



## **Panel: Federal and State Initiatives**

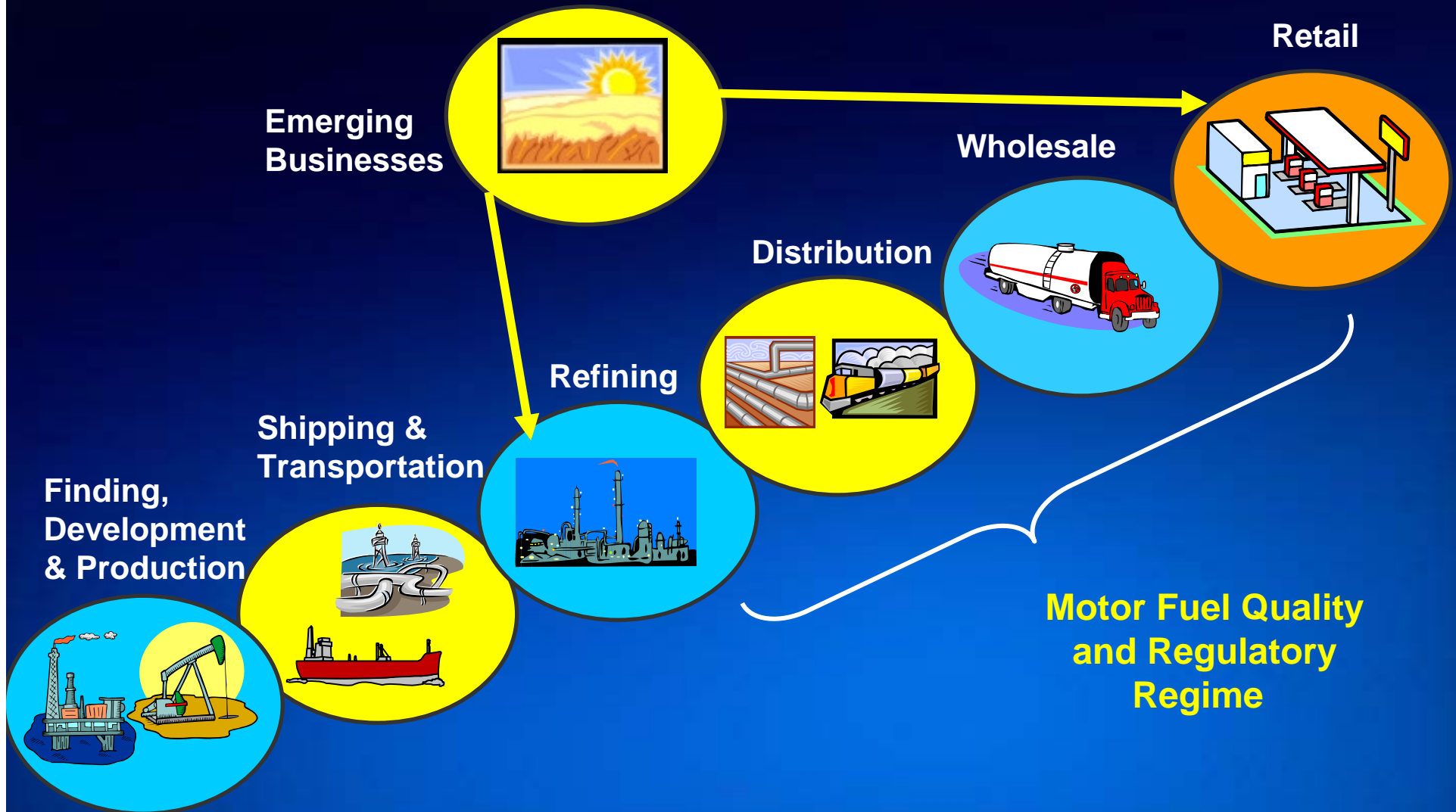
**Oklahoma Governor's Conference on Biofuels  
Norman, Oklahoma  
October 3 - 4, 2006**

**Gary Schoonveld  
ConocoPhillips  
Fuels and Regulatory Affairs**

# Outline

- Fuels Progression
- Federal
- State
- Future
- Closing

# Motor Fuel Supply Chain



# Fuels Regulatory Timeline

- ✓ 1991 Phase II Low Volatility Gasoline
  - ✓ 1992 **Winter Oxygenated Gasoline**
  - ✓ 1993 Low Sulfur Diesel – Highway LSD
  - ✓ 1993 CARB Diesel
  - ✓ 1995 **RFG Phase I**
  - ✓ 1995 CARB 2
  - ✓ 2000 RFG Phase II
  - ✓ 2004 CARB 3
- 
- ✓ 2004 – 06 **Low Sulfur Gasoline**
  - ✓ 2005 **National Energy Legislation**
  - ✓ 2005 **Minnesota biodiesel mandate**
  - ✓ 2006 **Federal RFS Interim Program and Ramp-up**
  - ✓ 2006 **Removal of RFG Oxygenate Mandate**
  - 2006 Ultra Low Sulfur Diesel – Highway ULSD
  - 2007 **RFS Comprehensive Program**
  - 2007 Non-road 500 ppm Diesel – LSD

- **Excludes financial provisions**

# Renewable Incentives in U.S.

- **Federal Programs**

- Tax and Funding Incentives:

- 51 cpg ethanol (through 2010)
    - 50 cpg recycled, \$1/gal virgin biodiesel (through 2008)
    - \$1/gal renewable diesel (through 2008)
    - Small producer tax credits, loan guarantees, and infrastructure incentives

- Alternative Fuel and Clean Fuels Fleet Programs (EPA92 & CAAA90)

- CAFÉ credits for E85

- R&D Incentives (cellulosic development and biodiesel testing)

- Clean Fuel Mandates (oxy fuels, RFG, and RFS)

- **State Programs**

- Mandated Use

- Subsidized Use;

- User or production incentives

- (tax exemption/reductions, credits for purchase, grants/loans, producer payments, etc.)

# U.S. National Energy Legislation

## The Energy Policy Act of 2005 (EPACT05)

- Signed by President Bush:  
August 8, 2005
- 18 Titles, 1734 pages of Legislation
- Primary Renewables Fuel Provisions in Title XV
- Research and Development supplemented throughout

- I. Energy Efficiency
- II. Renewable Energy
- III. Oil and Gas
- IV. Coal
- V. Indian Energy
- VI. Nuclear Matters
- VII. Vehicle and Fuels
- VIII. Hydrogen
- IX. Research and Development
- X. Department of Energy Management
- XI. Personnel and Training
- XII. Electricity
- XIII. Energy Policy Tax Incentives
- XIV. Miscellaneous
- XV. **Ethanol and Motor Fuels**
- XVI. Climate Change
- XVII. Incentives for Innovative Technologies
- XVIII. Studies

# EPACT05 Created National Renewable Fuels Standard (RFS)

- **EPACT05 specifies gallons of renewable use**
  - 2006: 4.0 billion gallons/year
  - 2007: 4.7
  - 2008: 5.4
  - 2009: 6.1
  - 2010: 6.8
  - 2011: 7.4
  - 2012: 7.5
  - 2013+: Same % as 2012 (0.25 billion gallons of which is cellulosic ethanol)
- **U.S. EPA required to convert to % gasoline production standard (by Nov 30 of prior year) based on annual EIA predictions of gasoline consumption**

# U.S. Energy Policy Act of 2005

- Repealed oxygen mandate in Reformulated Gasoline (RFG)
- Established Renewable Fuel Standard (RFS)
  - 2006:** 4.0 billion gal/year RF  
(~ 3 vol% of national gasoline pool)  
ramping to
  - 2012:** 7.5 billion gal/year RF  
(~ 5 vol% of national gasoline pool)  
(~ 50% of national pool with 10% ethanol)
  - 2013+:** Sustained ratio of 2012
- U.S. EPA affirms that RFS regulation will include opportunity for ethanol, E-85, biodiesel, renewable diesel, etc.



# RFS Standard: Not just ethanol

- EPACT05 defines Renewable Fuel as:

Motor vehicle fuel that;

- 1. a) is produced from grain, starch, oilseeds, vegetable, animal, or fish materials including fats, greases, and oils, sugarcane, sugar beets, sugar components, tobacco, potatoes, or other biomass; or  
b) is natural gas produced from biogas source, including landfill, sewage waste treatment plant, feedlot or other place where decaying material is found; AND
- 2. is used to replace or reduce the quantity of fossil fuel present in a fuel mixture used to operate a motor vehicle.

- Congress clearly intended for comprehensive inclusion of ALL renewables with opportunity for innovation

# 2006 RFS Interim Rule

- EPACT05 provided for a default RFS of 2.78 vol% (~4 billion gallons/yr) in 2006
- U.S. EPA adopted the default program for 2006 recognizing industry need for timing and certainty
  - Signed December 22, 2005
- *Refiners, Importers, and Blenders* held liable collectively for meeting the default standard
- Deficit will be carried into 2007 obligations
- Comprehensive program proposed for 2007 and beyond incorporating Congressionally directed Credit generation and trading for *Refiners, Importers and Blenders*

# Key Principles for Comprehensive Federal RFS Rule

- All qualified renewable fuels count toward applicable RFS compliance volume;
  - regardless of the type of motor fuel they are used in,
  - where in the U.S. they are used,
  - or where they are produced
- U.S. EPA proposed rule largely accomplishes
- Final rule anticipated in Spring-2007

# Federal Biofuels Legislation Future?

- **Some Proposals**

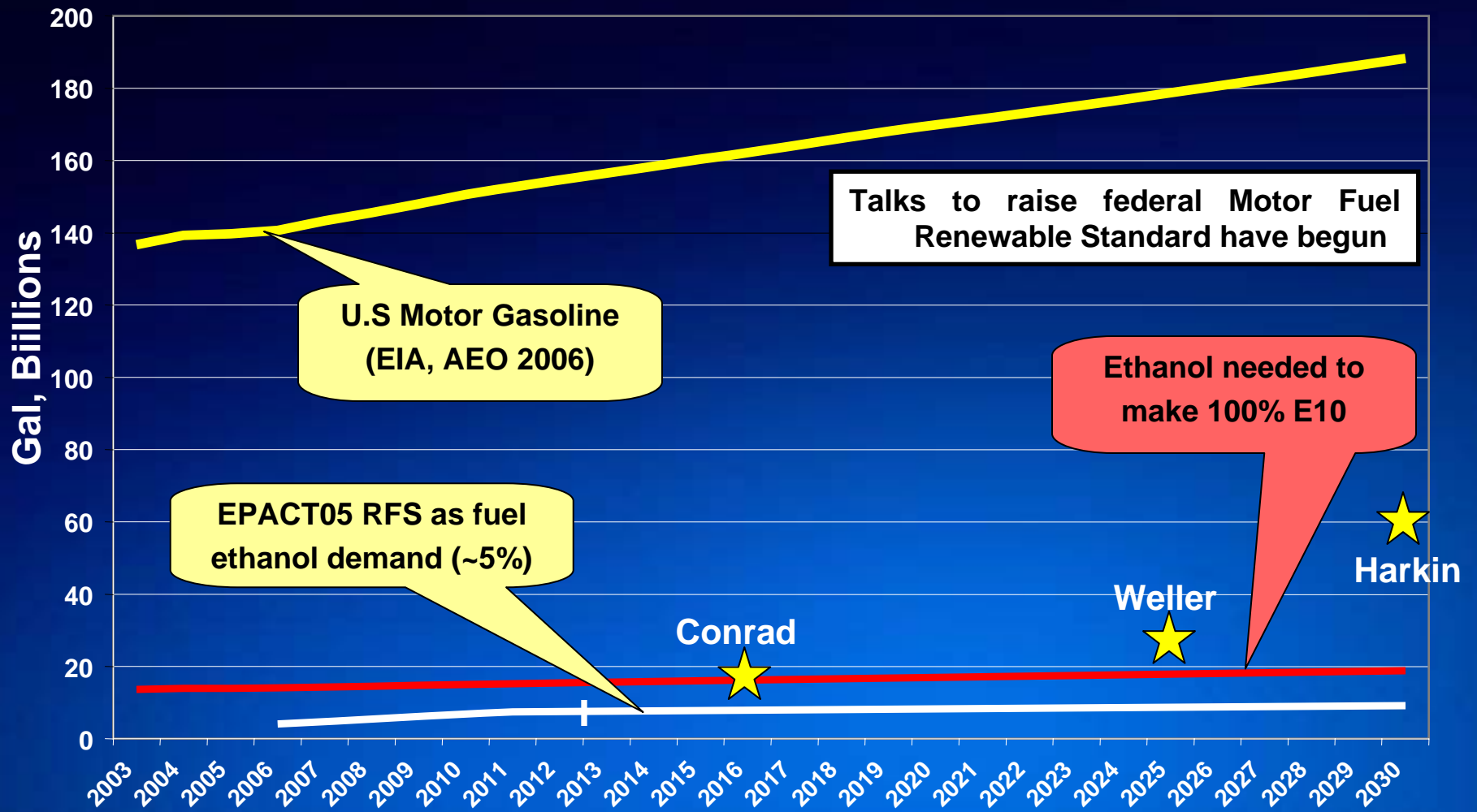
- ★ **Harkin:** 60 bgal ethanol & biodiesel by 2030  
E85 pumps at 50% major stations by 2016  
100% (new) ethanol FFVs by 2016

- ★ **Conrad:** 14.4 bgal/yr ethanol by 2016  
2 bgal/yr bio/alt diesel by 2015  
\$40 billion in new energy initiatives over 5 yrs

- ★ **Weller:** Increase RFS to 25 bgal/yr by 2025.

- ★ **Clinton:** \$50 billion to reduce oil imports by 50% by 2025  
and funded by new taxes on oil companies  
E85 at 50% of stations by 2015  
New “Advanced Research Projects Agency”

# U.S Renewable Fuel Standard in Perspective



# State Mandates

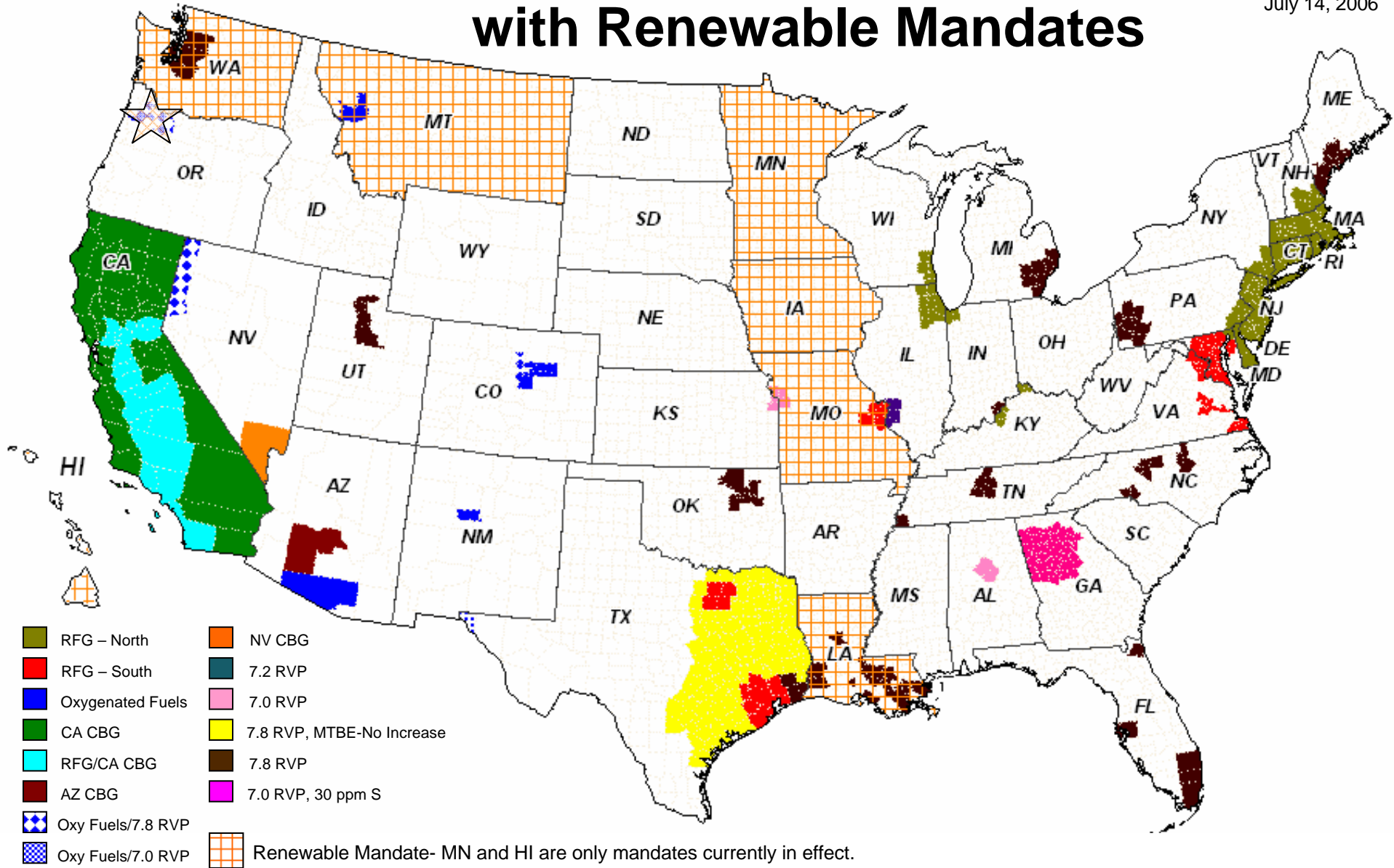
- **Some States mandate specific amounts of ethanol/biodiesel to supplement economic development in the State**
- **State mandates do not add to the federal RFS mandated volume but shift where the renewable fuel is blended and impacts national economics**
- **State mandates create market distortions and drive sub-optimal solutions unintended by U.S. Congress**
- **State mandates propagate “boutique” fuels and threaten supply security**
- **State/Local renewable mandates interfere with an efficient Federal RFS Program**



# U.S. Gasoline Requirements

July 14, 2006

## with Renewable Mandates



# Concerned about State 'Boutiques'

- Bill Douglass, CEO of Douglass Distributing Company, representing NACS and SIGMA, recently told the Senate Environment and Public Works Committee:

“These state boutique renewable fuel mandates directly undercut the EPACT RFS flexibility by preventing renewable fuels, including ethanol, from moving to areas of highest demand ...If state boutique renewable fuel mandates are allowed to proliferate unchecked, then all the work Congress put into restoring fungibility in the gasoline and diesel fuel markets will ultimately go for naught.”

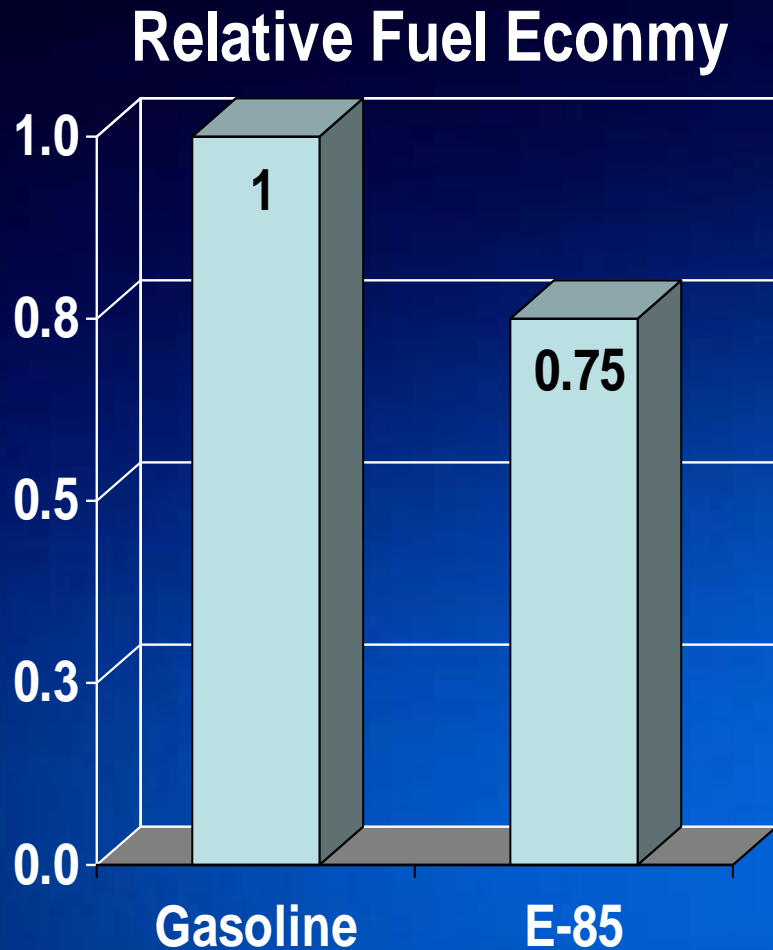
# Alternative Fuel Considerations

- Safety
- Health
- Environment
- Economics
- Resource intensity
- Materiality
- Sustainability
- Supply diversity
- Vulnerability
- Compatibility
- Performance
- Practicality

**All alternative fuels have pros & cons to consider in public policy arena**

# E-85 Example

## Ethanol up to 85% in Gasoline



- Only ~3% of today's vehicles are specially designed FFV's to use E-85, others will be damaged if misfueled
- By EPA measurements, FFV's using E-85 get about 25% less mpg than gasoline
- Costs to equip a retail outlet with E-85 can range from \$20k to \$200k
- E-85 specifications not yet suitable for branded sales

FFV – Flexible Fuel Vehicle can use gasoline or E-85

# Renewable Energy Policy

- **What Governments Should Avoid**

- Giving consumers unrealistic expectations about energy independence
- Disincentives to investment in critical existing energy infrastructure
- Choosing “winners” & “losers” among technologies and fuels

- **What Governments Should Do**

- Promote energy efficiency improvement
- Minimize number of “boutique” fuels
- Expedite permitting of key energy infrastructure
- Reduce uncertainty in the regulatory process