

Do Tax Incentive Programs Change Taxpayers' Behavior?

A Case Study Of Effectiveness of the Iowa Biofuel Retailers' Tax Credits

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OUTLINE

- **Purpose of Iowa's tax credits for biofuel retailers**
- **Iowa's tax credits for biofuel retailers**
- **Formulation of the Ethanol Promotion Tax Credit**
- **Biofuel distribution percentages**
- **Exit rates of the EPTC claimants**
- **Summary**

PURPOSE OF IOWA'S BIOFUEL TAX CREDITS FOR RETAILERS

- **2006: Iowa General Assembly enacts H.F. 2754**
- **Establishing the Goal:**
 - 25 percent of all petroleum used in gasoline to be replaced by biofuels (ethanol and biodiesel) by 2020
- **Purpose of tax credits for retailers:**
 - Provide tax incentives for retailers selling renewable fuels to help achieve the 2020 goal
- **Iowa currently provides four biofuel retailers Tax Credits**

IOWA'S BIOFUEL TAX CREDITS FOR RETAILERS

- **Ethanol Promotion Tax Credit (EPTC)**
 - \$0.04-\$0.08 per gallon of pure ethanol sold if biofuel threshold is met or within certain percentage points.
- **E85 Gasoline Promotion Tax Credit**
 - \$0.16 per gallon of E85 sold
- **E15 Plus Gasoline Promotion Tax Credit**
 - Sales from Jan 1 – May 31 and Sept 16 – Dec 31: \$0.03 per gallon of E15+ sold
 - Sales from June 1 – Sept 15: \$0.10 per gallon of E15+ sold
- **Biodiesel Blended Fuel Tax Credit**
 - \$0.045 per gallon sold for biodiesel blends classified as B5 or higher

Retailers can claim the EPTC even if the retailer claims an E15 Plus Gasoline Promotion Tax Credit and/or E85 Gasoline Promotion Tax Credit for the same tax year for the same ethanol gallons sold.

BIOFUEL DISTRIBUTION PERCENTAGE FORMULA

(EXAMPLE: SMALL RETAILER IN 2013)

- ~~15,000 Gallons Pure Gasoline = 0% Ethanol and 100% Gasoline~~
- ~~80,000 Gallons E10 = 8,000 Gallons Ethanol and 90% Gasoline~~
- ~~0 Gallon E15+ = 15% Ethanol and 85% Gasoline~~
- ~~5,000 Gallons E85 = 4,250 Gallons Ethanol and 21% Gasoline~~
- ~~5,000 Gallons B2 Biodiesel = 100 Gallons Biofuel and 0% Gasoline~~
- ~~10,000 Gallons Pure Diesel = 0 Gallons Biofuel and 0% Gasoline~~
- 100,000 total Gasoline Gallons 12,050 Biofuel Gallons (12.1%)

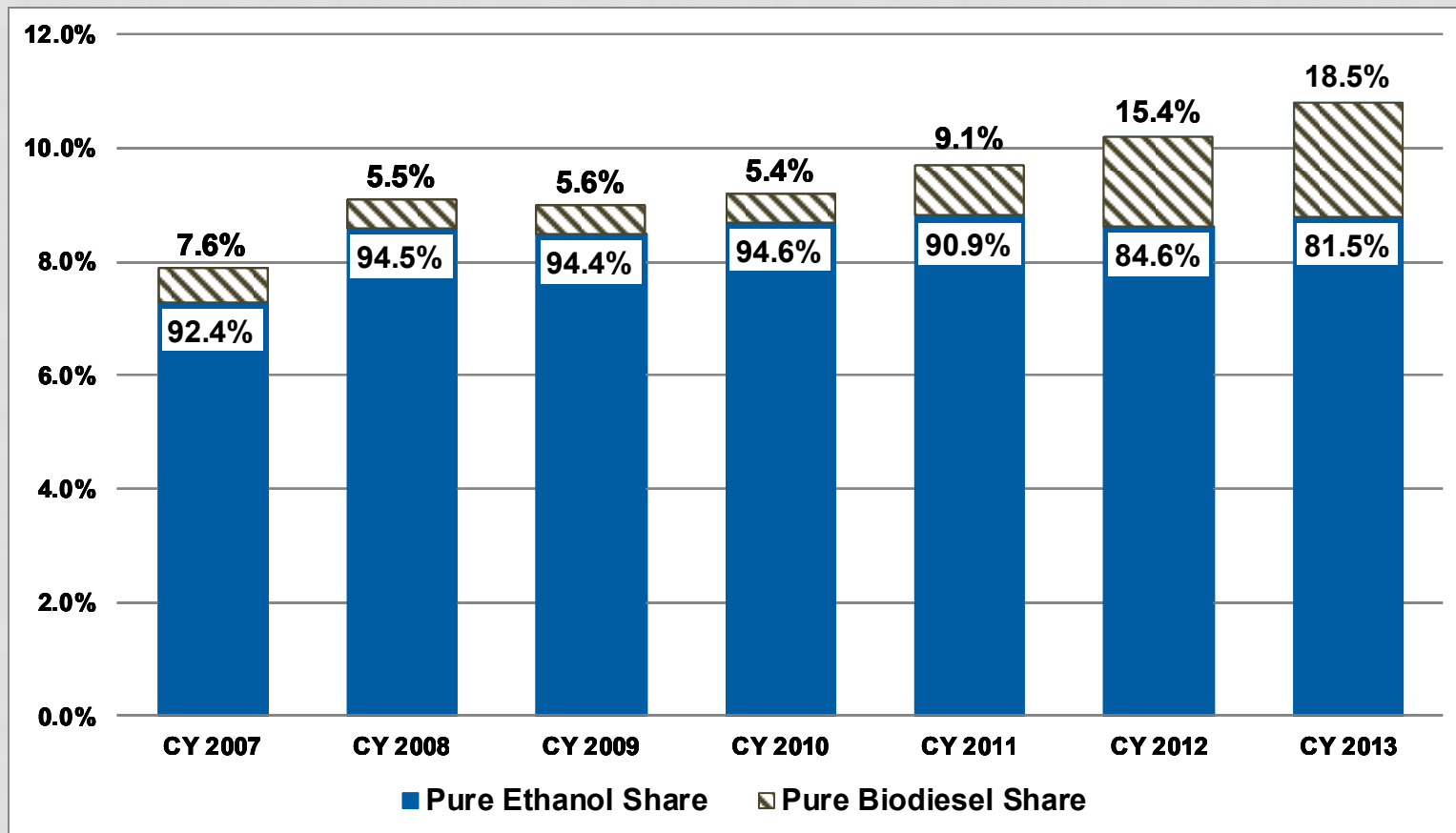
ETHANOL PROMOTION TAX CREDIT

- Retailer has met threshold: \$0.08 per gallon pure ethanol
- Retailer misses the threshold by 2 percentage points or less: \$0.06 per gallon pure ethanol
- Retailer misses the threshold by more than 2 percentage points but not more than 4 percentage points: \$0.04 per gallon pure ethanol
- Retailer misses the threshold by 4 percentage points or more: Not eligible for credit

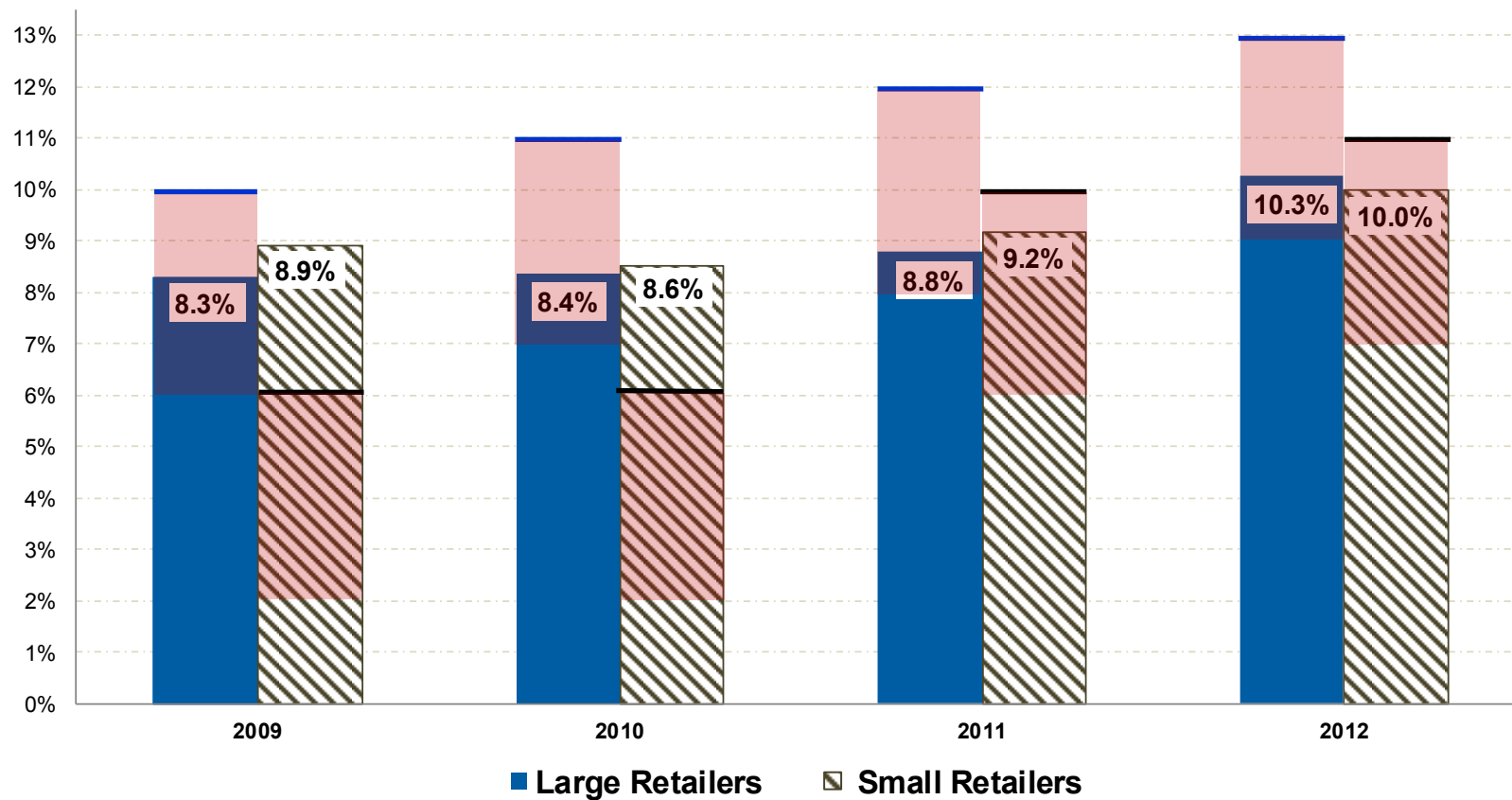
Calendar Year of Sales	Biofuel Threshold Percentages	
	Large Retailers	Small Retailers
2009	10%	6%
2010	11%	6%
2011	12%	10%
2012	13%	11%
2013	14%	12%
2014	15%	13%
2015	17%	14%
2016	19%	15%
2017	21%	17%
2018	23%	19%
2019	25%	21%
2020	25%	25%
2021 and later	NA	NA

Source: Iowa Code 422.11N and 422.33 (11A).
Credit expires on January 1, 2021.

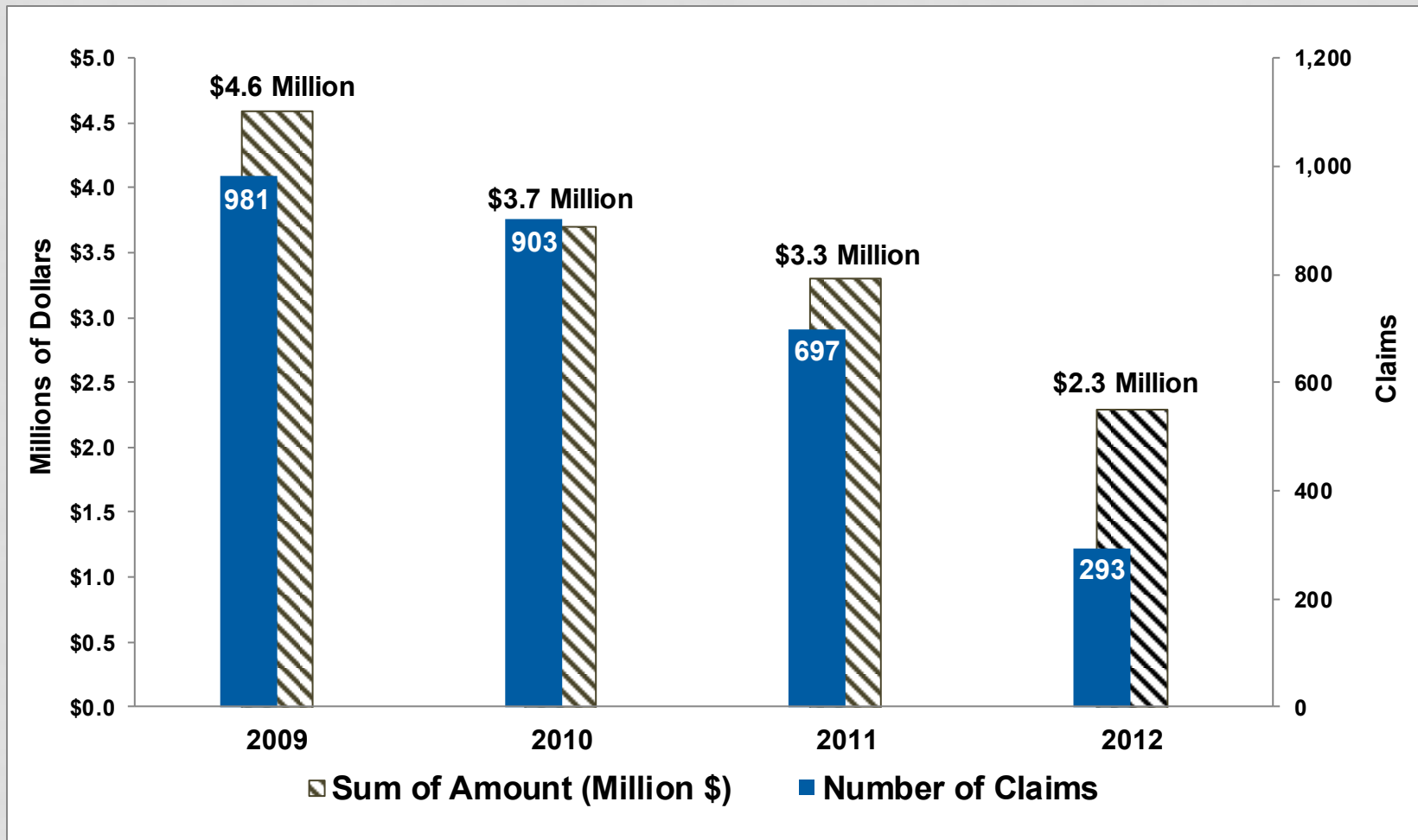
STATEWIDE BIOFUEL DISTRIBUTION PERCENTAGE



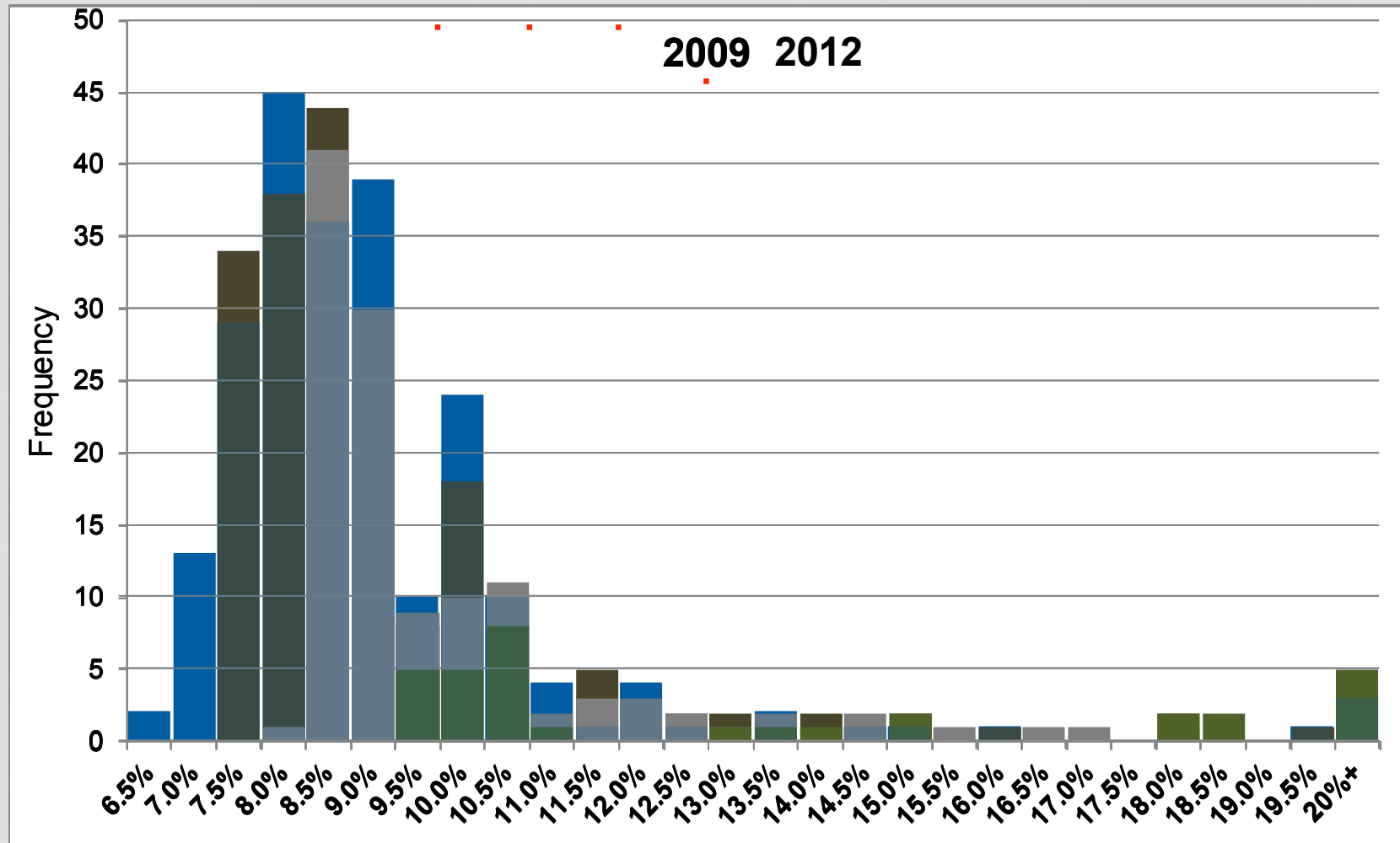
MEDIAN BIOFUEL DISTRIBUTION PERCENTAGE VS. THRESHOLD PERCENTAGE



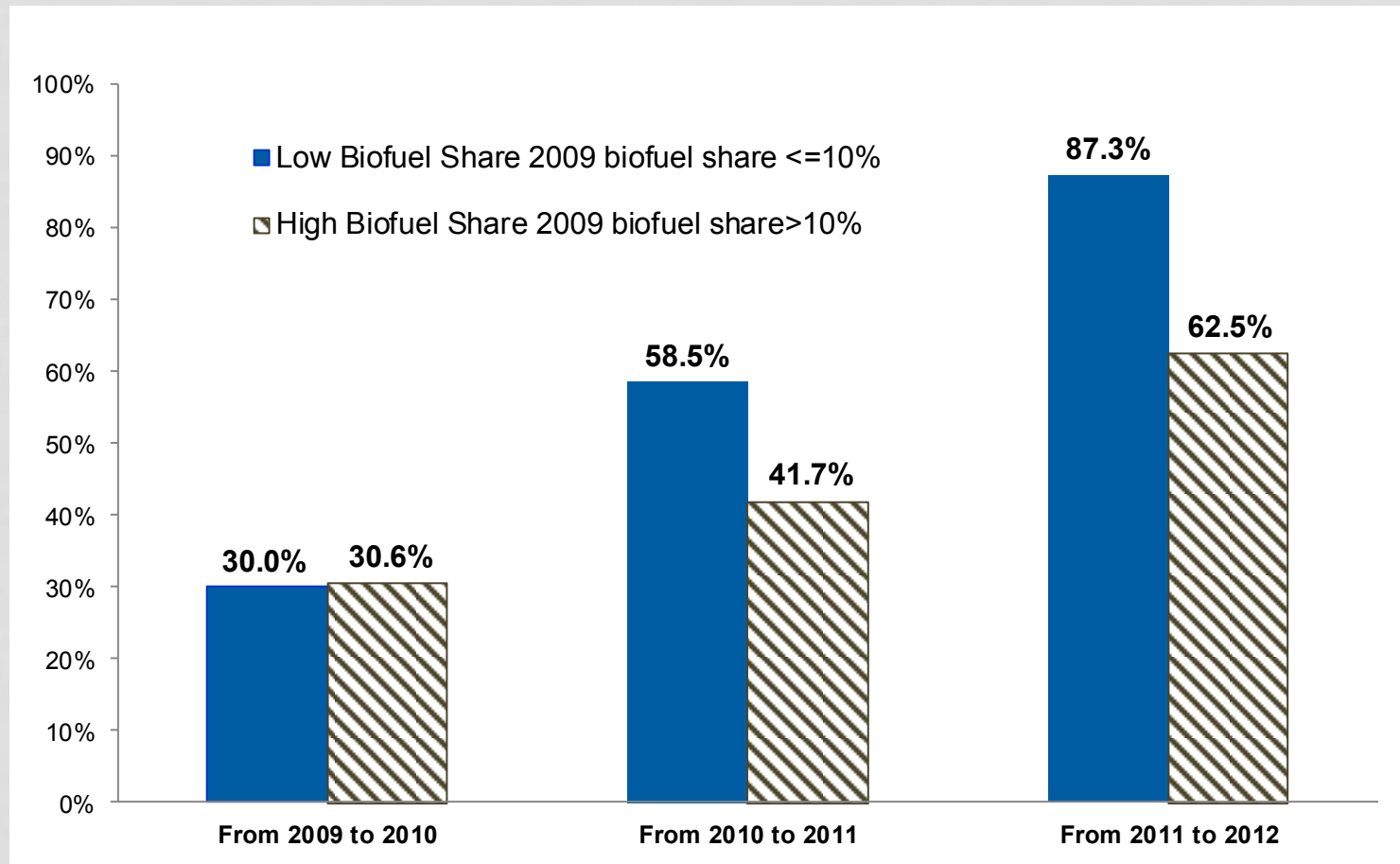
CLAIM NUMBERS AND AMOUNTS OF THE ETHANOL PROMOTION TAX CREDIT



BIOFUEL DISTRIBUTION PERCENTAGE FOR LARGE RETAILERS



EXIT RATE OF LARGE RETAILERS BY STARTING LEVEL OF BIOFUEL SHARE



Source: IA137 data. Preliminary results.

SUMMARY

- Through increasing the biofuel threshold percentages over time, the EPTC aims to promote ethanol sales in Iowa to help achieve the 2020 goal.
- As the biofuel threshold percentage increased, more and more retailers were no longer able to meet the thresholds and therefore exited from the tax credit program.
- The EPTC did not change biofuel retailers' behavior in the intended way.

QUESTIONS?

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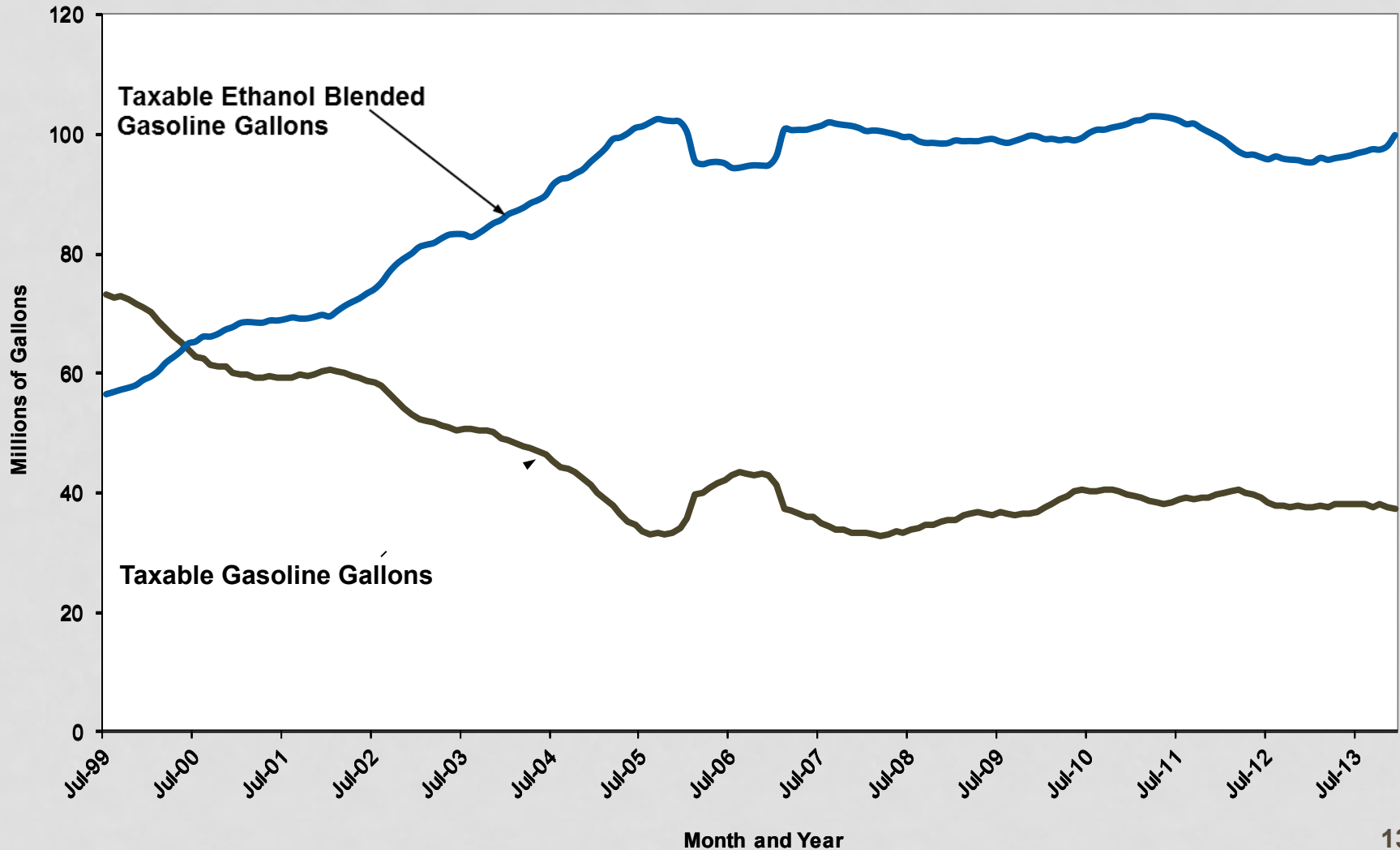
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(SUPPLEMENTAL INFORMATION) SALES OF ETHANOL BLENDED GASOLINE IN IOWA



Source: Iowa Department of Revenue, *Motor Fuel Tax Monthly Reports*

(SUPPLEMENTAL INFORMATION) RATE SCHEDULE FOR THE ETHANOL PROMOTION TAX CREDIT

Calendar Year of Sales	Biofuel Threshold Percentages										
	Credit Rate Per Gallon of Pure Ethanol Sold			Small Retailers						Large Retailers	
	Rate 1	Rate 2	Rate 3	Threshold	Threshold - - 2%	Threshold - 4%	Threshold	Threshold - - 2%	Threshold - 4%		
2009	\$0.065	\$0.045	\$0.025	6%	4%	2%	10%	8%	6%		
2010	\$0.065	\$0.045	\$0.025	6%	4%	2%	11%	9%	7%		
2011	\$0.08	\$0.06	\$0.025	10%	8%	6%	12%	10%	8%		
2012	\$0.08	\$0.06	\$0.04	11%	9%	7%	13%	11%	9%		
2013	\$0.08	\$0.06	\$0.04	12%	10%	8%	14%	12%	10%		
2014	\$0.08	\$0.06	\$0.04	13%	11%	9%	15%	13%	11%		
2015	\$0.08	\$0.06	\$0.04	14%	12%	10%	17%	15%	13%		
2016	\$0.08	\$0.06	\$0.04	15%	13%	11%	19%	17%	15%		
2017	\$0.08	\$0.06	\$0.04	17%	15%	13%	21%	19%	17%		
2018	\$0.08	\$0.06	\$0.04	19%	17%	15%	23%	21%	19%		
2019	\$0.08	\$0.06	\$0.04	21%	19%	17%	25%	23%	21%		
2020	\$0.08	\$0.06	\$0.04	25%	23%	21%	25%	23%	21%		
2021 and later	NA	NA	NA	NA	NA	NA	NA	NA	NA		

Source: Iowa Code 422.11N and 422.33 (11A). Credit expires on January 1, 2021.