

IOWA STATE UNIVERSITY

# RINs: An Economic Perspective

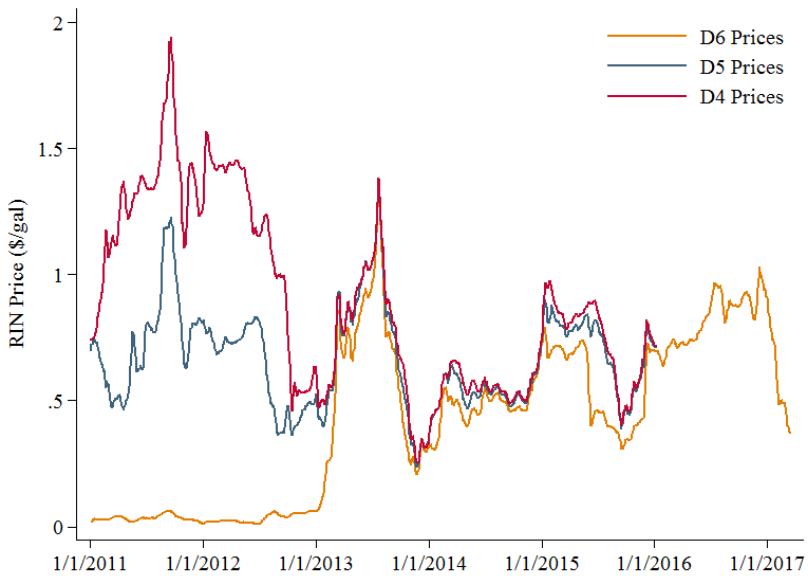
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# A Market Gone Wild?



ENERGY &amp; ENVIRONMENT

## U.S. Struggles to Rescue Green Program Hit by Fraud

By MATTHEW L. WALD OCT. 11, 2012



BUSINESS DAY | THE HOUSE EDGE

## Wall St. Exploits Ethanol Credits, and Prices Spike

By GRETCHEN MORGESON and ROBERT GEBELOFF SEPT. 14, 2013

Bloomberg Markets Markets Tech Pursuits Politics Opinion Businessweek Subscr...

## Icahn Calls on EPA to Fix ‘Mother of All Short Squeezes’

By Laura Blewitt and Zachary Mider  
August 15, 2016, 2:21 PM CDT Updated on August 16, 2016, 2:31 PM CDT

Bloomberg Markets Markets Tech Pursuits Politics Opinion Businessweek

## Biggest U.S. East Coast Oil Refinery Files for Bankruptcy

By Barbara J Powell and Tiffany Kary  
January 22, 2018, 12:26 AM CST Updated on January 22, 2018, 10:46 AM CST

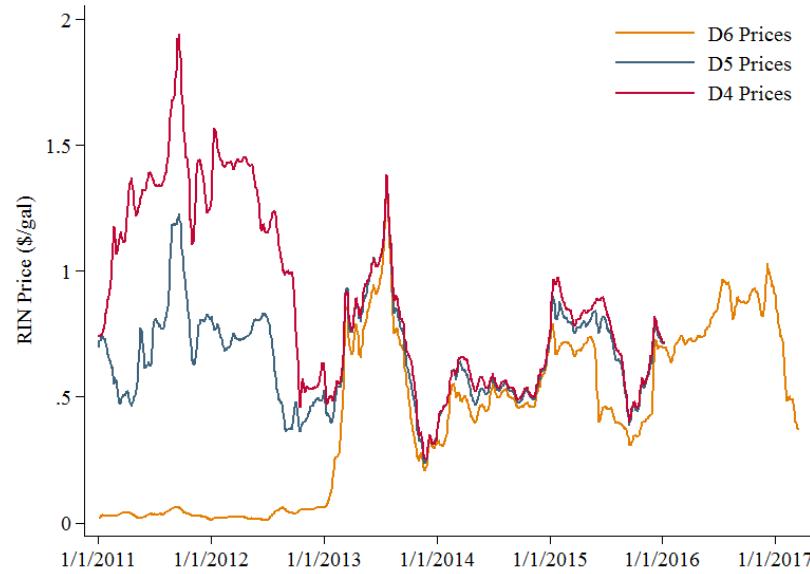
→ Expenses tied to renewable fuels spur Chapter 11 filing

# A Tale of Fundamentals

## What factors determine RIN prices?

Prices driven by *marginal* compliance costs

How much does *last* gallon of biofuel cost relative to gas/diesel



# A Tale of Fundamentals

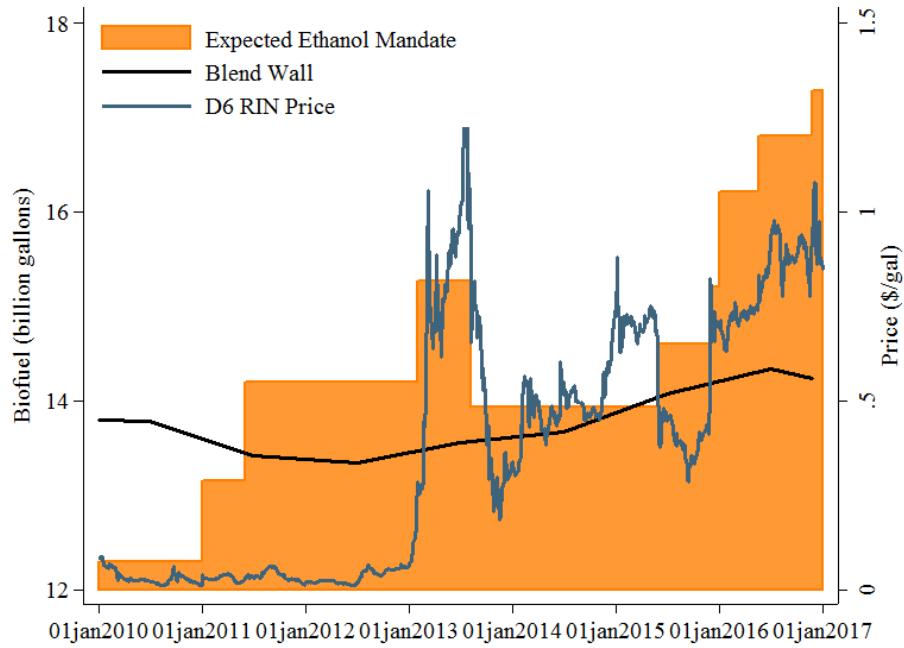
## What Determines D6 Prices?

Blend wall!

- Cheap to roll out E10 nation-wide

Compliance beyond the blend wall requires:

1. High-blend ethanol fuels (E85/E15)
2. Biodiesel

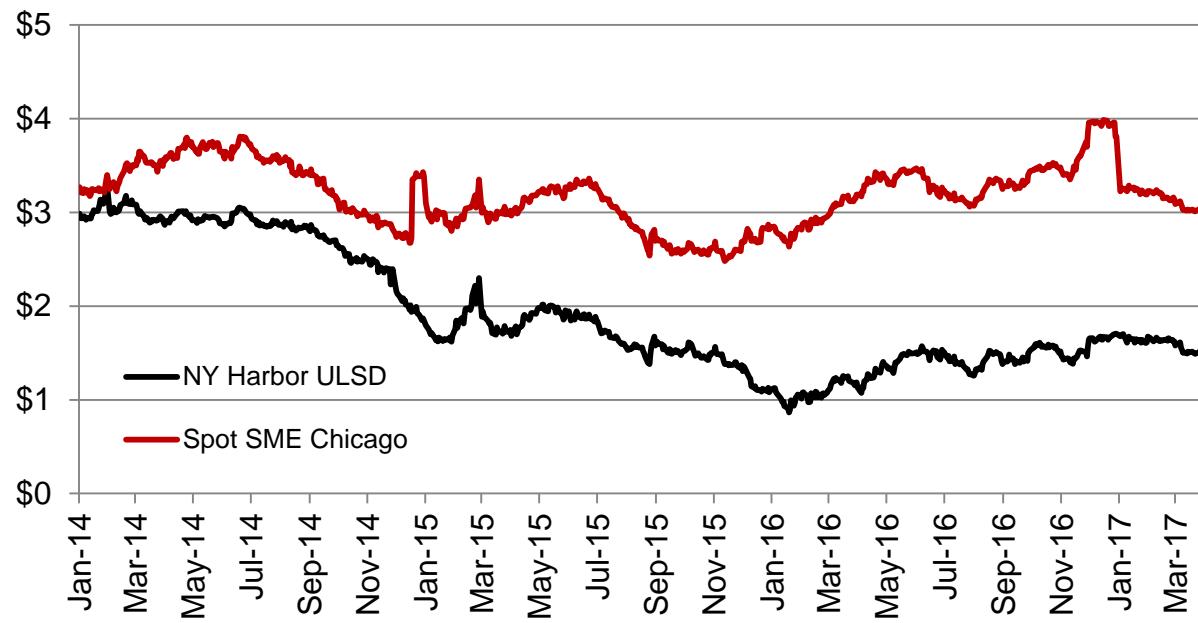


# A Tale of Fundamentals

## What Determines D4 Prices?

No substantive blending issues

BUT, production costs much higher

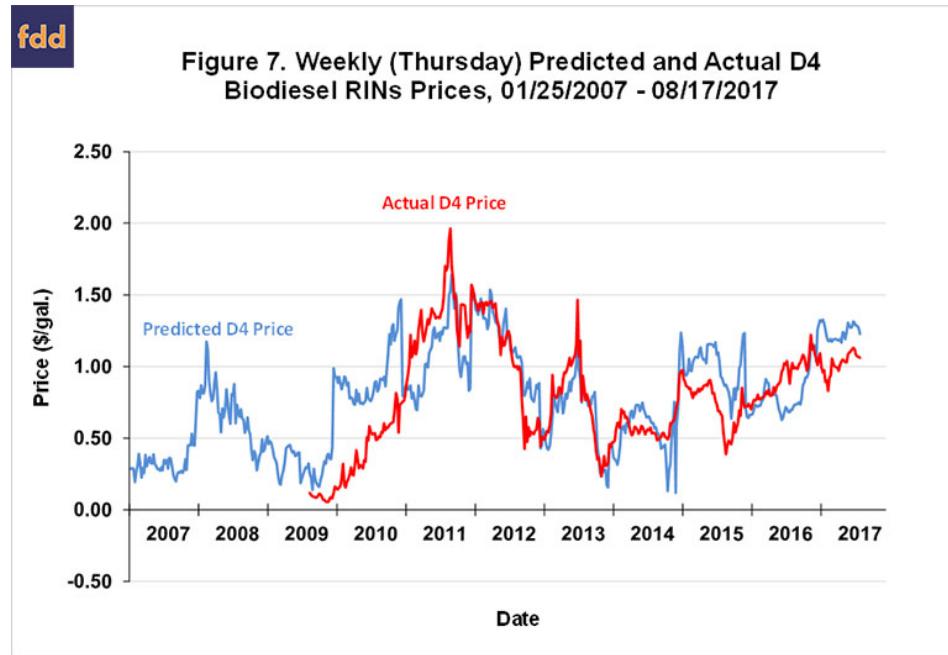


# A Tale of Fundamentals

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# A Tale of Fundamentals

## How do RINs impact gas/diesel prices?

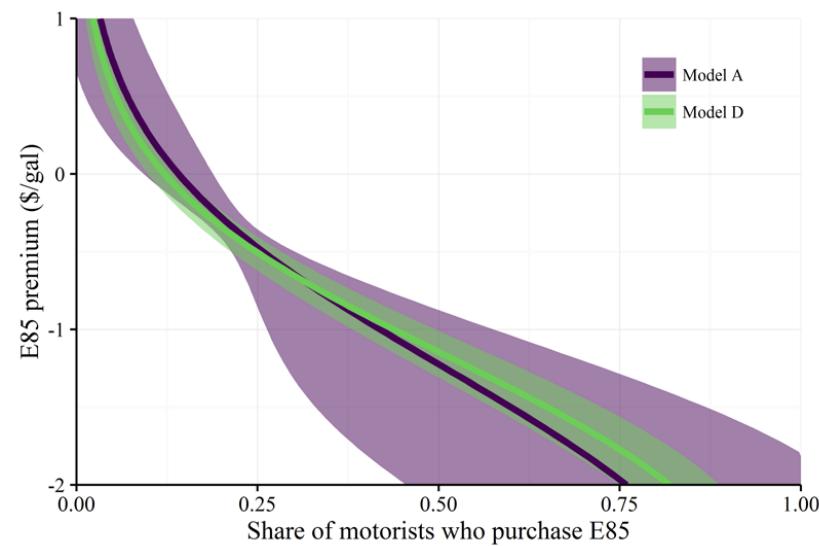
Increases refiner costs

- Similar impact as oil price increase
- Wholesale gasoline prices increase
  - Evidence to date shows refiners likely fully compensated for cost changes
  - Important to distinguish between accounting versus economic costs!

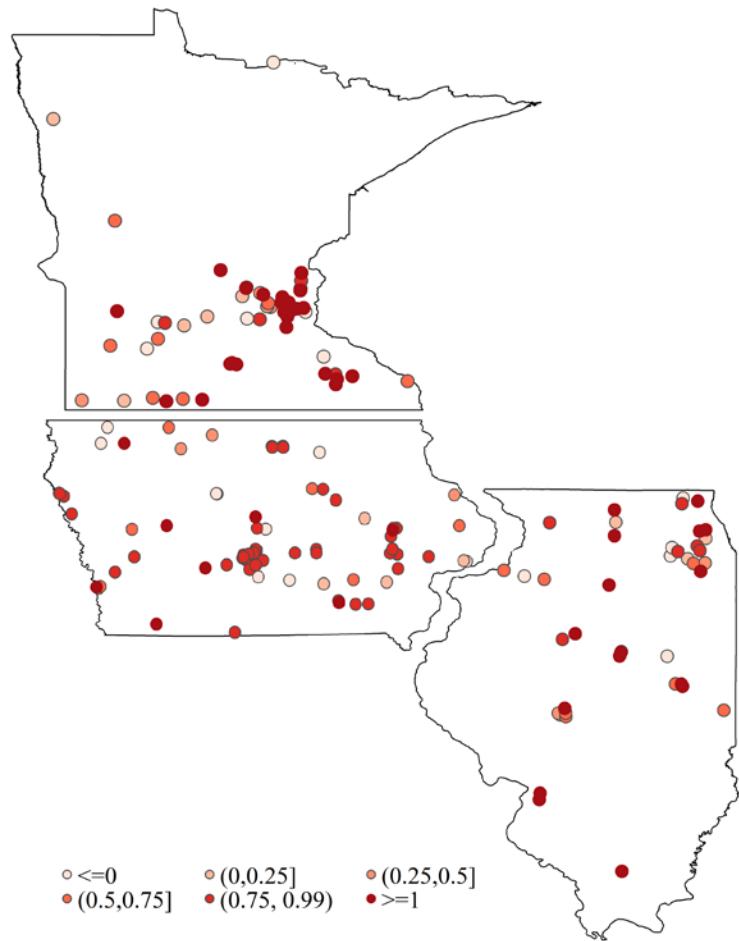
# Looking Forward: E15/E85 Markets

## Requirements for fuels to scale

- Consumers switch from E10 to E85 when E85 is cheaper ✓
  - BUT need large discounts and increased awareness ✗



# Looking Forward: E15/E85 Markets

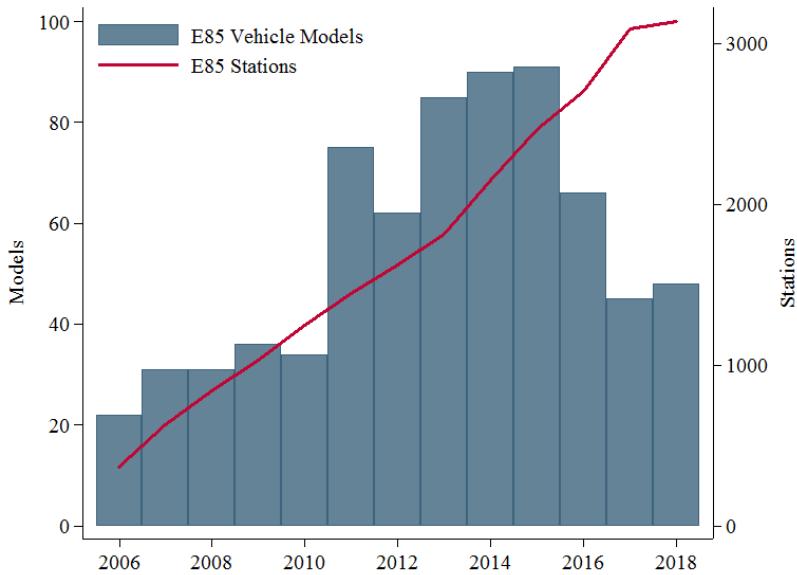


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# Looking Forward: E15/E85 Markets

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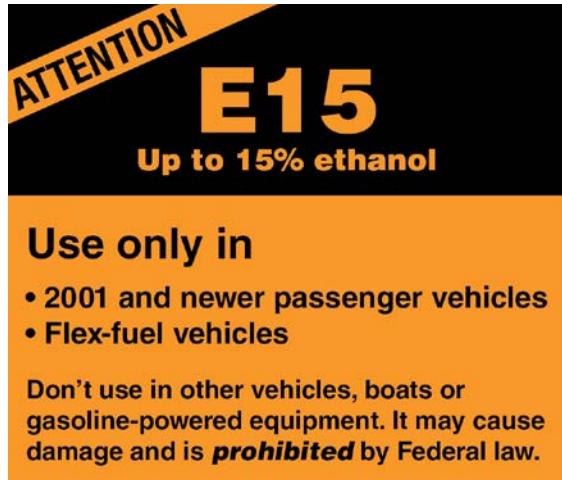


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## Mixed prospects looking forward

- E85 stations up ✓
- BUT, FFVs down ✗

# Looking Forward: E15/E85 Markets



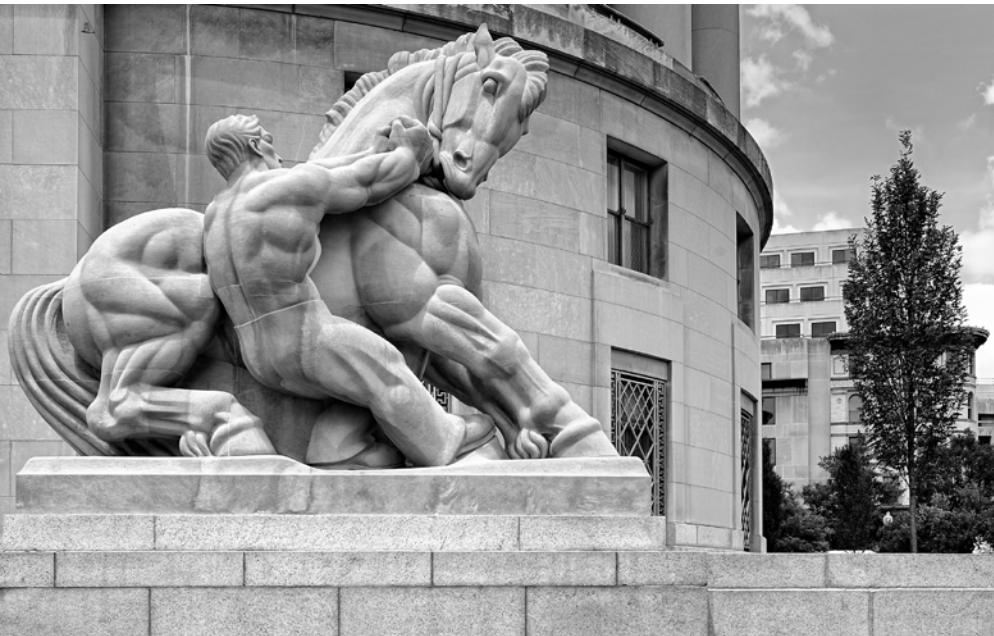
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- E15 (?)

# Challenge with ‘Technology-Forcing’ Policies



Historically, environmental restrained industry pollution

- E.g., lead phase down
- Programs largely viewed as successful

Newer policies seek to *incentivize and promote* new technologies

- Must still ensure environmental integrity of programs AND balance competing industries' interests
- Successful with respect to existing technologies
- Success less apparent with new technologies (to date)

# Thank you!

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