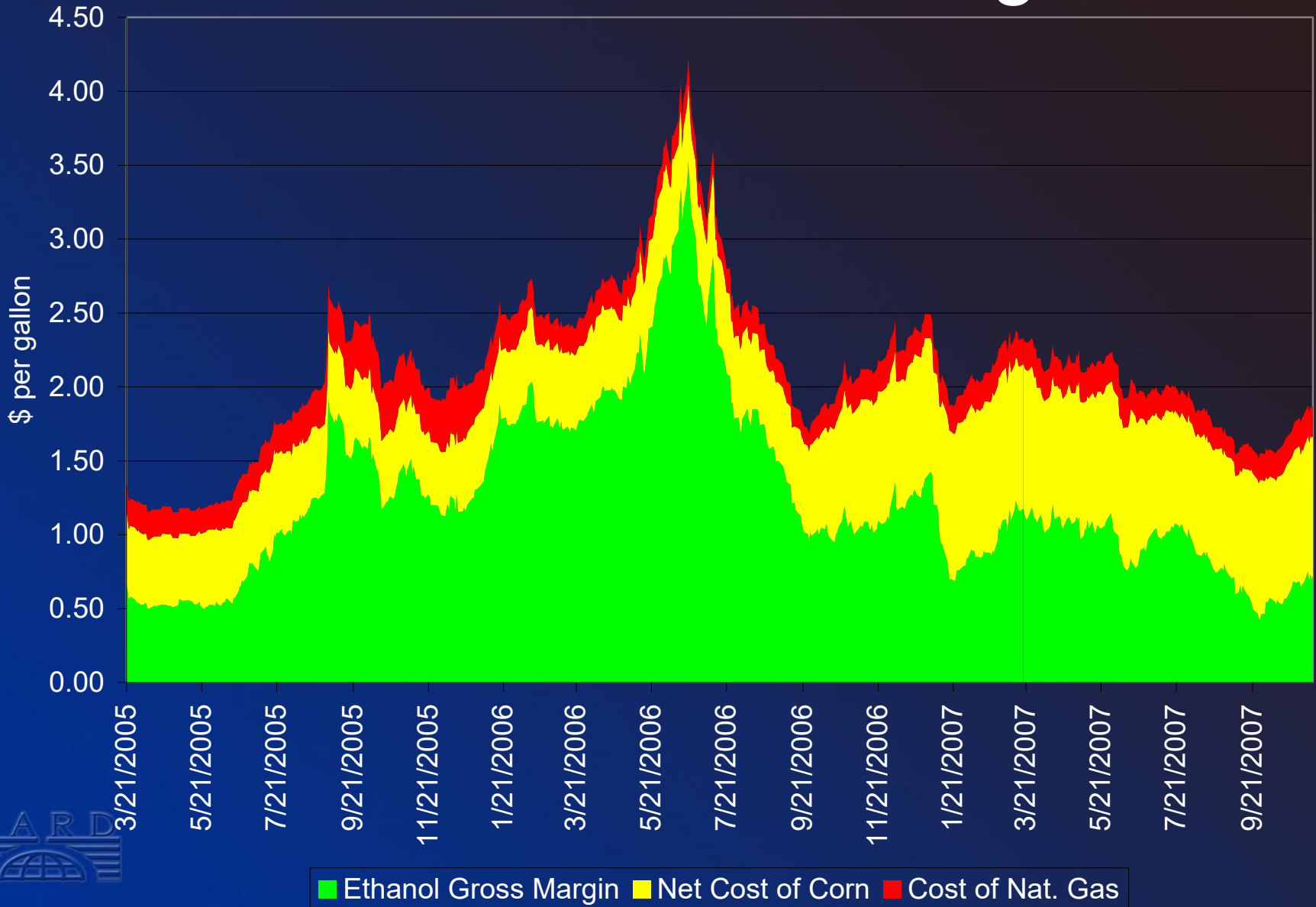
# Oil Prices as of 11/9/2007



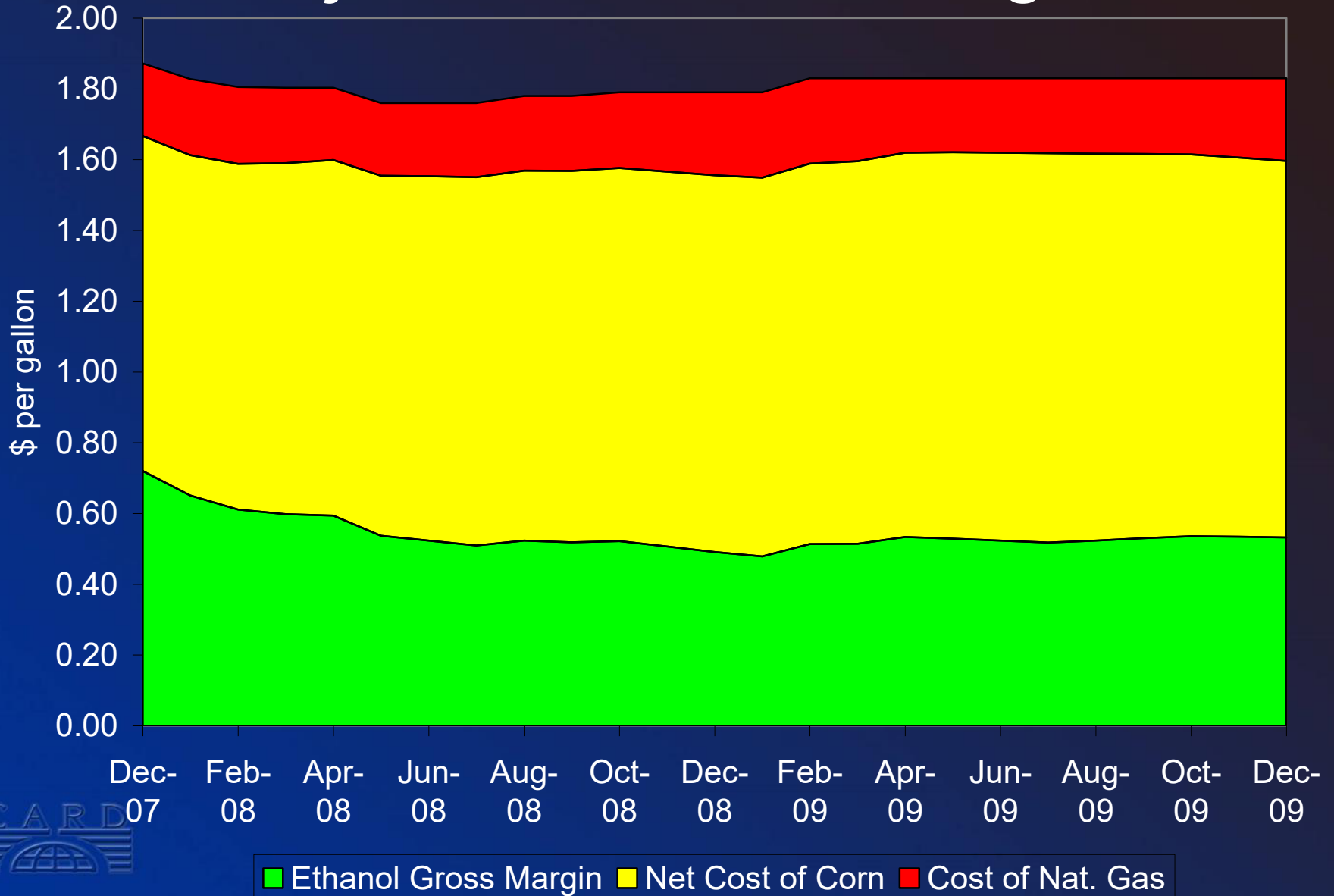
# Corn Prices as of 11/9/2007



# Historical Ethanol Margins



# Projected Ethanol Margins





# Cellulosic Ethanol

Earlier this year, the U.S. Department of Energy announced support for 6 pilot projects for cellulosic ethanol (up to \$385 million in funding over 4 years)

Goal: to make cellulosic ethanol cost-competitive with gasoline by 2012



# Pilot Plants

- Kansas (Abengoa Bioenergy Biomass)
  - 11.4 million gallons per year
  - Will use 700 tons of feedstock per day
  - Corn stover, wheat straw, sorghum stubble, switchgrass, etc.
  - Attached to corn-grain dry mill ethanol plant

# Pilot Plants

- Florida (ALICO, Inc.)
  - 13.9 million gallons per year
  - Will use 770 tons of feedstock per day
  - Yard, wood, and vegetative waste and energycane
  - Plan to also produce electric power, hydrogen, and ammonia

# Pilot Plants

- California (BlueFire Ethanol, Inc.)
  - 19 million gallons per year
  - Will use 700 tons of feedstock per day
  - Green and wood waste from landfills
- Idaho (Iogen Biorefinery Partners)
  - 18 million gallons per year
  - Will use 700 tons of feedstock per day
  - Wheat straw, corn stover, switchgrass, and rice straw

# Pilot Plants

- Georgia (Range Fuels)
  - 40 million gallons per year
  - Will use 1,200 tons of feedstock per day
  - Wood residues and wood based energy crops
  - Also plan to produce 9 million gallons of methanol

# Pilot Plants

- Iowa (POET)
  - 32 million gallons per year
  - Will use 842 tons of feedstock per day
  - Corn fiber, cobs, and stalks
  - In combination with an existing corn-based ethanol plant
  - Combined production: 125 million gallons per year