



**DOCKET**

**09-IEP-1K**

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RECD. April 14 2009

# Update on the State of the Renewable Fuels Industry

# About the New Fuels Alliance

## **National Advocacy Group w/ Regional Affiliates**

Focusing on Federal, CA and Northeast

## **Northeast Biofuels Collaborative**

Mascoma, Verenum, Bodega Algae, BioEnergy International, Qteros, New Generation Biofuels, Agrivida, Interstate Biofuels

## **California Renewable Fuels Partnership**

BlueFire Ethanol, Pacific Ethanol, Cilion, Altra Biofuels, VeraSun Energy, Verenum (CA)

## **Northeast Power Project**

Working with power markets on feasibility of using bio-based products for power generation; applying Integrated Fuel Assessment Model (IFAM) for feasibility analysis

# Ethanol Market

## 2008 Production / 2009 Estimate

9.2 billion gallons / 10.5 billion gallons

## 2008 Ethanol Imports

556 million gallons

## Current Annual Production Capacity

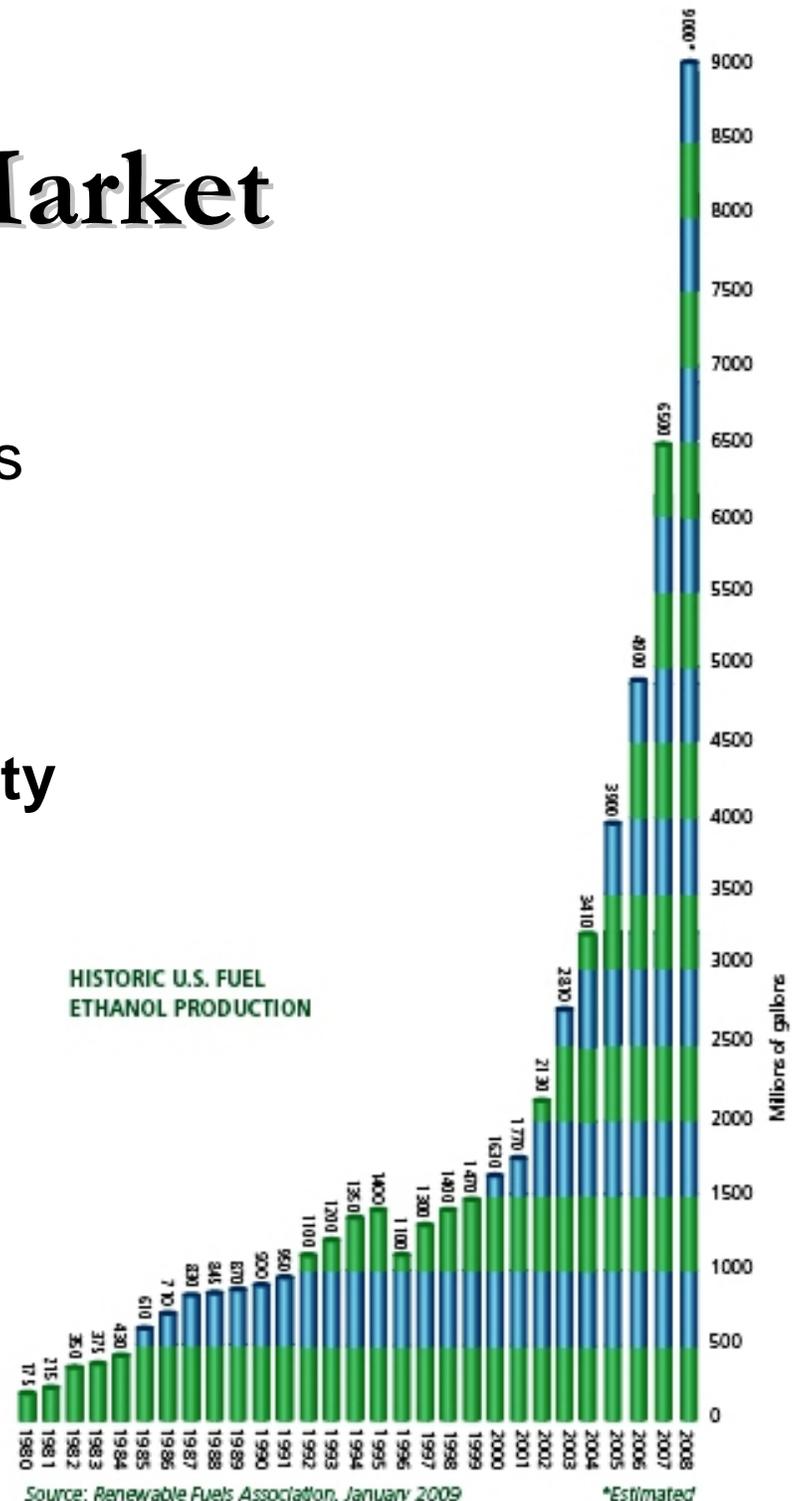
12.4 billion gallons

## Under Construction

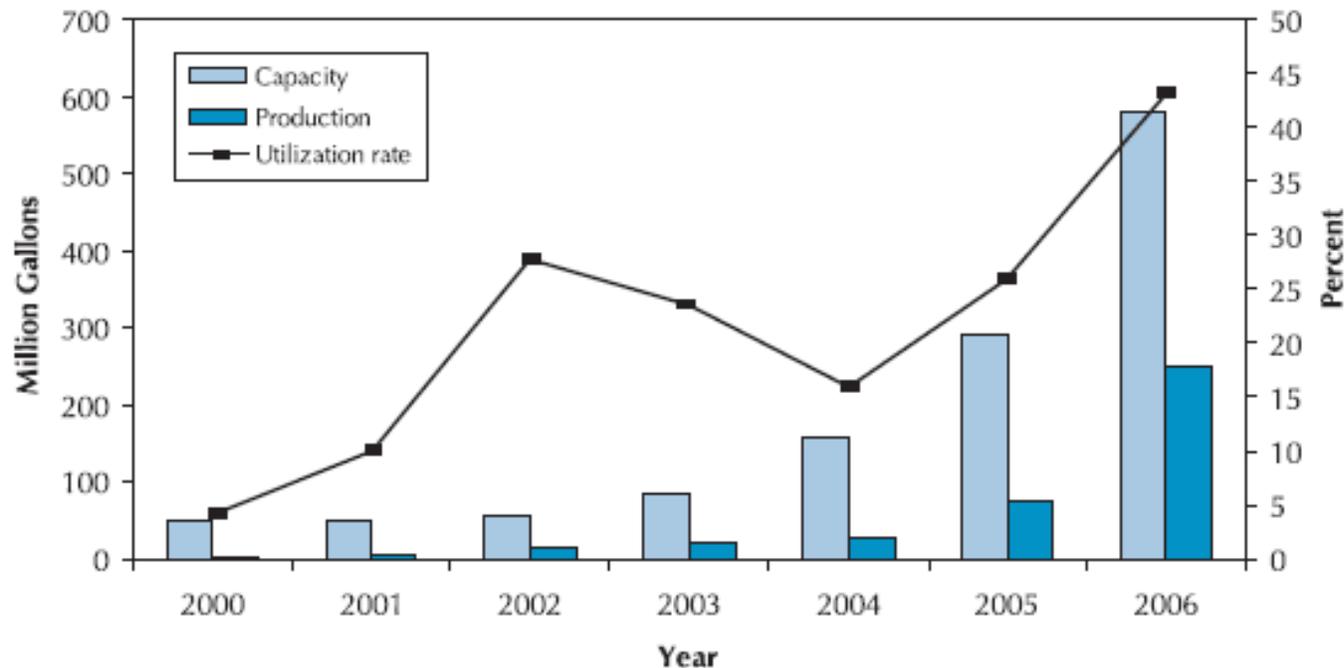
2 billion gallons

## Total Annual Operating Capacity

10.3 billion gallons at 170 locations



# Biodiesel Market Snapshot



Source: National Biodiesel Board.

Note: Capacity given is on September 1 of each year.

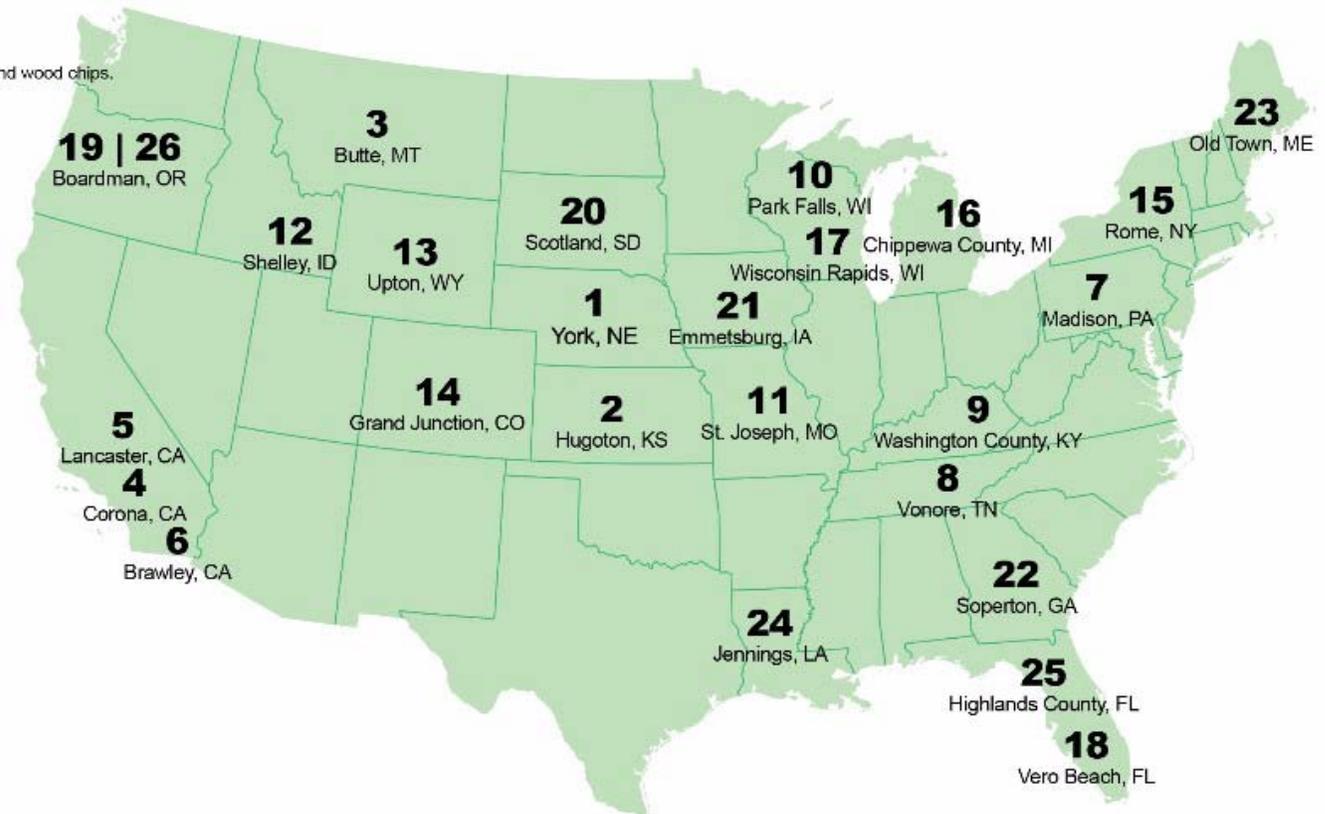
**Figure 1. U.S. biodiesel production and installed capacity for 2000 to 2006**

**"The market conditions are very, very tough right now," says Joe Jobe, head of the National Biodiesel Board in Jefferson City, Mo. Of the nation's 176 biodiesel operators, "it's very difficult to say how many of them are still operating." - Forbes Magazine, April 8, 2009**

# U.S. Cellulosic Ethanol Projects Under Development And Construction

- 1. Abengoa**  
Cornstover, wheat straw, milo stubble, switchgrass and other biomass.
- 2. Abengoa**
- 3. AE Biofuels**  
Switchgrass, grass seed, grass straw and corn stalks.
- 4. Bluefire**  
Green waste, wood waste, and other cellulosic urban wastes.
- 5. Bluefire**
- 6. California Ethanol + Power, LLC**  
Local Imperial Valley grown sugarcane facility powered by sugarcane bagasse.
- 7. Coskata**  
Any carbon-based feedstock, including biomass, municipal solid waste, bagasse, and other agricultural waste.
- 8. DuPont Danisco Cellulosic Ethanol LLC**  
Switchgrass, corn stover and corn cobs.
- 9. Ecofin, LLC**  
Corn cobs.
- 10. Flambeau River Biofuels LLC**  
Softwood chips, wood, and forest residues.
- 11. ICM Inc.**  
Switchgrass, forage, sorghum, stover.
- 12. Iogen Corp.**  
Agricultural residues including wheat straw, barley straw, corn stover, switchgrass and rice straw.
- 13. KL Process**  
Softwood, waste wood, including cardboard and paper.
- 14. Lignol Innovations**  
Woody biomass, agricultural residues, hardwood and softwood.
- 15. Mascoma**  
Lignocellulosic biomass, including switchgrass, paper sludge, and wood chips.
- 16. Mascoma**  
Consolidated bioprocessing refinery using bacteria to break down and ferment local wood chips
- 17. Newpage Corp.**  
Woody biomass, mill residues.
- 18. New Planet Energy**  
Municipal solid waste (MSW); unrecyclable paper; construction & demolition debris; tree, yard and vegetative waste; and energy crops.

- 19. Pacific Ethanol**  
Wheat straw, stover, and poplar residuals.
- 20. POET**  
Corn fiber, corn cobs and corn stalks.
- 21. POET**
- 22. Range Fuels Inc.**  
Wood residues and wood-based energy crops, grasses and corn stover.
- 23. RSE Pulp & Chemical LLC**  
Woodchips (mixed hardwood).
- 24. Verenium**  
Sugarcane bagasse and specially bred energy cane.
- 25. Verenium**  
Sugarcane bagasse and specially bred energy cane.
- 26. ZeaChem**  
Poplar trees, sugar, and wood chips.



**New Online Tool To Look At Advanced Biofuel Facilities**

<http://biofuels.abc-energy.at/demoplants/projects/mapindex>

# Problems For U.S. Biofuels Industry

## **Supply & Demand Equation Is Out of Whack**

Over Supply / Impinged Demand (it is both)

## **Plunging Fuel Prices vs. Easing Commodity Prices**

Wholesale Gasoline Down ~ 70% in 6 months

Corn down ~ 29% in last 12 months; soybeans down 30%

## **Frozen Credit & Debt Financing**

Renewable fuel facilities are project financed; debt is a reality

## **Constant Stream of Misinformation Slows Evolution**

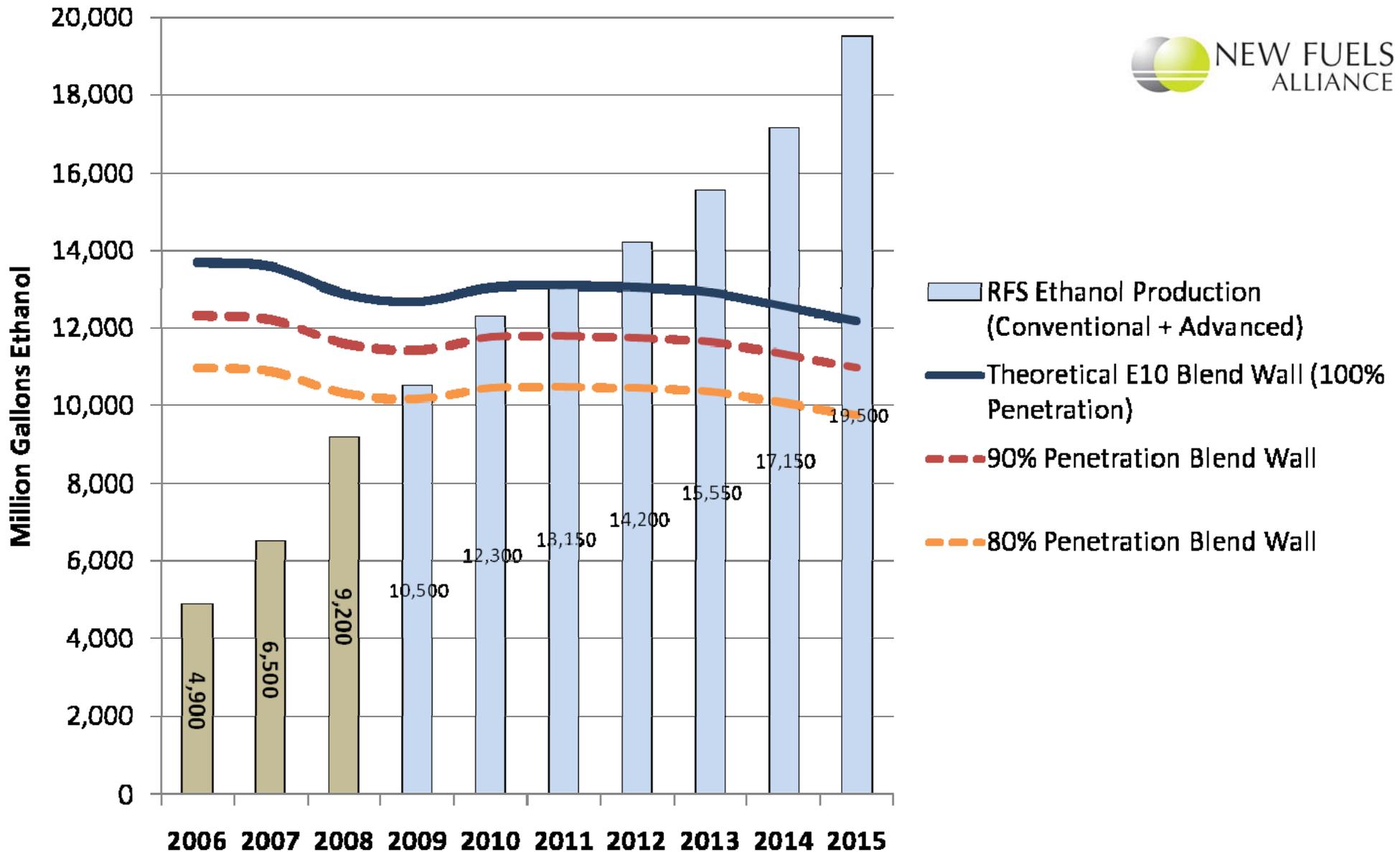
Food Versus Fuel; Indirect Land Use Change; Ag as Villain

## **Fundamentally Non-Competitive U.S. Fuels Markets**

Blend wall due to vehicle warranties & regulations

Highly consolidated wholesale markets; market access issues

# The E10 Blend Wall



Notes: (1) Assumes undifferentiated biofuel will be ethanol in mid-term; (2) Does not account for small refiner exemption through 2010

# Supply & Demand Situation

## High Value Competitive Fuel

Affordable blendstock

Extends supply; CA produced

## Oversupply Situation

Renewable fuel capacity is higher than regulated demand

## Demand Is Artificially Depressed

Oil companies legally hold RINs and squeeze ethanol suppliers

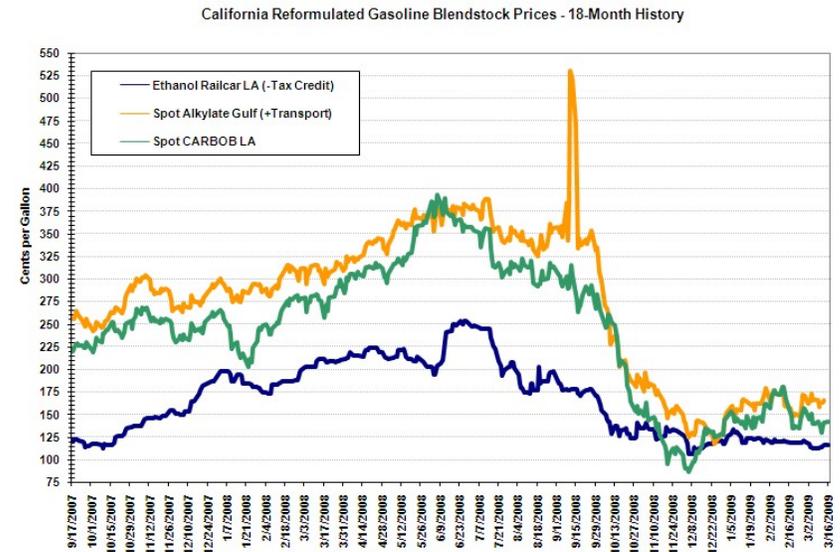
Vehicle blend walls keep biofuels “in a box”

Regulations are not designed to facilitate change

## Petroleum Dependence A Huge Problem, And yet ...

Idling roughly 2 billion gallons of ethanol production nationally

Tens of millions of ethanol gallons idled in CA



# What Does Renewable Fuels Need

## **Let Renewable Fuels Out of the Box**

Short Term: Increase blending allowance in conventional cars

Long Term: All vehicles should be FFV (+ hybrid + ??)

## **Let Biofuels Compete on Level Carbon Playing Field**

Current LCFS proposal tilts playing field against biofuels

## **Facilitate Honest Debate About Concerns**

Food Versus Fuel; Indirect Land Use Change; Ag as Villain

We need fact-driven analysis and discussion

## **Give the Industry A Chance to Innovate**

Good current trends on energy use and other inputs

First generation solar and wind critical to second generation

Feedstock diversification already happening because of \$



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