Powered by hydrogen but pricier than a Rolls

Fuel cell cars shown at U.N. conference emit only vapor

Michael Taylor, staff writer
S.F. Chronicle, June 2, 2005

Aside from a few odd names and identification logos plastered to their roofs and flanks, the cars assembled on the green of San Francisco's Civic Center on Wednesday looked like, smelled like and, well, drove like most of the quiet, comfortable if not very exciting cars you can buy in any American showroom for $25,000 or so.

There were only two differences: Each of these nearly hand-made cars may well have cost $1 million -- General Motors puts that price tag on its "HydroGen3" -- and their power plants run on hydrogen, a fuel not easily found at the corner gas station.

The excuse for having the cars in San Francisco was the United Nation's World Environment Day five-day conference -- these cars that emit only water vapor are very clean. But the real point was that all of the world's big auto manufacturers are competing fiercely for what is likely to be a lucrative market a few decades from now, once the world realizes that its supply of oil is finite and something else will be needed to power the 17 million new cars and light trucks Americans buy each year.

A Chronicle reporter took two of the fuel cell cars on separate drives Wednesday -- Toyota built a special fuel cell version of its Highlander SUV; General Motors turned to its German subsidiary for a donor car and cobbled up a fuel cell version of the Opel Zafira, a five-passenger van.

Driving them is like driving a hybrid, only more so -- they are silent, they accelerate about the same as a gasoline version, which means neither is really fast or really slow, and they act like normal cars. They have all the usual accessories -- sound systems, power windows and door locks, air conditioning and the like -- and they don't draw the kinds of stares you might get if you were driving, say, a Ferrari with the top down.

When you open the hood of a fuel cell car, you're faced with a big shield covering the internals of the fuel cell power plant. There's not much to see. And not much to do with what you can't see, either.

Oil or gas not needed

A fuel cell vehicle doesn't need oil or gas. It doesn't need periodic attention from a mechanic. In simple terms, it runs on a fuel that is "electrochemically converted into electricity," according to Daniel Sperling, director of the Institute of Transportation Studies at UC Davis and a recognized expert on fuel cell technology. The unique characteristic of fuel cell power, he said, is that there are "no moving parts, no combustion. Electricity powers electric motors that power the wheels."

Like any new technology that industry wants to apply in a massive, multi- million unit way, fuel cells still have a long way to go before they can be put in cars and marketed like, say, a Toyota Camry or a Ford Crown Victoria, both of which run on the proven internal combustion engine.

That power plant has been around for more than 100 years and has been so refined that, aside from being the faithful spewer of spoiling emissions, it is inexpensive to build and, these days, will easily run for more than 100,000 miles if it is properly maintained.

And it consumes gasoline by the billions of gallons.

Some critics of fuel cell technology say that because the production of hydrogen is a byproduct of the gasoline refining process, the green benefits of nonpolluting fuel cell cars are canceled out. But Toyota environmental spokeswoman Cindy Knight said efforts are already being made to produce hydrogen without fouling the air.

For example, she said, the "dream" method is to produce hydrogen by splitting oxygen and hydrogen from water through a solar-powered hydrolysis process.

"In talking about the way we get hydrogen, we have to make it sustainable, " Knight said, "making sure we don't create more pollution than we're trying to (eliminate)."

Back in the last century, the automakers, pressured by the California Air Resources Board to make nonpolluting cars, tried pure electric vehicles -- despite attaining near cult status, particularly in California, the vehicles didn't last because the manufacturers pulled the plug, so to speak. They said the electric cars were not profitable.

Toyota hybrid popular

Now they're on to hybrids, which run on gasoline engine and electric motors. Toyota's Prius is the current popular favorite, and it appears that all the manufacturers will, over the next few years, offer hybrid power plants in their product lines.

Eventually, though, auto industry observers say, fuel cells will be with us. The question is when. The obstacles are formidable.

Bill Reinert, Toyota's national manager for advanced technologies, said Wednesday that "before fuel cell vehicles are a reality," three important conditions must be met. "We have to solve all the technological issues," he said, "cutting the cost of the fuel cell 'stack' and giving the vehicle more range" -- most makers want the car to be able to go 250 to 300 miles before refueling. Currently, experimental fuel cell cars will not go nearly that far.

"We also have to prepare society" for fuel cell cars, he said, and acknowledged Gov. Arnold Schwarzenegger's crusade to establish a "hydrogen highway" of fuel cell filling stations. More work must be done by university researchers in the areas of reliability and engineering, and the myriad of federal, state and local "codes and standards" must be adjusted to reflect the wrinkles of a new technology, he said.

Finally, Reinert said, the auto industry has to convince consumers that this new way of getting to work every day, or to the mountains on the weekend, is worth it.

"Why would (a consumer) get out of a gas vehicle and into one of these?" Reinert asked rhetorically. "We have to provide significant (proof) that a move to fuel cells is clear and enduring. We don't see that signal right now. Without a federal policy that says this is the way we are going to move, it will be very difficult."

Nonetheless, the way it will probably start, Reinert said, is with "limited fleet introductions," such as city and suburban bus, taxi and utility fleets that can return each day to a centralized hydrogen fueling station. Buses might well be the first fleet users of fuel cell power because the manufacturers wouldn't have to redesign a complete vehicle -- they would simply put the fuel tanks on the bus roof.

As for the future, according to UC Davis's Sperling, "it's hard to imagine we won't see (fuel cell vehicles) in large numbers. They're a fundamentally superior technology, far more efficient than the internal combustion engine, and they're quieter. They have that electric drive feel to them."

Environment Day ceremonies

The United Nation's World Environment Day conference moves into high gear today in San Francisco with ceremonies at Civic Center Plaza at Grove and Polk streets. The event will begin at 9 a.m.

Speakers will include Mayor Gavin Newsom, California Environmental Protection Agency Director Terry Taminen and environmental activist Julia Butterfly Hill.

In addition, the daylong California Tomorrow Festival will be held at Civic Center Plaza, including free concerts, entertainment, food and examples of new innovations in green technology: hydrogen fuel, solar power, wind power, biofuels, geothermal energy and hydropower, among others.

EPA Names Long Beach Port an 'Environmental Hero'

By Deborah Schoch, Times Staff Writer
LA Times, June 2, 2005

The Port of Long Beach has received an award from the U.S. Environmental Protection Agency for promoting clean air and water, despite recent criticisms of the port by clean-air activists.

The port is one of 37 "environmental heroes" named this week in EPA Region 9, which encompasses the Southwest.

The fast-growing ports of Long Beach and Los Angeles together constitute the single-largest air polluter in the Los Angeles region. Long Beach is the nation's second-busiest seaport, after Los Angeles.

EPA officials praised the Long Beach port for taking steps to stem air pollution from ships, trucks and yard equipment. They cited such efforts as the installation of devices to reduce diesel emissions from yard equipment, a liquefied natural gas demonstration project and plans to allow oil tankers to plug into onshore electric power while in port rather than running diesel-burning engines.

"We're delighted to get recognized for the positive things we're doing," said Robert Kanter, the port's planning director.

One environmental attorney, however, took issue with the award.

"It's premature to give the port an award when they are one of the largest polluters in the region," said Gail Ruderman Feuer, senior attorney at the Natural Resources Defense Council.

Some of the port's programs are relatively small, such as a "minimal" liquid natural gas project, she said. "Much of what they're getting an award for is fluff."

But EPA Regional Administrator Wayne Nastri disagreed, saying that both the Long Beach and Los Angeles ports are ahead of many other ports in combating pollution.

"We want to make sure those achievements are noticed," Nastri said Wednesday. "The fact is, when we can get a real achievement — an example they set for others — that's a good thing."

Also receiving EPA awards were the Los Angeles County Department of Public Works, watersheds division, for its work in a flood-prone area of Sun Valley; Justin Rudd of 30-Minute Beach Cleanup in Long Beach, who has organized more than 75 beach cleanups since 1999; and the Audubon Center at Debs Park on the border of Highland Park and Montecito Heights, which the EPA called "the greenest building in the city of Los Angeles."

Fledgling State Ethanol Industry Faces Hurdles

Valley Voice Newspaper, June 2, 2005

Goshen - The up-start California ethanol industry remains in a pitched battle for survival this summer getting mixed signals from the government and market forces whether to build a home-grown fuel industry starting with several plants in central California or sound a retreat.

This past week, for example, as a Senate committee passed a bill to double the amount of ethanol produced to mix with gasoline over the next seven years, Senator Dianne Feinstein was able to get a them to agree to allow California to put a waiver on a mandate for ethanol in summer months for fear mixing of the fuel would boost summer pollution.

“We can’t build an industry based on an eight month schedule,” shrugs Pacific Ethanol’s Tom Koehler who strongly disagrees with Feinstein’s assessment. “Either she is badly misinformed or she’s doing the bidding for Chevron,” suggests Koehler, hoping the Feinstein waiver idea will die in conference when the bill moves forward.

Chevron is a big contributor to Feinstein’s campaigns.

“California has the best air quality ever in the first year that ethanol was added to our fuel supply in California,” says Koehler, arguing that big oil wants to limit the volume of non-petroleum ethanol with gasoline.

The Senate Energy Committee last week gave their blessing to increase the use of ethanol to six billion gallons next year and eight billion gallons in 2012. Today the industry produces about 3.4 billion gallons. One Senator predicted the high volume of domestic ethanol would displace two billion barrels of imported crude between 2006 and 2012.

“This is about fuel in our farm fields and not under sands in Saudi Arabia,” Senator Byron Dorgan, D-N.D., said. Feinstein recently argued that increasing the use of ethanol will cost consumers more money - adding 2.4 cents per gallon to consumers, citing a study. But ethanol supporters counter the study was based on $25 per barrel oil - now double that. Ethanol costs have fallen since then, the study says as well.

Feinstein says California doesn’t need the ethanol mandate. “You are forcing something that isn’t necessary,” citing state studies that show during hot summer days emissions increase when ethanol’s blended.

But there are also two schools of thought in the state on this with Governor Schwarzenegger calling this week for increased efforts to limit CO2 emissions to fight global warming. Ethanol produces far fewer CO2 emissions than gasoline.

Pacific Ethanol’s first plant broke ground in recent weeks, says Koehler at a former mill site in Madera making it the second ethanol plant to move to production in the state. The first, operated by Phoenix Biosystems in Goshen, is expected to make fuel this summer. (See front page)

The fledgling ethanol industry here wants California to follow the lead of every other state and allow blenders to mix 10% ethanol to the 90% gasoline mix. Right now because of air quality concerns, the state set the bar at 5.7%. Despite that, Valero Oil this past week confirmed that they are blending ethanol at a 7.7% rate without breaking any state pollution level mandate.

Valero is doing this at their Benecia refinery adding more ethanol in the fuel mix at a substantial cost saving compared to gasoline. Ethanol is now priced on the wholesale market at $1.25 a gallon - 25 cents cheaper than CARB gasoline. On top of that because of federal tax incentives the ethanol earns an extra 52 cents subsidy. The net cost adds up to about half the price of gasoline - a strong incentive to blend more ethanol even for an oil company.

But a Valero spokesman suggested to the Voice that their move while saving the oil company money did not extend the state fuel supply - contrary to what ethanol advocates claim. For every gallon of mostly foreign made gasoline you displace corn based, home-grown ethanol its net plus for energy security they have argued.

But Valero says to make room for ethanol the refinery has to remove lighter components found in gasoline and the net supply of fuel is about the same. But Koehler notes that the removed lighter components are put to use elsewhere. In the “big picture ethanol is clearly expanding the US fuel supply.”

The point is a critical one because of the tight gasoline situation in the US and the state. Adding a few percentage points of fuel could mean a big difference in supply meeting demand for gasoline or causing lines at the pump.

But ethanol production advocates have to face the downside of lower prices - it gives them a lower return even as they seek monies to finance more plants in the state. The price of ethanol has dropped from over $2 per gallon to the $1.25 today since last fall.

Still, Pacific Ethanol is preparing to file their building permit application in the next few weeks at a Visalia site across from the airport. The company contacted county officials last week saying the application was coming.

Nearby another company, Calgren is hoping to begin construction on a plant near Pixley late this summer.

That would mean four such ag based plants would be making the fuel in the central valley in the birth of an industry in the state. Although it will mean millions in new investment, displacement of foreign oil and jobs for our economy, this birth is having its labor pains.

Ethanol supporters have also been doing battle with the state ARB over whether the increased use of ethanol in the state's motor fuel would be a good thing or not. On the one hand the Energy Commission and CARB have set a goal that 20% alternative use here by 2020 other than petroleum. The state wants to meet a goal of reducing CO2 emissions.

Already the state uses 900 million gallons of ethanol annually to blend with gasoline replacing the use of an oil based oxygenate MTMB now found to cause ground water pollution. Ethanol advocates say California ethanol use could double to 1757 million gallons a year if regulators would allow helping to clean the air.

But barriers exist to the plan a new California Energy Commission report suggests. The report says that "Recent studies estimated that ethanol blended in gasoline has increased volatile organic compounds (VOCs) in the South Coast Air Basin between 19 and 25 percent because VOCs can permeate and escape through the "soft" components of a gasoline vehicle, such as rubber hoses. Furthermore, CARB's Predictive Model forecasts an increase in NOx emissions if the ethanol content is greater than 5.7 percent by volume. As a consequence, CARB has asked the federal government to waive the requirement for minimum oxygen content in gasoline due to these projected emission impacts."

Advocates like the California Renewable Fuel Partnership say newer cars eliminate the emissions and deny that ethanol in higher blends are a pollution problem.

The report says to boost ethanol use more E85 fueling stations would need to be built for use in flexible fuel vehicles at a value of 85% ethanol and 15% gasoline. There are already 200,000 such vehicles in the state right now.

The report says more studies of air quality issues relating to ethanol are needed.

Meanwhile, the state following Feinstein's lead, continues to seek a waiver from the federal government to end the use of ethanol as a mandatory oxygenate suggesting oil companies can make gasoline that is clean enough without it.

But how can they argue with both an increase in fuel supply at half the cost?

Valero who sells gasoline to many of the independent gas stations in California apparently passes on the lower cost to its suppliers. The trade group representing the independent stations have urged the state to allow a 10% blend to help lower gas prices even more.

Meanwhile, local agribusiness interests who want to build this new industry are having to fight to get financing even as some like Senator Feinstein appear to want to pull the rug out from under them. "She is essentially saying that Midwest ethanol producers should supply California," says Koehler.

What's New

Valley Voice Newspaper, June 2, 2005

EPA is calling for school districts who want to apply for grant funds for **clean school buses** to replace older diesel buses. EPA will make available $7.5 million to districts who apply. Older diesels - made before 1990 are six times more polluting than new buses. Sources say every valley district who applies is likely to get some funds considering our air status. Tulare school buses could use CNG buses to be fueled at the city CNG yard. Visalia Unified is ready to use a new CNG fueling station for its new bus fleet and the City of Visalia will also use the facility to fuel up their CNG garbage trucks.

Ag News

Valley Voice Newspaper, June 2, 2005

Scientists at the UC Kearney Research and Extension Center have developed **a new method to produce dried-on-vine (DOV) raisins.** Prior DOV systems required costly trellising and harvesting equipment, putting DOV out of reach for most growers. A new, within-row-alternate-bearing DOV (WRAB DOV) method can be used with the existing trellis and no retrofitting. DOV raisins are machine harvested, reducing human contact and production costs, and improving profitability. Drying raisins on the vine eliminates the need for intensive cultivation to prepare terraces down row middles. This method also removes the problem of using and disposing of paper trays, solving an important air-quality issue for raisin growers.

Gov. Vows Attack on Global Warming

Schwarzenegger says the state will take the lead in slashing greenhouse gas emissions, but offers few specifics on how goals would be reached.

By Miguel Bustillo, Times Staff Writer
LA Times, June 2, 2005

SAN FRANCISCO — Vowing to lead the world's response to global warming, Gov. Arnold Schwarzenegger on Wednesday announced a series of ambitious targets for cutting California's greenhouse gas emissions by more than 80% over the next half-century, but provided few details on how the state could achieve such dramatic reductions.

In a speech before hundreds of business and environmental leaders at the United Nations World Environment Day conference in San Francisco, Schwarzenegger signed an executive order that outlined bold goals for slashing industrial releases of carbon dioxide and the other heat-trapping gases that climate scientists now link to rising temperatures and sea levels.

"As of today, California is going to be the leader in the fight against global warming," Schwarzenegger said, adding, "I say the debate is over. We know the science, we see the threat, and the time for action is now."

Under the executive order, by 2010 California would reduce its greenhouse gases to 2000 levels, or about 11% less than they would be without taking action. By 2020, California would reduce the emissions to 1990 levels, or about 25%. By 2050, the state would reduce the emissions to 80% below 1990 levels.

The 1990 baseline is a key barometer in the growing international effort to combat global warming, because it is the mark countries pledged to get below as part of the Kyoto Protocol, a pact signed by every developed nation except Australia, Monaco and the United States, the world's largest emitter of greenhouse gases.

Schwarzenegger's proposal, which follows similar pledges by a number of states around the country, is only about half as aggressive as the Kyoto targets in the short run. But its long-term goals are far more ambitious than anything proposed in the United States. Indeed, some climate experts said that if California reduced its emissions by the targets Schwarzenegger set, it would cut more greenhouse gases than Japan, France or the United Kingdom.

Schwarzenegger never mentioned President Bush in his speech, but his call for aggressive action is a repudiation of the Bush administration's position on climate change. Bush reneged on a campaign pledge to curtail carbon dioxide emissions made during his initial campaign for president, and formally renounced the Kyoto pact. The Bush administration has since advocated only voluntary steps to reduce the gases, arguing that more drastic measures would damage the American economy.

By contrast, Schwarzenegger said Wednesday he believed reducing greenhouse gases could be an economic opportunity for businesses in Silicon Valley and elsewhere that develop pollution control technologies.

Exactly how Schwarzenegger proposes to achieve such drastic reductions in carbon dioxide emissions remained unclear, however. In his speech, the governor pledged to speed up an

existing California requirement that private utilities provide 20% of their power from renewable energy, moving the deadline from 2017 to 2010. He also pledged to make good on his goal of dramatically increasing the number of homes in the state with solar power panels. And he promised to lobby business leaders throughout the state to voluntarily reduce emissions.

But even before Schwarzenegger had announced his targets, political critics were calling his proposal short on substance, and it was clear that it would be the subject of heated debate in Sacramento.

Democratic lawmakers moved a rival proposal that set stronger early targets through an Assembly policy committee Tuesday, and Assemblywoman Fran Pavley (D-Agoura Hills), the author of a landmark state law to curtail greenhouse gases from cars and trucks, announced another bill to reduce the emissions from factories, power plants and other stationary sources.

"I hope that Gov. Arnold Schwarzenegger's 'Global Action Plan' on global warming does not turn out to be another empty and cynical promise like the governor's pledge to convert one of his many Hummers to hydrogen," said California Treasurer Phil Angelides, a leading Democratic contender for governor in next year's election.

Some climate experts said Wednesday that the most realistic way for California to make steep reductions in greenhouse gases would be by setting a hard cap on the emissions, and allowing companies that cut more than their allotted share to receive credits they could sell to others that exceed their limits.

Such "cap and trade" systems have proved successful in cutting the sulfur dioxide pollution that causes acid rain in the United States and are now being used in Europe to curtail greenhouse gases. In the Northeast, a coalition of states is formulating a regional cap and trade market to reduce greenhouse gas emissions, arguing that states can no longer wait for action from the federal government.

"Cap and trade is only part of the picture, but it is an essential part," said Michael Hanemann, director of the California Climate Change Center at UC Berkeley. The center has studied how global warming could affect California's water supplies, most of which come from mountain snowpacks.

Terry Tamminen, Schwarzenegger's Cabinet secretary and primary environmental advisor, said after the speech that the governor's early targets could be met by simply ramping up existing programs and adopting proposals the governor has already made. But he left open the possibility of a cap and trade regulation in California.

"There is definitely potential for those kinds of market-based approaches," Tamminen said.

Some business officials said they would wait to see more specifics before deciding their stance on the proposal, but expressed concern that the United States was adopting a patchwork of differing state regulations on climate change.

"We really want to see what state officials plan to do to implement these dramatic reductions — 80% is a huge target," said General Motors spokesman Dave Barthmuss.

"We already have one California regulation we don't like," he added, referring to the tailpipe emissions rule, which has been challenged in court by automakers. "We hope that they will seek input from industry as they approach this plan.

"We think it's important to address this issue nationally, but understand California's position that the federal government is not doing enough."

Governor acts to curb state's gas emissions

Goals put him at odds with many in GOP

Mark Martin, Chronicle Sacramento bureau
S.F. Chronicle, June 2, 2005

Gov. Arnold Schwarzenegger, in a strongly-worded speech declaring global warming an imminent threat, announced broad goals Wednesday to reduce greenhouse gases in California that many

environmentalists and scientists hailed as an effort that could have profound ramifications around the world.

Speaking at the United Nations World Environment Day conference in San Francisco, Schwarzenegger argued for curbing carbon dioxide and other gases emitted from cars, power plants and industry, which most experts believe are raising global temperatures and threatening water supply, air quality and human health in California.

The goals Schwarzenegger announced Wednesday are less aggressive in the short term than emission-reduction goals outlined in the Kyoto Protocol, which came into force in February, signed by 156 countries around the world, but not by the United States. Many of the specifics that Schwarzenegger administration officials pointed to as ways to meet the goals -- such as a law limiting tailpipe emissions in cars -- were already in place and first enacted by former Gov. Gray Davis. And some Democrats in Sacramento accused the governor of not going far enough.

But the Republican governor delivered a politically powerful message by saying the time for studying whether global warming is real has past -- a statement that seemed to rebuke many in his own party, including President Bush. And clean-air advocates noted that any move by a giant economy like California's to limit greenhouse gases could have financial and environmental impact around the globe.

"I say the debate is over," Schwarzenegger said in urging action. "We know the science, we know the time for action is now. Global warming, pollution and the burning of fossil fuels that caused it are threats we see here in California and everywhere around the world."

"We have no choice but to meet this challenge," he said to a cheering crowd of environmentalists and mayors assembled in San Francisco City Hall.

"The governor is a real-life climate action hero today," said Nancy Ryan, a senior economist with the group Environmental Defense.

Schwarzenegger signed an executive order calling for a slowdown of emissions by 2010 that would return the state to the level of emissions in the year 2000. By 2020, the order calls for the state to return to 1990 levels and by 2050, the state would be expected to reduce emissions by 80 percent below current levels.

Administration officials said they will pursue several strategies to meet the goals.

Cabinet Secretary Terry Tamminen, who was an environmental activist in Southern California before joining the Schwarzenegger administration, noted that Schwarzenegger has already signed an executive order requiring state- owned buildings to become significantly more energy efficient, which would cut down on electricity use.

The governor is also sponsoring legislation, dubbed the "Million Solar Roof" program, designed to increase the use of solar power in new home construction. The measure was approved by the state Senate Wednesday and must now work its way through the Assembly.

Schwarzenegger also is backing the state Public Utilities Commission's push to require utilities like PG&E to acquire 20 percent of the electricity they deliver to consumers from renewable sources by 2010. He said in his speech Wednesday that he supports moving the renewable power levels to one- third of utilities' portfolios by 2020.

He also supports a law enacted by Davis that will require new cars sold in California to emit less carbon dioxide, beginning with 2009 models. That law is being challenged in court by automakers, however.

Power plants and cars contribute about 70 percent of the state's greenhouse gas emissions.

Many scientists said Schwarzenegger's goals are important because they could help spur more technological innovations and set the stage for major emission reductions in the future.

For the long term, many economists, scientists and environmentalists believe the state should set up emission limits for industries and allow businesses to buy and sell emission permits, similar to a system already in place in Europe.

New England states that made a similar move toward emission limits in 2001 are now set to implement that system, referred to as cap-and-trade, noted Michael Hanemann, director of the California Climate Change Center at UC Berkeley. Enacting such a system in a major economy like California's would be an important global precedent, he said.

As the 10th largest emitter of greenhouse gases, California's every action is important, said Jason Mark, California director of the Union for Concerned Scientists.

"My sense is the governor's voice adds immeasurably," Mark said.

Whether the goals will cost consumers remains to be seen. Automakers have argued that car prices will rise in California with the emissions law and that Schwarzenegger's solar legislation could lead to a slight increase in power rates.

But many economists and administration officials argue that decreasing reliance on fossil fuels actually saves money. The Union of Concerned Scientists, an environmental group, estimates motorists could save $10 billion between 2009 and 2016 by driving more fuel efficient cars, for example.

Schwarzenegger has consistently portrayed himself as an environmental vanguard in his party, and the speech Wednesday seemed to further distance him from Bush and many California Republicans.

The president has refused to sign the Kyoto Protocol and has indicated that global warming needs further study.

Schwarzenegger said Wednesday that failing to address pollution caused by fossil fuels in the past was "our mistake."

"But now we do know better," he said. "And if we don't do anything about it, it would be our injustice."

And a day before the governor declared global warming a credible threat, three Assembly Republicans questioned it in speeches on the Assembly floor. Assemblyman Doug LaMalfa, R-Richvale, referred to global warming as a "dubious theory."

Legislation by Assemblyman Ira Ruskin, D-Redwood City, that would go further than Schwarzenegger's executive order and require stronger reductions in greenhouse gases, passed the Assembly with only one Republican vote.

Democrats attacked the governor this week for limiting his greenhouse gas initiative to an executive order, which could be overturned by the next governor, and for falling short of the Kyoto limits.

"The governor can do better," state Sen. Sheila Keuhl, D-Santa Monica, said at a press conference Tuesday.

Keuhl and others suggested the governor should agree to support the Ruskin measure or sponsor other legislation enacting the targets into law.

Bye-bye business if price-wage disparity drags on

Trend tracker says sudden jolt in real estate in valley not at crisis point -- yet

By STEPHANIE TAVARES, Californian staff writer
Bakersfield Californian, June 2, 2005

With historically low housing and living costs, Bakersfield was once a place that attracted new workers, allowed people to grow old in the same neighborhood they were raised and encouraged businesses to expand.

Those days are gone.

Wednesday's study from the Office of Federal Housing Enterprise Oversight found that in the last year, housing costs in Bakersfield have risen more than in any other metropolitan area in the nation.

It's news made even more alarming by a recent study that found stagnant wages also make it one of the most financially difficult places to live.

That doesn't just mean a few people will go without homes. It means that hot, smoggy, foggy Bakersfield could become less attractive to large employers.

"In the extreme, when housing prices get disproportionate to people's salaries, it inhibits economic development because people can't afford to come in and take jobs," said Carol Whiteside, president of the Great Valley Center, an organization that tracks trends in the Central Valley.

For many large businesses, the ability to recruit top-quality employees is key when choosing a location.

Two years ago, State Farm Insurance expanded its local offices, increasing local jobs and importing about 300 employees from the Thousand Oaks area.

Faced with the choice today, as housing prices have skyrocketed, it might not make the same choice.

"When deciding which offices to keep, we considered 'what would life be like for our employees, what would housing costs be, would they be able to afford to buy a home, what are the schools like?'" State Farm spokeswoman Hilary Whitcomb said. "We considered more than just the business side of it. We wanted to be sure it was someplace our employees could live. So housing costs played a large part there."

Whiteside said the sudden rise in the cost of housing in the Central Valley in general (Visalia and Porterville are also high on the government's list) has not created a crisis -- yet. The real danger will come if the trend of high-priced homes and stagnant wages continues.

"I don't think we should be cavalier or insensitive to the possibility," Whiteside said. "Providing housing for all sectors of the work force is very important to support the economic needs of the community."

Sierra Club member and Bakersfield resident Gordon Nipp said the increased housing prices have already had a negative impact on Bakersfield. He said city and environmental groups often become easy scapegoats for frustrated home buyers stretched to the limit.

"Air quality, park, school, transportation fees, they all add to the increase in price, but it's important to remember that the thirty percent increase is incredibly more than these fees could add up to be," Nipp said. "The developer is going to charge whatever the buyer will pay, whatever the market will bear, and the market is bearing a lot right now."

S.F. Chronicle commentary, Thursday, June 2, 2005:

OPEN FORUM

California, low-carbon leader

By Nancy Skinner
June 2, 2005

Climate change is not just an environmental issue, it's an economic issue, too. Major economic activities of our industrialized society are at the root of human-caused climate change, which in turn will have economic effects. Yet, the degree that we allow our response to the threat of climate change to be economically damaging or economically productive is in our hands.

Climate change is a leading topic of discussion at the World Environment Day in San Francisco this week, and, fittingly, California will be able to show the world it has a firm grip on both the problem and the solution. The state, its businesses and its public sector are all taking positive actions to create a productive and thriving low-carbon economy -- actions that demonstrate a positive economic response to climate change.

California is both using and developing the technologies we'll need worldwide to make the transition away from high-carbon emissions. California businesses and government are employing energy efficiency, cogeneration, diverse fuels, renewable energy and other clean

technologies to reduce their operating costs and increase economic output. In working together, the state and its businesses have shown worldwide leadership in developing clean technology and renewable energy.

Although California has the largest population of the United States, in terms of carbon intensity, it is atypical. Whereas national annual per-capita greenhouse-gas emissions average 20 metric tons, Californians per-capita emissions average 12 metric tons, according to the California Energy Department. The reason: Since the early 1970s, California has been a leader in promoting efficiency, cleaner technologies and renewable energy. California acknowledged early the threat of climate change, passing legislation in 1988 to assess impacts and identify mitigation strategies. Since that initial law, California became the first government to regulate greenhouse-gas emissions from vehicles; set a Renewable Portfolio Standard requiring 20 percent of electricity to be produced from renewables by 2010; established the first state-sponsored climate-change research program; and opened the California Climate Action Registry to facilitate public and private reporting of greenhouse-gas emissions.

The effect of the state's 30-year history of energy-efficient building codes and numerous financial and other incentives to reduce electricity use is pronounced. Per-capita electricity use has remained practically unchanged since the mid 1970s, compared to a growth in national per-capita electricity use of about 1.5 percent per year.

Examples abound of how California's vast intellectual and economic resources are being used to reduce emissions and create new opportunities. Take the city of San Francisco. It operates the largest city-owned solar power system in the United States. Every year, electricity-producing photovoltaic cells on Moscone Center save 4 million kilowatt hours of electricity and $305, 000 in energy costs. By the end of next year, more than 10 new solar systems will be installed at city-owned schools, libraries and health clinics. The installation of energy-efficient traffic signals is expected to cut 7.7 million kilowatt hours and save the city an additional $1.2 million per year in electricity costs. San Francisco is also an established leader in the use of low-emission vehicles and implementing extensive waste reduction, recycling and reuse programs.

Just as San Francisco is proving to be an example for other municipal governments in how to be a low-carbon leader, so are many California-based companies. Take San Jose's Calpine Corporation, for example. This largest independent power producer in the United States and worldwide leader in renewable geothermal power operates 4,000 megawatts of natural gas- and geothermal-fueled sources within California. Calpine's gas turbine combined- cycle power plants emit about 52 percent less carbon dioxide per unit of electricity compared to the industry average and produce electricity at lower costs, demonstrating that environmental and economic improvements can be achieved together.

Many more leadership examples, such as how California's electric utilities are all expected to meet the state's goal of 20 percent electricity from renewable sources by 2010. Or consider how Green Star Products, based in Chula Vista (San Diego County), has become the largest U.S. producer of biodiesel, with 35 million gallons per year capacity. Or how the state-funded Public Interest Energy Research grants have brought more than 33 clean-energy products to the marketplace.

California's response is a model of the abundant economic opportunities available in reducing greenhouse gas emissions and making the transition to a low-carbon future. The state's universities and other institutions are working on the technologies that will shape the low-carbon future and its entrepreneurs are bringing them to market. Such leadership can have big paybacks. A recent survey of U.S. venture-capital firms, conducted by the Natural Resources Defense Council and Environmental Entrepreneurs, labeled California as the most attractive region in North America for clean technology/clean energy investment.

Every economic threat also represents a challenge to those who are bold and creative enough to rise up to it. Investment in the technologies and products and the new energy infrastructure that will shape the low-carbon future offers a huge opportunity to businesses around the world. California demonstrates that the right leadership and incentives can harness the talent and skills that exist to find solutions that beat climate change and increase prosperity for all. As the world's

environmental leaders discuss climate change in San Francisco this week, they won't have to look far for solutions.