



# Bioenergy Incentive Funding for Alternative Fuels and Transportation

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Alternative and Renewable Fuel and  
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**CalRecycle Zone Works Conference**  
Sacramento, CA

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# Assembly Bill 8

*(Perea, Chapter 401, Statutes of 2013)*

Assembly Bill No. 8

CHAPTER 401

An act to amend Sections 41081, 44060.5, 44125, 44225, 44229, 44270.3, 44271, 44272, 44273, 44274, 44275, 44280, 44281, 44282, 44283, 44287, 44299.1, and 44299.2 of, to add and repeal Section 43018.9 of, and to repeal Section 44299 of, the Health and Safety Code, to amend Sections 42885 and 42889 of the Public Resources Code, and to amend Sections 9250.1, 9250.2, 9261.1, and 9853.6 of the Vehicle Code, relating to vehicular air pollution, and declaring the urgency thereof, to take effect immediately.

[Approved by Governor September 28, 2013. Filed with Secretary of State September 28, 2013.]

LEGISLATIVE COUNSEL'S DIGEST

AB 8, Perea. Alternative fuel and vehicle technologies: funding programs.  
(1) Existing law establishes the Alternative and Renewable Fuel and Vehicle Technology Program, administered by the State Energy Resources Conservation and Development Commission, to provide to specified entities, upon appropriation by the Legislature, grants, loans, loan guarantees, revolving loans, or other appropriate measures, for the development and deployment of innovative technologies that would transform California's fuel and vehicle types to help attain the state's climate change goals. Existing law specifies that only certain projects or programs are eligible for funding, including block grants administered by public entities or not-for-profit technology entities for multiple projects, education and program promotion within California, and development of alternative and renewable fuel and vehicle technology centers. Existing law requires the commission to develop and adopt an investment plan to determine priorities and opportunities for the program. Existing law also creates the Air Quality Improvement Program, administered by the State Air Resources Board, to fund air quality improvement projects related to fuel and vehicle technologies.

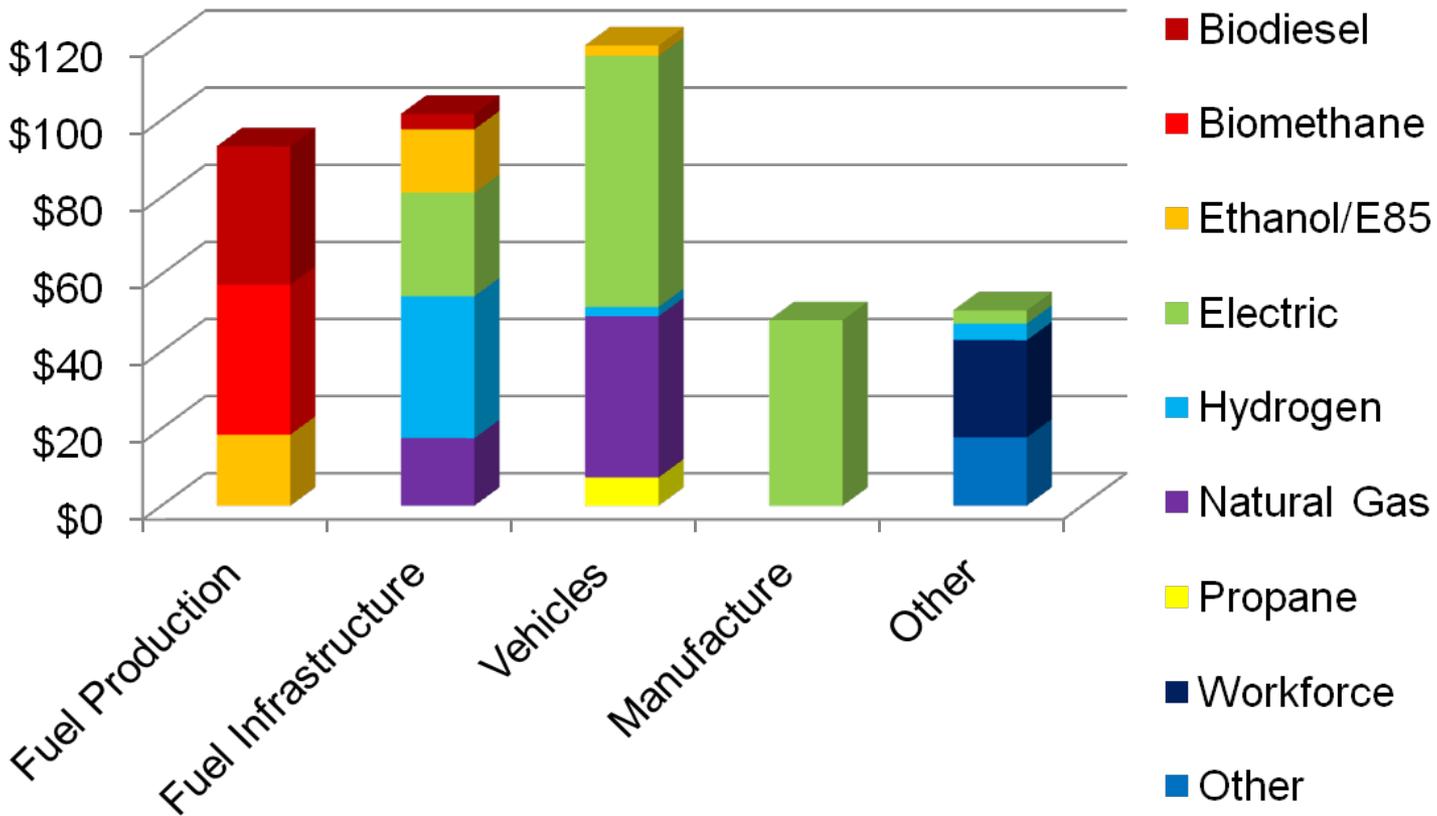
This bill would provide that the state board has no authority to enforce any element of its existing clean fuels outlet regulation or other regulation that requires or has the effect of requiring any supplier, as defined, to construct, operate, or provide funding for the construction or operation of any publicly available hydrogen-fueling station. The bill would require the state board to aggregate and make available to the public, no later than June 30, 2014, and every year thereafter, the number of hydrogen-fueled vehicles that motor vehicle manufacturers project to be sold or leased over the next 3 years, as reported to the state board, and the number of hydrogen-fueled vehicles registered with the Department of Motor Vehicles through April 30. The bill would require the commission to allocate \$20 million annually, as specified, until there are at least 100 publicly available hydrogen-fueling

- Extends ARFVTP funding through January 1, 2024
  - ✓ \$100 million per year
- To transform California's transportation market into a diverse collection of alternative fuels and technologies and reduce California's dependence on petroleum.

*“...develop and deploy innovative technologies that transform California’s fuel and vehicle types to help attain the state’s climate change policies.”* (Health and Safety Code Section 44272(a))



# Existing Agreements Through 2013 \$413 Million for 264 Projects





## Biofuels Funding

Category	Funding (\$ millions)	No. of Projects
<i>Fuel Production</i>		
<b>Biogas</b>	<b>38.9</b>	<b>12</b>
Biodiesel / Renewable Diesel	34.1	13
Ethanol	18.4	8
<b>Total Fuel Production</b>	<b>91.4</b>	<b>33</b>
<i>Fueling Infrastructure</i>		
Biodiesel Tankage	4.0	4
E85 Retail Stations	16.5	205
<b>Total Infrastructure</b>	<b>20.5</b>	<b>209</b>



## Biogas Project Categories

### **Commercial Scale Anaerobic Digestion of Food Wastes**

**Clean World:** \$6 million grant, 36,500 TPY, 566,000 DGE

**Harvest Power:** \$4.7 million grant, 40,000 TPY, 666,000 GGE

**Blue Line Transfer:** \$2.6 million grant, 9,000 TPY, 56,000 DGE

**CR&R Perris:** \$4.5 million grant, 50,000 TPY, 865,000 DGE

### **Northstate Rendering, Oroville: \$5.4 million grant**

Anaerobic digestion of rendering remains

370,000 DGE production



# Clean World's 100 Ton per Day Digester

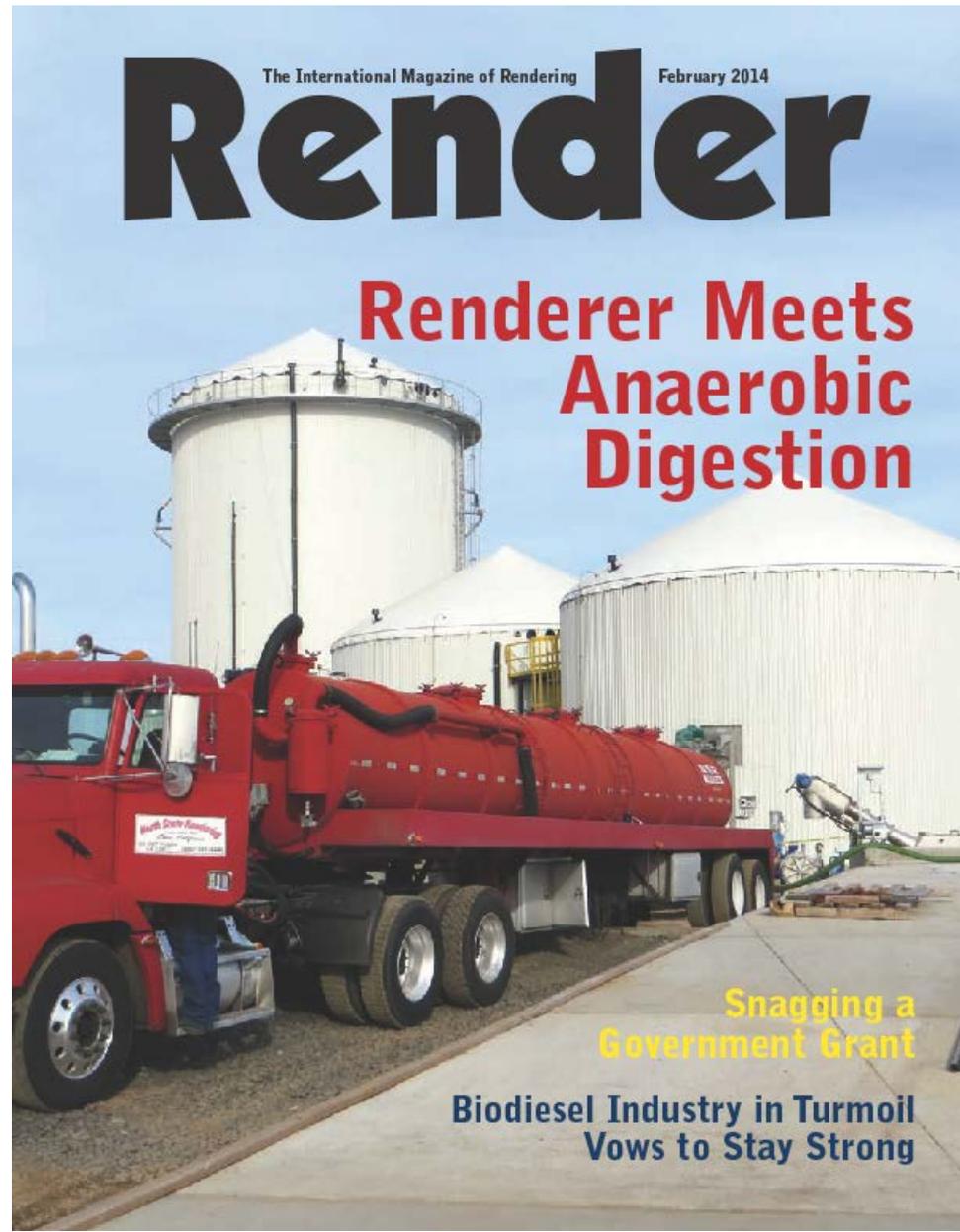
RNG Fueling Station





# North State Rendering's New Anaerobic Digesters

\$5.4 Million  
ARFVTP Grant





# Biogas Project Categories

## Dairy Waste Conversion

**BioStar Systems:** \$3.3 million grant, 141,000 gpd feedstock

## Process Fuel Replacement at Biorefineries

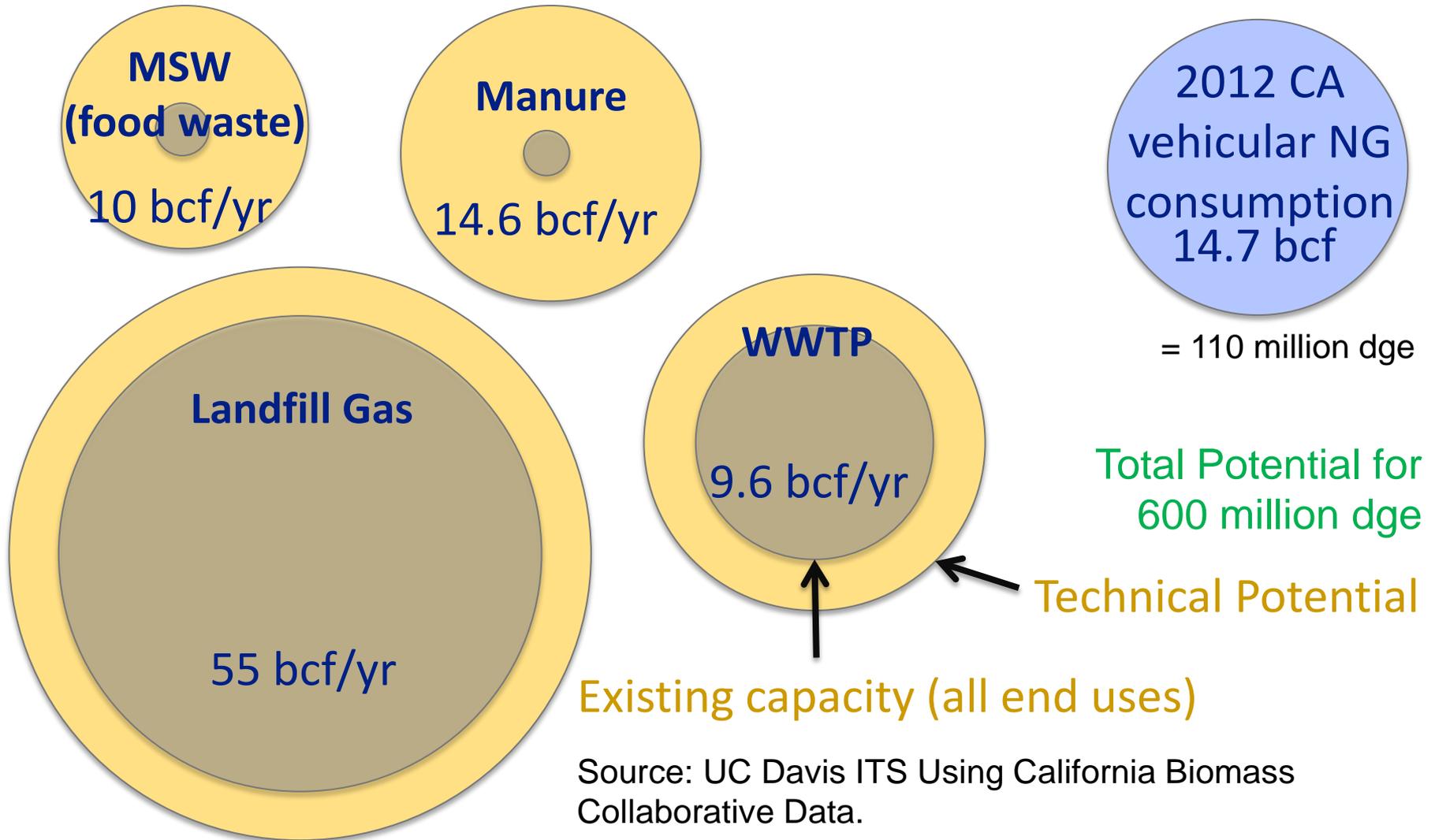
**Pixley Biogas:** \$4.6 million grant

Anaerobic digestion of dairy waste manures.

Use biogas to displace natural gas at Calgren Ethanol Biorefinery



# CA Production Potential for Renewable Natural Gas



Source: UC Davis ITS Using California Biomass Collaborative Data.



# Biogas Market Opportunities in Transportation Sector

## California's Truck Fleet = Nearly 1 Million Vehicles

- 4 percent of total vehicle population
- 16 percent of petroleum consumption & GHG emissions
- Major contributor of criteria emissions and PM in urban air basis
- Low NOx engines and RNG can meet future emission standards for carbon and criteria emissions

## Conversion to Natural Gas Well Underway

- Compliance option for meeting diesel emissions regulations
- About 15,000 trucks on road in California
  - CEC funding added 1,500 trucks
- 460 natural gas fueling stations in California
- Clean Energy Natural Gas / RNG stations and products

## California's Transit Bus Fleet



# Biogas Market Opportunities in Transportation Sector

## Renewable Hydrogen for Fuel Cell Vehicles

- FCV light duty vehicle population projected to increase rapidly to help meet ZEV Mandate
- Publicly-funded hydrogen fueling stations must have one third renewable hydrogen component (SB 1505)

## Process Fuel Replacement for Biorefineries

- 5 ethanol biorefineries
- 12 biodiesel biorefineries
- Federal Renewable Fuel Standard and State Low Carbon Fuel Standard will drive expansion of biorefineries



# Upcoming Funding Opportunities

## **Current \$24 million Biofuels PON (13-609)**

- \$6 million for biogas projects
- NOPA Phase I Expected: Imminent
- NOPA Phase II Expected: Late June

## **2014-15 Investment Plan**

- \$20 million for biofuels