



# Corn-Based Ethanol: An Advanced Biofuel | 2011

The Renewable Fuels Standard in the Energy and Security Act of 2007 mandates that 2 billion gallons of ADVANCED BIOFUELS be used in the US marketplace in 2012. The probability that we will meet this requirement is negligible if corn starch ethanol continues to be exempt from qualifying as an Advanced Biofuel.

Current ethanol capacity is 14.4 to 14.6 billion gallons with an arbitrary legislative cap at 15 billion gallons by the end of 2015, leaving room for approximately only four or five new plants to be built in the US.

The intent of the RFS schedule (below) was for cellulose and other biofuels to meet the Advanced Biofuel mandates, but those industries are still too immature. The failure of US ethanol to meet the total RFS mandate of 36 billion gallons by 2022 puts our nation's energy security at risk.

## What is an Advanced Biofuel?

- Essentially anything but corn starch ethanol
- Includes cellulosic ethanol and biomass-based diesel
- Must meet a 50% lifecycle GHG threshold

### NEW RENEWABLE FUELS STANDARD SCHEDULE

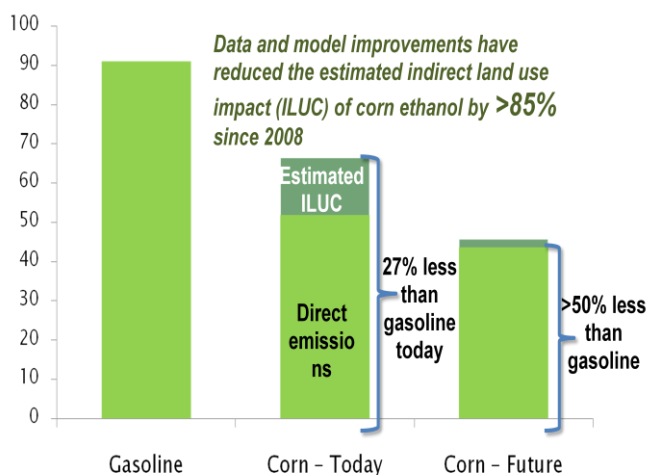
Year	Renewable Biofuel	Advanced Biofuel	Cellulosic Biofuel	Biomass-based Diesel	Undifferentiated Advanced Biofuel	Total RFS
2008	9.0					9.0
2009	10.5	.6		.5	0.1	11.1
2010	12	.95	.1	.65	0.2	12.95
2011	12.6	1.35	.25	.8	0.3	13.95
2012	13.2	2	.5	1	0.5	15.2
2013	13.8	2.75	1		1.75	16.55
2014	14.4	3.75	1.75		2	18.15
2015	15	5.5	3		2.5	20.5
2016	15	7.25	4.25		3.0	22.25
2017	15	9	5.5		3.5	24
2018	15	11	7		4.0	26
2019	15	13	8.5		4.5	28
2020	15	15	10.5		4.5	30
2021	15	18	13.5		4.5	33
2022	15	21	16		5	36



## POTENTIAL GALLONS OF CORN ETHANOL AVAILABLE FOR RFSII BY 2015

	2002	2006	2007	2008	2009	USDA 2010	PRX 2015 (Potential)
Harvested corn acres & yield	69.3M (129.3 bu/A)	70.6M (149.1 bu/A)	85.4M (152.8 bu/A)	78.6M (153.9 bu/A)	79.6 M (164.7 bu/A)	81.3 M (154.3 bu/A)	84.1 M (191.1 bu/A)
Total Corn Produced	8,966 Mbu	10,500 Mbu	13,100 Mbu	12,092 Mbu	13,110 Mbu	12,540 Mbu	16,435 Mbu
Ethanol produced	2.1B gal	4.9B gal	8.0B gal	10.2B gal	12.7B gal	13.4B gal	20.5B gal
Net corn used for ethanol	546 M bu (6%)	1,274 M bu (12%)	2,014 Mbu (15%)	3,713 Mbu (31%)	4,568 Mbu (35%)	4,800 Mbu (38%)	5,441 Mbu (33%)
Corn available for other uses	8,420 Mbu	9,226 Mbu	11,153 Mbu	8,379 Mbu	8,542 Mbu	7,740 Mbu	10,624 Mbu
Ending Stocks	Mbu			1,673 Mbu	1,708 Mbu	827 Mbu	2,076 Mbu

## WHAT WILL U.S. CITIZENS GAIN IF CORN-BASED ETHANOL IS CONSIDERED AN ADVANCED BIOFUEL?



1. Corn starch ethanol is the lowest cost biofuel in the RFS II.
2. By 2015, corn starch ethanol will meet the performance requirements of an Advanced Biofuel.
3. Corn starch ethanol can help meet the volume requirements for Advanced Biofuels in the RFS II.
4. Corn starch ethanol as an Advanced Biofuel will accelerate the commercialization of cellulose ethanol from corn kernel fiber and stover.