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Costs weighed on having utilities cut back on CO2

By Tony Davis

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Tell utilities to cut back the carbon dioxide they put into the air, and guess what?

The price of electricity will go up. On that, all sides of a contentious global-warming issue agree.

Curbing carbon dioxide emissions as Western governors proposed last week will have a cost, at least in the short term.

Beyond that lies a mass of disagreements over how high the cost will be and whether benefits of fighting climate change will ultimately outweigh it.

The plan released by seven Western states, including Arizona, and four Canadian provinces is likely to ratchet up this debate over curbing greenhouse gases.

Here are some questions and answers about the economic effects of the Western Climate Initiative's proposed "cap-and-trade" system:

Q: What is the goal?

A: To slice greenhouse gas emissions by 15 percent of 2005 levels by 2020. Arizona Gov. Janet Napolitano has already proposed knocking emissions in Arizona down to 2000 levels.

Q: How would it work?

A: Under a cap-and-trade system, emission levels would be capped. Utilities and other greenhouse-gas emitters would buy, sell or trade emission rights to those wanting to emit more or willing to emit less. The states would auction some of the auction rights.

Q: Who would be affected?

A: Only utilities when it kicks in in 2012. Starting in 2015, it would also limit greenhouse gases from cars and other vehicles.

But transportation-based limits will not hit drivers directly — they'll go after companies that distribute and blend gasoline and other motor fuels.

Q: Why will it cost money?

A: The fewer greenhouse gases we can emit, the less electricity or motor fuel can be sold, unless alternative forms arise that don't emit greenhouse gases.

The lower the supply, the higher the price. Industry's cost must be absorbed or passed on to consumers, said David Schaller Tucson's city sustainability administrator.

Q: Can the economy handle this change?

A: Given the uncertainties of current financial, investment and insurance markets, it is unclear whether the economy can withstand the plan's huge front-end transaction costs, said officials of the Business Roundtable, a Colorado-based trade group representing 45 businesses in coal, utilities, power generation and oil and gas.

Q: What challenges does Arizona face in meeting the plan?

A: One is population growth, experts say. Arizona's 2020 population is forecast to be 9.1 million, or 37 percent higher than today's.

To bring greenhouse-gas emissions back to 2000 levels, the state have to cut emissions from industries, homes and cars already here, but also accommodate newcomers, said Dennis Dickerson, environmental planning coordinator for the Pima Association of Governments.

Q: How can that be done?

A: It would require newer types of cars and ways of generating electricity not yet in widespread use, said Paul Portner, dean of the University of Arizona's Eller College of Management.

It would require much more aggressive energy conservation, efficiency and expansion of renewable electricity sources such as solar, he said.

But in a growing state, one can do a lot to increase energy efficiency because many new homes will be built, said Dallas Burtraw, a senior fellow for the think tank Resources for the Future.

Burtraw sat on an advisory committee that made recommendations for the regional cap-and-trade plan. New homes generally have stricter building standards and more energy efficient appliances, he said.

Q: What could help Arizona meet the requirements?

A: In the past two weeks, General Motors and Chrysler announced they would put electric cars on the market by 2010.

Though skepticism has greeted those announcements, Colleen Crowninshield, a Pima Association of Governments planner who has promoted alternative-fuel vehicles, predicted electric cars will be on the market in Tucson by 2010 and in widespread use by 2012.

Q: Will electric cars be affordable enough to catch on?

A: Although there will be a stiff premium on the price at first, "then you'll see auto manufacturers say, 'This is what public wants and we have to make them affordable,'" Crowninshield said.

But it would take time for electric cars to make headway in CO2 emissions. Turnover in the entire vehicle fleet is only 5 percent to 7 percent annually.

Q: Will solar-energy use be a big part of the plan?

A: Last week, the U.S. Senate approved an eight-year extension of federal tax credits for solar and other alternative energy forms that are due to expire at the end of 2008.

If this becomes law, investors would have incentives to plow a lot more money into solar energy and bring its cost down, backers say.

In turn, home solar panels could cost four or five times less in 2012 than today, putting costs on a par with conventional electricity, said Joseph Simmons, director of the Arizona Research Institute for Solar Energy.

Today, Tucson gets less than 1 percent of its energy from renewable sources. That's fifth-lowest of 45 cities whose energy sources were compared in a new survey on environmental achievements, published by the group SustainLane.

We will still need all other conventional energy sources, said Britt Weygandt, the Business Roundtable's executive director:

"Even with all the wind and solar available, it doesn't appear that will be enough to meet growing energy consumption in the U.S.."

Q: How does the business community feel about cap-and-trade's effects?

A: Because most of this state relies on non-renewable energy, Arizonans will pay a high price for limits on CO2 emissions, said Glenn Hamer, president of the Arizona Chamber of Commerce.

Today, nuclear, natural gas and coal are cheaper than renewable energy. Tucson Electric Power gets 78 percent of its electricity from coal and most of the rest from natural gas, down from 94 percent coal in 1998.

Hamer said he feels this way even though he has a background in the solar energy business.

"People are struggling out there. This is a tough, tough economy," he said.

"This is a global challenge, and there is a global solution. If India and China don't participate in this plan, we destroy

economic output here and transfer it to India and China."

Q: Could the plan have economic benefits?

A: Limits on CO2 emissions could improve the odds for other, cleaner energy forms, such as solar or geothermal energy, cars that run on electricity, or less-polluting mass transit, advocates for the plan say.

That would mean more of what they call "green jobs."

In the long run the plan will bring cost savings, said Steve Owens, director of the Arizona Department of Environmental Quality.

Q: Do advocates believe industries will eventually embrace the plan?

A: Some businesses will find it cheap to reduce their emissions and sell their allowances to emit CO2 on the market, Owens said.

Others can use "offsets," in which they invest in projects such as reforestation, landfill gas management or management of agriculture manure, which would reduce CO2 emissions.

Under the regional cap-and-trade proposal, up to 49 percent of all emission reductions occurring from 2012 to 2020 can come from use of offsets.

"That is going to spur a lot of innovation as well. People will think of all kinds of ways of doing offset projects so as to not require imposition of new control technologies," Owens said.

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