

University of Nebraska - Lincoln

DigitalCommons@University of Nebraska - Lincoln

Cornhusker Economics

Agricultural Economics Department

1-7-2009

The California Global Warming Solutions Act of 2006: The 2009 United States Global Warming Act?

J. David Aiken

University of Nebraska-Lincoln, daiken@unl.edu

Follow this and additional works at: http://digitalcommons.unl.edu/agecon_cornhusker



Part of the [Agricultural and Resource Economics Commons](#)

Aiken, J. David, "The California Global Warming Solutions Act of 2006: The 2009 United States Global Warming Act?" (2009). *Cornhusker Economics*. 387.

http://digitalcommons.unl.edu/agecon_cornhusker/387

This Article is brought to you for free and open access by the Agricultural Economics Department at DigitalCommons@University of Nebraska - Lincoln. It has been accepted for inclusion in Cornhusker Economics by an authorized administrator of DigitalCommons@University of Nebraska - Lincoln.

CORNHUSKER ECONOMICS

UNIVERSITY OF
Nebraska
Lincoln

January 7, 2009

University of Nebraska–Lincoln Extension

Institute of Agriculture & Natural Resources
Department of Agricultural Economics
<http://www.agecon.unl.edu/Cornhuskereconomics.html>

The California Global Warming Solutions Act of 2006: The 2009 United States Global Warming Act?

Market Report	Yr Ago	4 Wks Ago	1/2/09
<u>Livestock and Products,</u>			
<u>Weekly Average</u>			
Nebraska Slaughter Steers, 35-65% Choice, Live Weight.....	\$92.97	\$85.27	\$85.17
Nebraska Feeder Steers, Med. & Large Frame, 550-600 lb....	116.13	101.74	102.44
Nebraska Feeder Steers, Med. & Large Frame 750-800 lb....	100.75	93.63	97.62
Choice Boxed Beef, 600-750 lb. Carcass.....	145.08	148.18	143.49
Western Corn Belt Base Hog Price Carcass, Negotiated.....	47.57	54.19	51.37
Feeder Pigs, National Direct 50 lbs, FOB.....	47.23	52.28	54.13
Pork Carcass Cutout, 185 lb. Carcass, 51-52% Lean.....	57.21	60.41	55.13
Slaughter Lambs, Ch. & Pr., Heavy, Wooled, South Dakota, Direct.....	92.63	95.50	*
National Carcass Lamb Cutout, FOB.....	262.11	263.79	259.15
<u>Crops,</u>			
<u>Daily Spot Prices</u>			
Wheat, No. 1, H.W. Imperial, bu.....	8.76	4.18	5.53
Corn, No. 2, Yellow Omaha, bu.....	4.49	2.98	4.00
Soybeans, No. 1, Yellow Omaha, bu.....	11.70	7.76	9.56
Grain Sorghum, No. 2, Yellow Dorchester, cwt.....	7.89	3.55	5.48
Oats, No. 2, Heavy Minneapolis, MN, bu.....	3.33	1.97	2.10
<u>Feed</u>			
Alfalfa, Large Square Bales, Good to Premium, RFV 160-185 Northeast Nebraska, ton.....	135.00	202.50	185.00
Alfalfa, Large Rounds, Good Platte Valley, ton.....	85.00	77.50	77.50
Grass Hay, Large Rounds, Premium Nebraska, ton.....	*	75.00	75.00
Dried Distillers Grains, 10% Moisture, Nebraska Average.....	172.50	130.00	144.00
Wet Distillers Grains, 65-70% Moisture, Nebraska Average.....	54.00	42.00	50.87
*No Market			

Greenhouse gas (GHG) emissions trap solar heat in the atmosphere, increasing global temperature by an estimated 1.4 degrees. Increases in global GHG emissions, resulting largely from increasing global energy use, have led to more heat being trapped in the atmosphere, leading to global warming. Major impacts of global warming include rising sea levels, higher temperatures and increased global migration of disease-carrying insects.

While there is continuing scientific discussion regarding how quickly the earth's atmosphere will warm and when the adverse global warming impacts will occur, most scientists believe that GHG emissions must be reduced 50-80 percent in the next 50 years to minimize adverse impacts.

Carbon dioxide (CO₂) accounts for over 80 percent of GHG emissions, and is the principal focus of GHG reduction programs. The United States, with five percent of the world's population, generates 25 percent of global GHG emissions. The U.S. has recently been overtaken by China as the largest generator of GHGs. Electricity (generated from coal-fired power plants), is second only to deforestation as a global source of GHG emissions. One way to reduce global warming is to move to cleaner sources of electricity, such as solar energy and wind energy. Another is to reduce energy use. Both are part of the California global warming program, which is likely to serve as a model for U.S. global warming legislation, which will be debated in the next year or two.

What are the main features of the California warming program? (1) A cap and trade system to limit and ultimately reduce GHG emissions; (2) increased motor vehicle fuel-economy (i.e. mileage) requirements, and (3) programs to increase residential,



Extension is a Division of the Institute of Agriculture and Natural Resources at the University of Nebraska–Lincoln cooperating with the Counties and the U.S. Department of Agriculture.

University of Nebraska Extension educational programs abide with the non-discrimination policies of the University of Nebraska–Lincoln and the United States Department of Agriculture.

industrial and commercial building and appliance energy efficiency.

What is the cap and trade program? Basically, major GHG emitters will be required to acquire governmental emission allowances to emit GHGs, with the quantity of authorized emission allowances reduced over time. Coal-fired electricity plants, for example, would be required to acquire emission allowances to cover their power plant GHG emissions.

Global and United States Emissions		
	Earth	U.S.
Deforestation	19%	-----
Electricity	16%	32%
Agriculture	14%	7%
Transportation	13%	28%
Other Fuel Combustion	11%	-----
Manufacturing and Construction	10%	20%

How does cap and trade reduce GHG emissions? If the emission allowances are distributed free of charge and at 100 percent of current emission levels, cap and trade does not reduce overall emissions. However, if the number of emission allowances are reduced (e.g. over time), then electricity generators must find ways to generate electricity without (or with fewer) GHG emissions. If the government charges a fee for the emission allowances, then the electricity generators can reduce their operating costs by reducing GHG emissions and thereby reduce the number of allowances they need to purchase. If emission allowances are sold, the proceeds can be used to e.g., fund clean energy projects, etc.

How would cap and trade affect consumers? Ultimately cap and trade would result in higher electricity prices, depending on whether emission allowances are free or must be purchased. In addition, most “clean” sources of energy like wind and solar power are more expensive than electricity from coal. So California will make funds available to consumers to reduce electricity use (and expenses), by insulating their homes or businesses, etc.

What about motor vehicles? The main way to reduce GHG emissions from motor vehicles is to improve vehicle efficiency in miles per gallon (mpg). Proposed California fuel efficiency requirements are 44 mpg by 2020 (as opposed to the 35 mpg required

by federal law). While the Bush EPA declined to grant the necessary waiver to authorize the California fuel economy requirements, the Obama EPA is likely to grant the waiver.

What about other energy efficiency standards? California already has building and appliance energy efficiency standards that are among the nation’s highest. Those energy efficiency standards will be strengthened over time. In addition, California provides loans and grants for consumers and businesses to insulate their homes and buildings, and to purchase more efficient heating and cooling equipment and electrical appliances. So if energy prices rise for business and consumers, but business and consumers become more efficient in their energy use, overall energy costs may be moderated or even reduced.

Won’t moving to cleaner energy sources raise consumer energy prices? That depends. If gasoline prices increase but vehicle fuel efficiency also increases, there may be no net increase in average fuel costs. And if consumers can reduce energy use for home heating, cooling and appliance use, higher energy prices may not necessarily increase consumer energy costs.

This also depends on what are considered “clean” sources of fuel. For example, nuclear power has no GHG emissions, so it is cleaner than coal. Nuclear power costs more than electricity from coal, but less than electricity from wind or solar. So increased nuclear power generation may be an important part of our “clean” energy future.

J. David Aiken, (402) 472-1848
 Professor, Water & Agricultural Law Specialist
 Dept. of Agricultural Economics
 University of Nebraska–Lincoln
daiken@unl.edu