# Industry Perspectives on Biofuels

Southwestern Biofuels Policy Summit

Biofuels & America's Transportation Economy

Patrick Kelly

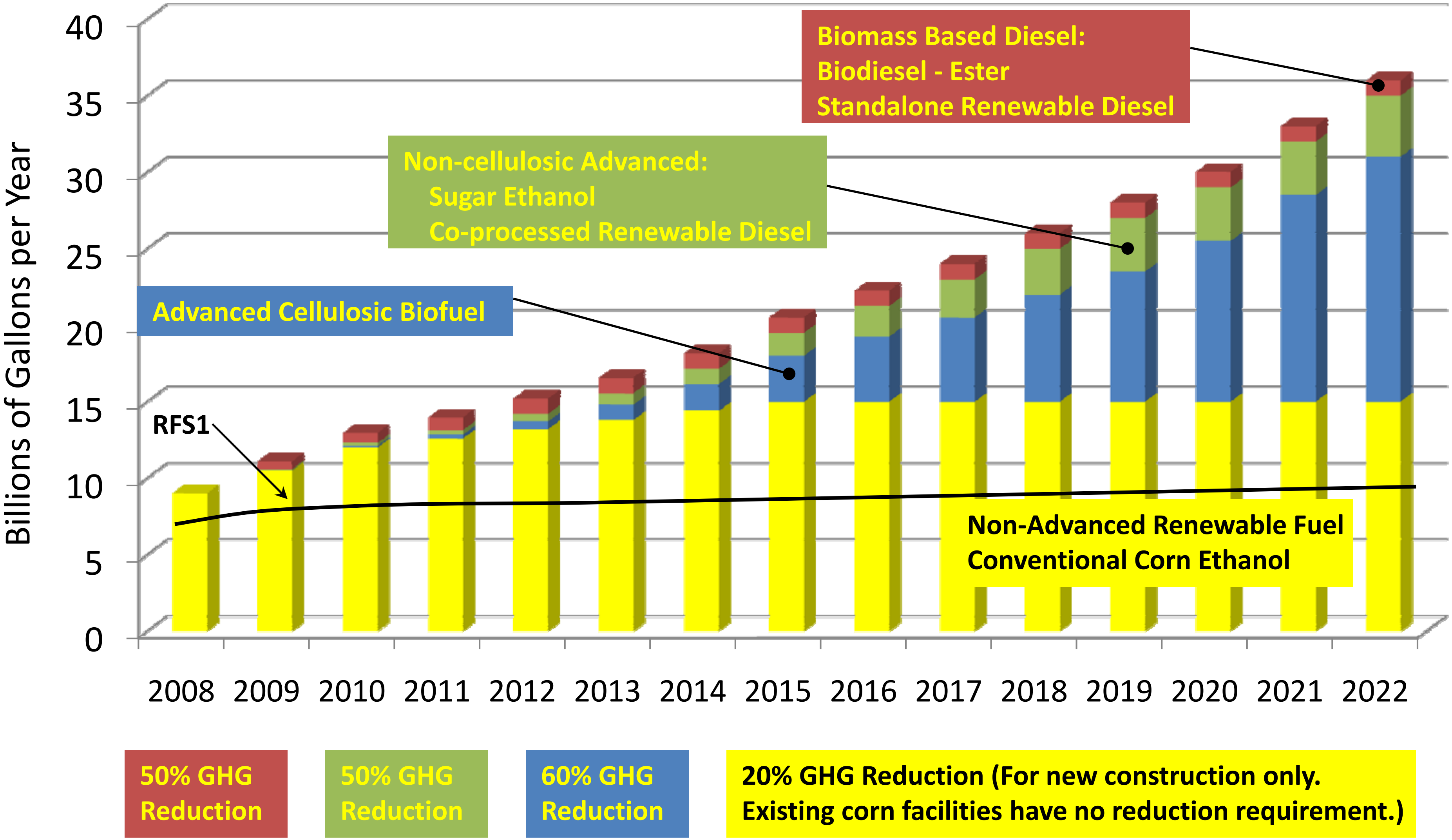
May 27, 2009

energy API

# API Biofuels Overview

- Given current and projected worldwide energy demand, we need *all* sources of commercially viable energy, as well as a commitment to energy efficiency and energy conservation
  - Biofuels are an important resource
- Almost 74% of all gasoline now produced in the US includes ethanol
  - Last year our industry used 9.6 billion gallons
- API supports a realistic and workable Renewable Fuels Standard (RFS)
- A patchwork of state-by-state ethanol mandates or low carbon fuel standards interfere with the flexibility Congress provided
  - State ethanol blending legislation also interferes with RFS compliance

# EISA Renewable Fuel Standard 2007-2022



# EISA Implementation

- EISA is very complicated and aggressive
  - Implementation will be challenging
  - Challenge for EPA to make implementation simple and cohesive
- EPA Administrator signed proposed RFS2 regulations on May 5$^{th}$
  - Comments due 60 days from publication
  - Combines 2009 & 2010 biodiesel standards
  - Proposes no waiver in cellulosic standard for 2010
  - January 1 deadline will be a challenge

# Background – Ethanol as a Fuel

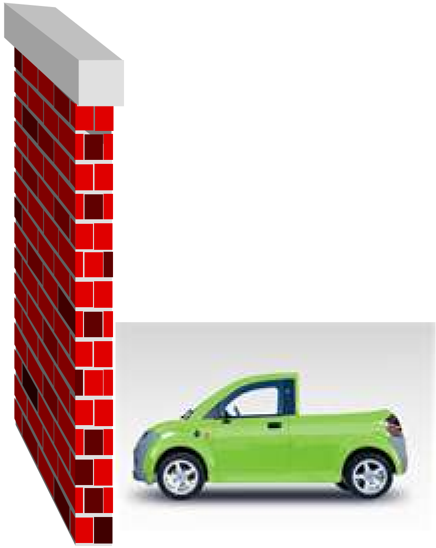
To meet the RFS, ethanol can be used in 3 ways:

1. Up to 10% (by volume) blend
   - Can be used in all vehicles and engines
2. E10+ blend
   - Gasoline containing above 10% volume for use in conventional (non-flex fuel) vehicles and engines
   - Currently not legal
3. E85
   - Alternative fuel containing 70-85% ethanol (gasoline is the balance) which must be used in a flexible fuel vehicle


# E10 Blend Wall

- Obligated parties will be required to use (or purchase RINs representing) the following volume percentages of ethanol in their gasoline:

| Year | Percent Ethanol |
|---|---|
| 2009 | 9.0%* |
| 2010 | 10.3%* |
| 2011 | 9.1%** |
| 2012 | 9.8%** |
| 2013 | 10.8** |
| 2014 | 12.2%** |



*Based on EIA Short Term Energy Outlook, March 2009

** Based on EIA Short Term Energy Outlook, December 2008

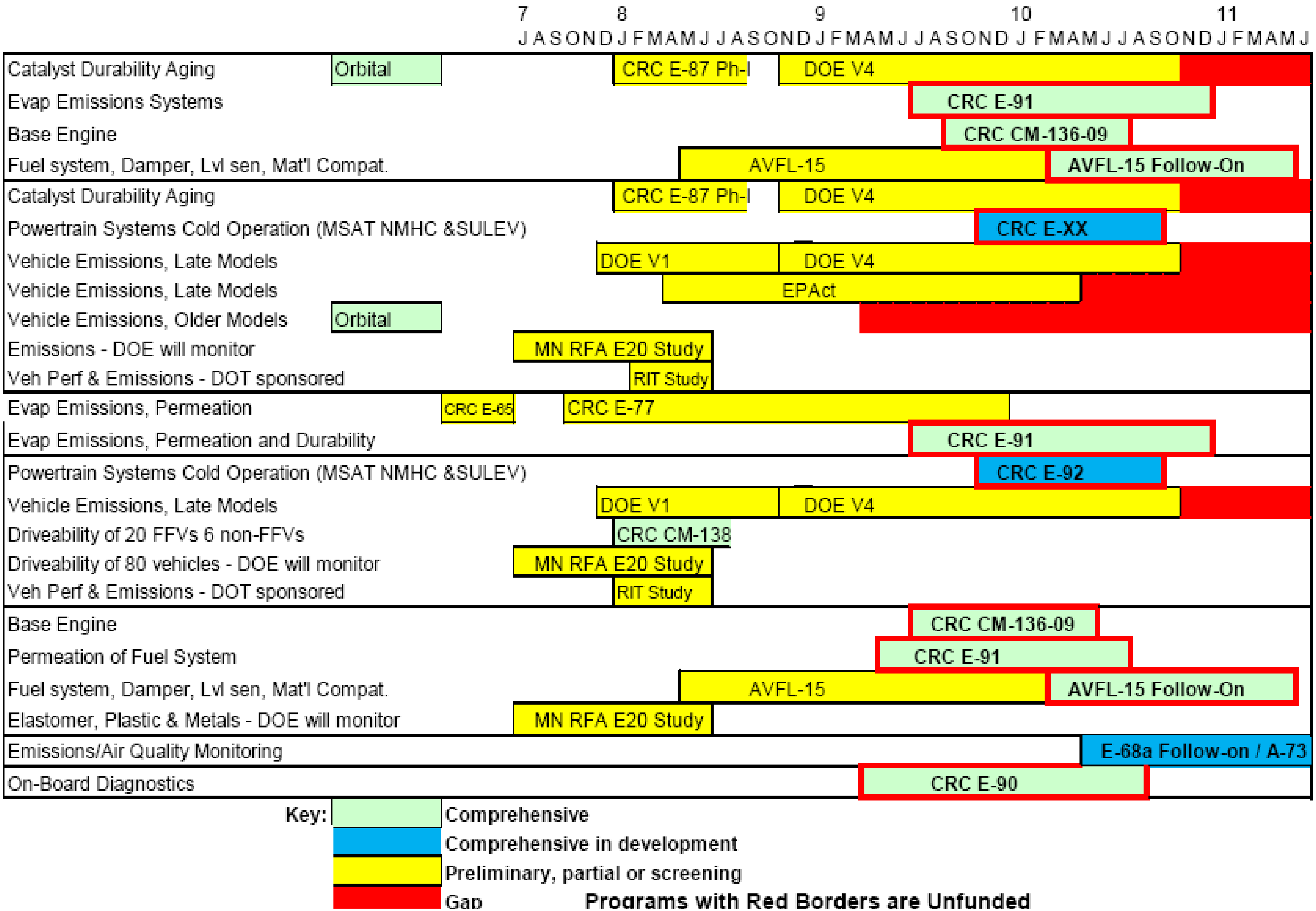
# E10 Blend Wall

- The recent gasoline demand decreases have accelerated the E10 blend wall
- E10+ approval by EPA is very unlikely to be completed before industry hits the E10 blend wall
- In the absence of a waiver, regulatory adjustments or changes to legislation:  significant volumes of E85
- Even if no cellulosic ethanol is produced by 2022, industry still hits the blendwall

# E10+ Issues

- Many unanswered questions on emissions, vehicle and engine compatibility, and underground tank and pump compatibility
- API is committed to working with other stakeholders on research into the E10+ issue until:
  - A significant showstopper is found
  - Sufficient research has been completed to allow EPA and other regulating groups to allow a new fuel
- Unlikely E10+ will be approved for non-road

# Status of Research on Mid-Level Blends



# E85 Issues

- There will be significant costs to install pumps at retail outlets
  - Currently 1,541 public retail outlets*
  - Costs range from $20,000 to $200,000
- FFV's make up less than 5% of the vehicle fleet
  - Less than 3% of FFV's use E85
- Significant mis-fueling concerns
  - Changes to dispensing equipment may be necessary

* Per DOE on November 12, 2008

# Summary

- Biofuels are an important resource
- API supports a realistic and workable RFS
- Our industry will strive to implement these challenging mandates
- A patchwork of state-by-state mandates, low-carbon fuel standards and blending restrictions are counterproductive

# Industry Perspectives on Biofuels

Southwestern Biofuels Policy Summit

Biofuels & America's Transportation Economy

Patrick Kelly

May 27, 2009