

## **Power plant saves \$1.4m annually Fresno Co. project also expected to cut air pollution.**

By Kerri Ginis / The Fresno Bee  
Monday, April 24, 2006

Tucked behind a red brick wall near the Fresno County Jail, a natural gas-burning plant cranks out electricity 24 hours a day to some buildings in downtown Fresno.

The 1.2-megawatt plant is expected to save the county about \$1.4 million a year in electricity costs and reduce air pollution.

The county also earned a one-time rebate of \$1.5 million from Pacific Gas & Electric Co. because the plant saves energy and produces power on site.

"This is a great win," Supervisor Judy Case said after the county received the rebate check last week from PG&E. "We've got energy savings and we've got improved air quality."

The plant, which went online in December, supplies some of the energy to power the jail, courthouse, Hall of Records, county plaza and sheriff's administration building.

"This generator replaces electricity we're buying from PG&E," said Martin Bloom, facility services and purchasing manager for the county's Department of General Services. "This allows us to buy less electricity during the peak hours, especially in the summer when it's the most expensive."

Burns & McDonnell Engineering, a Kansas City-based company that specializes in energy conservation projects, designed and built the plant. It completed the work in November, nearly four months ahead of schedule.

The plant consists of a large diesel engine, an electrical box, underground piping, a heat recovery steam generator and emission control system.

The county financed it by selling \$15 million in bonds in 2004.

The annual debt service averages about \$1.2 million, said Jeff Heller, administrative analyst with the Department of General Services.

That cost will be recovered through reduced energy bills. The bonds will be paid off in 15 years.

Part of the PG&E rebate, about \$300,000, will go toward the first debt service payment due in August. The rest will be put toward the cash-strapped Department of Behavioral Health, which faces cuts in adult mental health services because of a deficit of about \$5 million.

County officials said they are pleased the plant is reducing energy consumption and helping to improve air quality.

Said Bloom: "Because of the success of this, we're taking a look to see what other energy-saving projects we can do."

## **Scientists try to solve mystery of particulates**

Warren Lutz, staff writer  
Stockton Record, Sunday, April 23, 2006

STOCKTON - They're much smaller than the width of a human hair, but some can give you headaches and even kill you.

Some do nothing. Some can trigger coughing so violent you can't breathe. Some cause heart attacks.

Some get into your lungs and your blood. Others go straight to your brain. What they do there, no one knows.

In fact, what experts don't know about the tiny particles that make up bad air could fill a library. And they're even unsure about that.

"The science of all air pollution is rapidly advancing and evolving," said Matt Haber, a deputy director with the U.S. Environmental Protection Agency. "We don't even know what we don't know at this point."

Now, a new effort involving engineers, biologists, toxicologists and physicians aims to find out exactly how bad San Joaquin Valley's notoriously bad air really is.

The Valley has never met federal standards for fine particulate pollution. Heavy vehicle traffic, dust and organic gases produced by farms and the Valley's bowl-like structure all contribute to the problem.

According to a study released last month, the Valley's failure to meet federal air regulations costs \$3 billion a year in lost productivity, health-care costs and premature deaths - or \$789 a year for every San Joaquin County resident.

Armed with an \$8 million federal grant, as many as 60 different research scientists at the University of California, Davis, want to know what the Valley's myriad pollutants do inside the lungs of seniors, farm workers and children.

Not every particle is toxic, said Kent Pinkerton, a UC Davis professor of anatomy, physiology and cell biology. But scientists are unsure without further studies.

"We really don't have a good handle on which types of particles are likely to produce which health effects," Pinkerton said.

In the Valley, however, there's plenty of airborne nasties to look into.

Vehicle exhaust, gases from dairy operations, dust stirred up by farming and burning wood are contribute to a floating stew of particulates. Most particles regulated by state and federal officials are 10 microns or smaller - about one-tenth the width of a human hair.

Anthony Wexler, another UC Davis professor and expert in analyzing the chemical and physical characteristics of airborne particles, said the school will be able to re-create many different air pollution scenarios on campus.

Wexler, who recently became the director of the new San Joaquin Valley Aerosol Health Effects Center, last week showed off one such tool in his lab. An apparent mishmash of plastic tubes, boxes, gauges and metal framing, it doesn't look half as ominous as its purpose - taking particulates and condensing them into nightmarishly bad air pollution scenarios.

One area of research will involve how rats react to that bad air. For example, Wexler said, early studies have showed the hearts of animals exposed to particulates will beat more steadily than normal.

Although that sounds like a good thing, it's not. It could even signal the onset of a heart attack, said Wexler, explaining that a healthy heart is able to shift gears.

"You want some variability," he said.

In her own lab several buildings away, cell biologist Michelle Fanucchi dangles an object she and other scientists will spend a lot of time with: the inside of a rat's lung. Created by pouring a rubber solution through the organ, it looks like a white, jiggly sea critter, or a three-dimensional negative of a sponge.

Taken from a healthy rat, the cast will be used to compare with the lungs of rats exposed to high levels of pollution at different stages of growth. The goal: find out how air particulates affect growing bodies.

The findings are particularly needed, Fanucchi said, because most previous studies were designed to find out how air pollution affects adults.

"There's not enough research being done on children," she said. "You can't predict whether or not a child is susceptible based on how an adult reacts."

The multidisciplinary approach to the research means scientists can share samples and data with each other, Wexler said. The goal, he added, is to build compelling research that results in better regulations that, in turn, protect people.

"You got to do studies to understand the relationship between and human health and air pollution," Wexler said. Although there's no guarantee the research will be acted upon, he added, "some work ends up affecting the world."

## **News Analysis**

### **Tough turf for Bush's energy speech**

#### **In a state hostile to his environmental policies, he touts hydrogen as new fuel**

By Mark Martin, Chronicle Sacramento Bureau

S.F. Chronicle, Sunday, April 23, 2006

West Sacramento (Yolo County) -- President Bush declared hydrogen the fuel of the future in an Earth Day speech that highlighted the second day of his visit to California, a state that has continually clashed with the president over environmental policy.

Saying the country has a "real problem when it comes to oil," Bush touted his plan to boost federal funding for research into making hydrogen a commercially viable alternative to gasoline as he spoke Saturday at the headquarters of the California Fuel Cell Partnership. The partnership is funded by automakers, government agencies and energy companies to promote hydrogen fuel cell technology for use in vehicles.

"It (hydrogen) has the potential -- a vast potential to dramatically cut our dependence on foreign oil," Bush said, warning that gasoline prices will probably continue rising this summer. "Hydrogen is clean, hydrogen is domestically produced and hydrogen is the way of the future."

Bush, who spent Saturday morning on a bike ride in Napa County, said California was "a good place to spend Earth Day."

But from policies on fish, forests, air quality and global warming, the state and the president have rarely been in harmony. Through litigation and legislation, it's often Bush vs. California on environmental issues.

Attorney General Bill Lockyer, a Democrat, has played a part in several major lawsuits against federal government environmental policies. Democratic lawmakers have frequently authored bills intended to counter federal proposals on air, water or forestry by increasing state regulation. And

Republican Gov. Arnold Schwarzenegger said earlier this month that the federal government had "fallen short" in environmental protection.

"California is totally at loggerheads (with the president) on virtually every environmental issue that there is," Carl Zichella, regional director for the Sierra Club chapters in California, Nevada and Hawaii, said on Friday.

Part of the frequent fighting is political, stemming from a state dominated by Democratic officeholders versus a Republican president. Democrats rarely miss a chance to snipe at Bush on the environment, an issue on which only 27 percent of Californians think Bush is doing a good job, according to a recent poll taken by the Public Policy Institute of California.

"George Bush is to environmental protection what the Exxon Valdez was to seals," quipped Lockyer earlier this week, referring to the tanker involved in the huge Alaska oil spill in 1989.

Lockyer filed a lawsuit this week under the federal Freedom of Information Act seeking to force the Bush administration to disclose contacts the administration has had with the auto industry regarding a battle over a new California law intended to reduce greenhouse gas emissions from cars.

Schwarzenegger too has differed with Bush on many environmental issues. He sent a strongly worded letter to the president earlier this month demanding federal help to implement the state's auto emission law.

One of Bush's top environmental advisers disagreed that Bush and California were at odds on the environment, arguing the state is benefiting from new federal standards requiring cleaner diesel fuel, more federal dollars to clean up abandoned polluted industrial sites and agricultural incentives for farmers to restore unproductive farmland for environmental purposes.

"When you take into consideration the scope and scale of all the issues we're in agreement on, it's overwhelming," said Jim Connaughton, chairman of the White House Council on Environmental Quality.

But consider the following conflicts, among just a few during Bush's tenure:

- Lockyer sued Bush's forest agency last year due to the administration's decision to scrap a Clinton-era proposal for the Sierra Nevada and replace it with a plan that called for increased logging to prevent more wildfires. Both former Gov. Gray Davis and Schwarzenegger have supported the Clinton plan.
- A Bush proposal to ease rules requiring power plants and some factories to upgrade air pollution equipment whenever they make other equipment upgrades was challenged in court by Lockyer. That led the state to pass a law prohibiting the rule change in California.
- Legislation by state Sen. Dean Florez, D-Shafter (Kern County), this year addresses a Bush administration proposal that would change air particulate regulations, making them more stringent in urban areas but relaxing standards in many rural areas and exempt mining and farming operations from oversight. The bill would enhance the state's role by increasing potential penalties for violating air quality rules.

And no battle looms larger currently than the one concerning the state's auto emission law.

The law, signed by Davis and supported by Schwarzenegger, requires automakers to find ways to lower the amount of carbon dioxide and other greenhouse gases their cars emit beginning with 2009 models.

The law requires a waiver from the federal government because it exceeds Clean Air Act standards, and the state's Air Resources Board asked for one last December. The Bush administration has not responded, and new rules released last month by the executive branch's

Department of Transportation included a 50-page document detailing why California and other states can't regulate greenhouse gas emissions from cars.

The auto industry has sued the state over the law, and the document may help the carmakers' case.

Environmentalists complain that although Bush touts hydrogen, which isn't expected to be a viable alternative to gas for many years, he has been less interested in helping California implement a law that could make a huge environmental impact much sooner.

"Hydrogen is all well and good for the future, but California has a plan to do something much faster and the president can help the state achieve that," noted Ann Notthoff of the Natural Resources Defense Council.

Connaughton, Bush's chief environmental adviser, said the administration is concerned about legal problems with California's new air quality law because the federal government is solely allowed to set fuel efficiency standards -- the key issue at stake in the automaker's lawsuit against the state.

But he stressed that the Environmental Protection Agency is reviewing the state's waiver request and hadn't yet made a decision.

In his speech Saturday, Bush said his administration is on track to spend \$1.2 billion on research into hydrogen-powered cars, and he noted that the federal government gives a tax credit of up to \$3,400 for anyone who purchases a hybrid car like the Toyota Prius.

Bush's visit to West Sacramento Saturday, Like Friday's visit to the Bay Area, was met with protests. West Sacramento police said about 1,500 protesters gathered along sidewalks about 100 yards from the building in which Bush spoke. The president's caravan entered the site from a different entrance.

During the president's visit, the police were forced to move the crowd of protesters after the discovery of an unattended backpack. West Sacramento police later said the item had been dropped as a hoax, and they planned to charge one man.

The president left Sacramento late Saturday afternoon, traveling to the Palm Springs area for a fundraiser for the Republican National Committee.

He is expected to meet with Marines and Navy sailors and their families in Twentynine Palms (San Bernardino County) today, before delivering a speech on immigration in Orange County Monday.

## **Reducing emissions from cargo, cruise ships part of state plan**

By Gordon Smith, Copley News Service

In the San Diego Union-Tribune, Sunday, April 23, 2006

An ambitious new blueprint by the California Air Resources Board for reducing port pollution statewide would cut emissions from cruise and cargo ships visiting San Diego by 88 percent during the next 15 years, as part of an effort to address the health risks posed by rapidly expanding port activities.

The plan, approved by the air board at a meeting in Long Beach last week, also estimated that premature deaths due to port-related pollution in San Diego County would increase from 150 in 2005 to 200 in 2020 if no action is taken. Even with the new strategies outlined by the agency's staff in place, the premature death toll in San Diego County would stand at 80 in 2020.

The statewide cost of meeting the plan's goals, \$6 billion to \$10 billion, would be borne primarily by the "goods-movement" industry - as shipping lines, cargo-terminal operators, trucking companies and railroads are collectively known - Air Resources Board officials said.

The plan is a key building block of Gov. Arnold Schwarzenegger's effort to expand the state's highways and other infrastructure to accommodate the booming goods-movement industry, which contributes \$200 billion annually to California's economy and is expected to handle three times the current volume of freight by 2020, most of it from Asia, according to state officials.

Schwarzenegger had hoped to put a multibillion-dollar infrastructure bond to a public vote in June. Although he failed to win the Legislature's support for that move, he is widely expected to make another push for infrastructure spending in the coming months.

San Diego County Supervisor Ron Roberts, who is on the Air Resource Board's 11-member governing board, said the agency's plan is a step in the right direction, although it's aimed primarily at curbing pollution from port-related cargo operations in Los Angeles and elsewhere in California.

"In San Diego, we have more of an issue with the cruise ships, which are contributing disproportionate amounts of pollution to the air - not just to the immediate area, but to the entire region," Roberts said.

The plan does not contain any specific regulations, which air board officials said would be hashed out in future public hearings. But one of the strategies it outlines is so-called cold ironing, in which cruise or cargo ships use dockside electrical power rather than running their engines while in port.

The practice greatly reduces particulate and sulfur emissions from ships, which burn relatively dirty, high-sulfur fuels. The air board is also considering requiring ships using California ports to use cleaner fuels.

David Merk, director of environmental services for the Port of San Diego, said his agency plans to pursue two or three cold-ironing ship connections as part of a plan to rebuild the B Street Cruise Ship Terminal. (The Navy already routinely cold-irons ships stationed in San Diego, according to the Air Resources Board.)

But Merk added that the port is concerned by language in the board's plan that calls for rolling back port pollution to at least 2001 levels by the year 2010.

"There was no significant San Diego maritime market in 2001," he said, noting that cruise ship calls at the port have gone from 122 in 2001 to 221 last year. Still, Merk said he's confident the air board won't apply the 2001 standards uniformly to every port.

## **Gasoline prices surge to \$2.91/gallon**

Reuters

in the Washington Post, Sunday, April 23, 2006

NEW YORK (Reuters) - The average U.S. retail price of gasoline surged about 9 percent over the past two weeks, pumped up by higher crude oil costs as well as regulatory ethanol-blending requirements, an industry analyst said.

The national average for self-serve regular unleaded gas was \$2.91 a gallon on April 21, up nearly 25 cents in the past two weeks, according to the nationwide Lundberg survey of about 7,000 gas stations.

Nearly all of that increase came as benchmark U.S. crude futures surged \$8 a barrel over the two-week period, Lundberg said, reaching \$75.17 on Friday amid strong demand and fears of supply disruptions in exporting countries like Nigeria.

Yet prices at the pump also reflect the higher cost of delivering and blending ethanol into gasoline, as mandated by federal and state laws designed to combat air pollution.

"Not only are these costs higher than for the additive ethanol replaced, MTBE, but ethanol is also in tight supply," analyst Trilby Lundberg told Reuters on Sunday.

Lundberg also noted several U.S. East Coast and Texas cities reported "spotty outages," where gasoline sales were halted as service stations waited for deliveries of ethanol-blended product.

Ethanol, which is produced from corn and other crops, helps reduce emissions that contribute to smog. MTBE, a chemical that had been used for the same purpose, is being phased out after being linked to drinking water contamination.

But ethanol costs refiners and retailers more because it has special transportation and blending requirements. The replacement of MTBE also comes as refiners must upgrade their production facilities to comply with low-sulfur regulations.

Moreover, U.S. ethanol supplies are tight, Lundberg said, a situation she blames on steep tariffs on imports from foreign producers like Brazil.

"It's a de facto barrier," she said.

At \$3.12 a gallon, San Diego had the highest average price for self-serve regular gas, while the lowest price was \$2.54 a gallon in Boise, Idaho. Gasoline exceeded \$3 a gallon in cities in five states plus Washington, D.C.

On a national basis, regular unleaded is up nearly 67 cents or 30 percent from a year ago. Still, it is 10 cents shy of the all-time high of \$3.01 reached last September, in the aftermath of Gulf of Mexico storms that disrupted oil and gasoline production.

And as high as prices may seem, the average price last week is still 15 cents below the record inflation-adjusted high of \$3.06 reached in March 1981, Lundberg said.

## **Bush visit may fuel automotive switch**

By Chris Bowman, staff writer  
Sacramento Bee, Saturday, April 22, 2006

President Bush is an unlikely pitchman for petroleum-free cars.

Critics have accused the former Texas oilman of going to war to protect U.S. access to Middle Eastern crude and of giving the oil industry a heavy hand in drafting the nation's energy policy.

But this afternoon, in West Sacramento, the president plans to sing Earth Day praises for an automotive technology that promises to wean motorists off gasoline entirely while cleaning the environment.

Showcased on an industrial strip fronting Interstate 80, the \$1 million-plus "fuel cell" prototypes look much like today's autos but operate electronically. Drivers fill 'er up with hydrogen. An electronic motor powers the wheels. And the tailpipe spews only wisps of water vapor.

The president's visit to the California Fuel Cell Partnership demonstration facility is part of a three-day swing through the state and the latest of several stops around the country to tout alternative fuels for cars and homes.

Bush embarked on the clean energy circuit after declaring in this year's State of the Union address that "America is addicted to oil." He proposed a 22 percent increase in research on powering homes and workplaces with nonpolluting generators, including nuclear plants, and renewed his call for better hybrid cars and pollution-free autos that run on hydrogen.

California hosts much of the nation's clean-energy research and development, pioneers incentives for greater fuel economy and has the largest number of vehicles of any state - with the smog to show for it.

The fuel cell partnership, a consortium of 31 energy companies, car manufacturers and government agencies promoting the technology, is but one of the activities that makes metropolitan Sacramento a mecca in this arena.

UC Davis officials say they have more faculty and students studying the technology than any other university.

In Sacramento, the California Energy Commission and Air Resources Board is planning a "hydrogen way," or network of stations to fuel the cars of the future, as Gov. Arnold Schwarzenegger directed. And the governor has his own road show, recently having converted his gas-guzzling Hummer to run on hydrogen.

Bush's West Sacramento stop today, however brief, no doubt will add momentum if not research dollars to the fuel cell campaign.

"He'll do us a favor by calling people's attention to the fact that we are going to have to move a new fuel," said James Boyd, a member of the Energy Commission's board of directors.

Some clean-energy advocacy groups, however, said Bush's energy policy invests in solutions decades away and does little to achieve more immediate gains.

Today, automakers have placed no more than 300 of these mostly hand-crafted, experimental vehicles on the road worldwide, for testing and promotion, according to Ballard Power System, a fuel cell manufacturer that has equipped about half of the demonstration vehicles.

Under the most optimistic industry projections, hydrogen-powered vehicles would be available at a price consumers can swallow no earlier than 2010.

By then, the fuel-cell fleet is expected to number no more than 2,000 in California, said Joan Ogden, a UC Davis professor of environmental science and policy. If all goes as planned, Schwarzenegger's hydrogen highway would have about 50 hydrogen fueling stations, mostly in urban areas such as Sacramento, Ogden said.

To go much beyond those numbers, automakers will have to overcome several technological and psychological barriers.

One of the major challenges is reducing the size of the tank for storing enough pressurized hydrogen to drive more than 300 miles.

And, like the battery-powered cars that emerged in the mid-1990s, the biggest challenge for fuel cells in the next decade will be weaning the public from the internal combustion engine, industry experts said.

Another big problem is cost. Fuel cells are expensive to make and contain precious metals.

The technology works by pumping compressed hydrogen and oxygen into opposite ends of the fuel cell: a tiny sandwich of perforated nickel plates, or electrodes, coated with platinum.

When hydrogen meets platinum it breaks into electrically charged particles. The movement of the negatively charged particles - electrons - generates the electricity that powers the motor.

The oxygen combines with hydrogen to produce water vapor, which is emitted from the tailpipe along with just heat. There are no cancer-causing chemicals, no gases that smudge the skies or sear the lungs.

All that sounds great environmentally. As far as fuel economy goes, these vehicles would be more efficient than the best of today's hybrid autos, which are powered by gasoline and batteries.

But environmental benefits and fuel savings alone won't create enough demand for automakers to produce fuel cell vehicles in large enough numbers to make a big impact anytime soon, said Anthony Eggert, associate research director at the UC Davis Institute of Transportation Studies.

"It will be 20 years or more before we see significant percentages of these vehicles on the road, to where they have an impact on reducing fuel mileage and global warming gases," Eggert said.

In fact, some environmentalists scoff at Bush's decision to tour the fuel cell center in West Sacramento because he has done little to reap more immediate gains.

For example, the \$150 million the Bush administration has proposed for research into biofuels such as corn-produced ethanol is \$350 million a year less than the amount Congress authorized last year, said Nathanael Greene, a senior policy analyst for the Natural Resources Defense Council in New York City.

At the heart of Bush's policy on vehicle transportation - which makes up 70 percent of U.S. oil consumption - is research on better batteries, ethanol production that doesn't rely solely on corn, and, of course, hydrogen fuel cells. He also has offered consumers tax incentives to buy "green" cars, and has given fuel providers breaks to add clean fuel pumps to their stations.

The Bush administration tightened the average fuel economy standards for light trucks earlier this year, including gas-guzzling sport-utility vehicles for the first time.

But he let off the hook one of America's most profitable markets - pickup trucks. And the remaining fuel savings were criticized by environmentalists and others as paltry compared to what might have been technologically feasible.

To power buildings, Bush has pushed for breakthroughs in clean coal, solar and wind energy, and nuclear advancements.

But his administration has yet to propose any regulations that would tighten appliance or equipment energy standards, according to Steven Nadel, executive director of the American Council for an Energy Efficient Economy, a research and advocacy group in Washington, D.C.

By contrast, Nadel said, "The California Energy Commission has issued two dozen of these standards since Bush has come into office."

## **Bush calls hydrogen fuel 'way of the future'**

### **Technology still is very expensive**

By Jennifer Loven, Associated Press

In the San Diego Union-Tribune, Sunday, April 23, 2006

WEST SACRAMENTO - President Bush had an Earth Day message for drivers worried about soaring gasoline prices: The nation must move more quickly toward widespread use of hydrogen-powered cars.

Running vehicles on hydrogen fuel cells would help reduce oil consumption, as the technology does not require gasoline, and lower pollution, as they emit only water. But the technology is far from being a reality in the marketplace - the cells are prohibitively expensive and require a new distribution system to replace today's gas stations.

Bush is proposing to spend additional federal research dollars to help speed that process - but it still would be many years off.

"I strongly believe hydrogen is the fuel of the future. That's what we're talking about," he said. "It has the potential - a vast potential to dramatically cut our dependence on foreign oil. Hydrogen is clean, hydrogen is domestically produced and hydrogen is the way of the future."

The president spoke on a visit to the California Fuel Cell Partnership, a collection of 31 organizations such as car makers, energy providers, government agencies and fuel cell companies that promotes the commercialization of hydrogen fuel-cell vehicles.

Bush, who was met by a handful of protesters, inspected several fuel cell vehicles and a hydrogen fueling station. "It's important what we're doing here because we got a real problem when it comes to oil," he said.

With gas prices on the rise just months before crucial fall congressional elections, Bush can do little but express sympathy for families and businesses. The energy plan he wants Congress to pass, which would also boost federal research into batteries for hybrid and electric cars and renewable fuels, does not include any measures that would reduce pump costs in the short term.

"I understand the folks here, as well as in other parts of the country, are paying high gas prices," Bush said. "We're going to have a tough summer."

In a rash of statements, Democrats sought to capitalize on public anxiety about gasoline costs - which is dampening confidence in the rebounding economy.

In the Democratic response to Bush's weekly radio address, Florida Sen. Bill Nelson said the administration must stop being influenced by the powerful oil industry and start promoting production of synthetic fuel from coal, broader use of alternative sources such as ethanol and a significant increase in the mileage standards for all passenger vehicles.

Rep. Rahm Emanuel, D-Ill, chairman of House Democrats' campaign arm, criticized Bush and Congress GOP leadership for subsidies and tax breaks for oil companies. "The Republican Congress can't stop taking oil money and can't stop sending billion-dollar giveaways to their friends in the oil industry," he said.

## **Behind Toyota's hybrid revolution**

### **Automaker's successful gamble with Prius fuels its image as a trendsetter**

Robert Collier, Chronicle Staff Writer

S.F. Chronicle, Monday, April 24, 2006

Toyota City, Japan -- Satoshi Ogiso doesn't look or act like a brash automobile executive. With an ill-fitting suit and spiky hairdo, his hands flutter bashfully across his face as he talks of "difficulties," "challenges" and "problems."

The 45-year-old engineer refuses to brag about his accomplishments. But as chief engineer of the hybrid Prius, Ogiso has helped Toyota revolutionize the auto industry.

By making huge long-term investments in gas-saving technologies that U.S. automakers poo-hooed, Toyota has proved that corporate environmental consciousness can be wildly profitable.

"What has made this revolution possible is that Toyota is a company with a focus on technology, because we think innovation is the future of our company," Ogiso said in an interview. "So we cannot fall behind. We are trying very hard, and it is very difficult."

Ogiso's humility is typical of Toyota. Its world headquarters in Toyota City, a quiet industrial city 150 miles southwest of Tokyo, has a deceptively modest demeanor: The nondescript, 13-story building looks like it might house a midsize insurance firm in any American suburb.

But Toyota is expected to overtake the nearly bankrupt General Motors this year as the world's largest automaker. While GM and Ford are closing factories and losing billions of dollars annually, Toyota is expanding at a red-hot pace around the world.

For years, Toyota recorded solid growth because of its dependable, fuel-efficient cars such as the Camry. Then, in the 1990s, while U.S. automakers were building bigger and bigger SUVs and trucks, Toyota threw itself into hybrid gasoline-electric research, investing more than \$1 billion in the then-little-known field.

Executives at GM, Ford and Daimler-Chrysler derided the hybrids as money-losers and lagged in producing their own models. Toyota pressed ahead, and its resulting hybrids -- the Prius, the Highlander SUV and Lexus RX400h, as well as a half-dozen other hybrid models sold only in Japan -- now dominate the market, accounting for about 80 percent of U.S. hybrid sales.

Hybrids make up only 3 percent of Toyota's overall world sales, but the buzz resulting from their success has added to Toyota's public image as a trend leader.

"Toyota is willing to make investments to gain technological capability, not just for guaranteed returns on investment, like the Big Three," said Jeffrey Liker, the author of a recent book, "The Toyota Way."

"Toyota believes that 10 years from now, its hybrid technology will be like the Windows platform is now -- most cars will be a version of hybrid," said Liker, a professor of industrial and operations engineering at the University of Michigan. That gamble is "probably correct," he added.

In many ways, the Prius project appears to be a textbook example of Toyota's much-vaunted, much-imitated internal management system and its mantra of kaizen, or continuous improvement, in which top executives steadily ratchet up performance standards for their employees, while also listening closely to suggestions and emphasizing consensus.

The project was the brainchild of Toyota's chairman at the time, Eiji Toyoda, a member of the company's controlling family, who had an unusual obsession with energy saving. The secretive project, known internally only as G21, was at first not meant to be a hybrid.

Ogiso was one of the original team of about 100 engineers selected by Toyota chiefs in late 1993. "We didn't know much about the idea," he said. "Our only instruction was that it should achieve a fuel-efficiency improvement of 50 percent, and it somehow should be the 'car of the 21st century.'"

The insistence on fuel efficiency was highly unusual. At the time, the price of oil averaged below \$15 per barrel, Americans were snapping up ever-bigger SUVs, and saving gasoline seemed like a politically correct anachronism.

But Toyota's chairman convinced his top executives that environmental issues were a long-term threat, said Takehisa Yaegashi, a chief of the Prius project in the mid- and late 1990s who later became chief of all Toyota alternative power-train projects.

"In those years, discussions were going on about the hybrid program, but we thought it was quite clear that global warming was a challenge we would have to take up," said Yaegashi, who now is a semi-retired consultant for the firm.

In September 1994, the G21 team first heard hints from top executives that it should consider hybrid technology, which had been tainted by its association with an earlier, failed project to build an electric car.

That December, management came with a thunderbolt -- instead of a 50 percent improvement in fuel efficiency, the new car would need a 100 percent improvement.

The team protested that this would be impossible with a normal internal combustion gasoline engine. Fine, the response came. So you'll have to make it a hybrid.

In August 1995, Toyota's new chairman, Hiroshi Okuda, came with another thunderbolt -- instead of the previous target date of December 1998, the project would have to be completed by December 1997.

The team worked feverishly, canceling all vacations and working through most weekends, and divided into two 12-hour shifts, working around the clock.

They had several crises. At first, the electric motor's battery was very sensitive to high temperatures, and it would malfunction when heated up by the gasoline engine next to it. "For a long time, we couldn't solve that," Ogiso said. "It was very difficult."

After that was fixed, a full-scale prototype vehicle was plagued by malfunctions. "It would hardly go 100 meters," Ogiso recalled.

The tight-knit team of Yaegashi, Ogiso and the others finally succeeded in beating the deadline by two months. The Prius was launched on the Japanese domestic market in October 1997. Three years later, it came to the United States.

Last year, Toyota sold 110,400 Priuses in the United States and Canada and 43,600 in Japan. U.S. and Canadian sales of other Toyota hybrid models totaled 40,300 and Japanese sales were 14,500.

Yaegashi calls hybrid technology "the key to two issues -- the global environment and the development of world energy resources. I do not understand why U.S. manufacturers are not so keenly working on hybrid technology. Are they more optimistic about global warming or the supplies of oil?"

John Cleveland, vice president of IRN Inc., an auto industry consulting firm in Grand Rapids, Mich., said Toyota views environmental concern as simple business logic, not "do-gooderism."

Toyota has been the most explicit automaker "about the environmental challenge facing the auto industry because it has always had such a long-term perspective, ever since the days of Mr. Toyoda, when he started the company with a 50-year business plan," Cleveland said, referring to Kiichiro Toyoda, who founded the company in 1938 as an offshoot of his family's textile loom business.

"Now, they're starting to realize they have an almost \$200 billion market (capitalization) based on a carbon energy source that's diminishing, and they're wondering, 'What's our company going to be worth 50 years from now, when oil may be much more scarce?' " said Cleveland, whose company's client list includes several Toyota parts suppliers. "So they're the most aggressive about developing alternate technologies."

By Wall Street's main yardstick -- the company's share price levels -- Toyota is the world's ninth most valuable company, and is now worth more than double the combined value of GM, Ford and DaimlerChrysler.

Japanese analysts agree that even by Japan's standards, Toyota is unique.

"Toyota is a model company in the field of environmental management and resource productivity," said Ryoichi Yamamoto, a professor of environmental materials design at the Institute of Industrial Science of the University of Tokyo.

Yamamoto cited Toyota's steps to improve the recyclability of its cars, its reduction of waste and pollution in its manufacturing plants, and its focus on fuel efficiency. "Other companies are trying to imitate it, but they have not yet reached the same level," he said.

Some environmentalists disagree.

"Toyota is two-faced," said Yurika Ayukawa, director of the climate change program at the World Wildlife Fund of Japan. "It wants to be seen as an eco-company, as environmentally committed, but it's really just business as usual."

Ayukawa noted that Toyota has joined with U.S. automakers in filing lawsuits in state and federal court seeking to block California's landmark 2004 rule ordering all automakers to reduce the greenhouse gas emissions of the cars they sell.

Masayuki Sasanouchi, general manager of Toyota's environmental affairs division, defended the company's attack on the California rules.

"We understand climate change is a federal issue, so we don't think California has a right to legislate it," he said. "We don't believe carbon dioxide is the same as a pollutant, and for this reason it's not covered under the Clean Air Act," he said, referring to the 1977 law, amended in 1990, that gives California the right to set air-quality standards different from the federal government's rules.

In fact, Toyota probably would benefit if the new California rule goes into effect in 2009 as scheduled, because its cars produce less emissions than its competitors' cars. But some analysts said Toyota seems to have bowed to larger political concerns, calculating that by allying with the politically powerful Detroit automakers on the anti-environment lawsuits, it could defuse pressure in Congress for anti-Japanese tariffs.

"Toyota is hypersensitive to the potential for protectionist backlash," Jeffrey Liker said, pointing out that Toyota's exports from Japan to North America are growing fast, reaching 940,000 cars in 2005, up 16 percent from 2004.

Environmentalists also have criticized Toyota for using hybrid technology to boost the horsepower and acceleration, rather than fuel efficiency, of its new Lexus RX 400h and Highlander hybrid models.

And under U.S. fuel-efficiency rules, the high mileage of the Prius helps Toyota comply with fleet averages even as it launches gas guzzlers like a larger, beefed-up version of the Tundra, its big pickup.

For Toyota, whose U.S. sales are soaring while American automakers' sales are slumping, there is never time for bragging.

A hybrid version of the best-selling Camry will be released this autumn. Ogiso said his team of engineers is working on a new version of the Prius and other hybrid projects.

"We need to continue working hard," Ogiso said. "We need to be making drastic improvements."

## **Mayor's goal: Give L.A. a dash of green**

BY Dana Bartholomew, staff writer  
L.A. Daily News, Sunday April 23, 2006

They'll scrub the air. Purify the water. Reduce urban stress. Cool homes and businesses under leafy boughs. And potentially raise property values across Los Angeles.

A million trees planted under the direction of Mayor Antonio Villaraigosa could also turn drab schools and streets into verdant, shady hangouts.

"We need to imagine a future in which Los Angeles is the greenest and cleanest big city in America," Villaraigosa proclaimed during his first State of the City speech last week.

"We'll be breaking ground shortly on our initiative to plant a million trees."

A million trees?

That's 10 percent more than the 10 million magnolias, palms, sycamores and other trees that now grow in L.A., according to the city.

That's enough trees to:

Produce a year's supply of oxygen for 666,667 residents.

Absorb the carbon dioxide, a greenhouse gas attributable to global warming, from 16,666 cars on a 25,000-mile journey around the globe.

Absorb 80,000,000 gallons a year of urban street runoff now polluting the Pacific with such contaminants as motor oil, heavy metals from cars and herbicides and pesticides.

The mayor's Million Tree Initiative, the details of which will be announced early this summer, aims to root enough trees around schools and along city streets and the Los Angeles River to allow residents to experience what a difference a tree makes.

"The scope of it, the vision of it, the promise of it," said Paula Daniels, commissioner on the Board of Public Works and chairwoman of the mayor's Million Tree Task Force. "The environmental benefits are key: What we want to do is to plant trees in the right places."

The initiative will attempt to fill holes in the city's urban forest with a range of drought-tolerant trees, she said. Priority would be given to schools, poorer neighborhoods and the river.

A study of ultra-sharp satellite images of Los Angeles will determine what gray areas must be made green.

Though most trees will likely be planted in public areas or rights of way, Daniels said residents and businesses will be encouraged to plant them in their own yards.

In addition to cleaning the air and water, mature trees save energy by cooling buildings as much as 11 degrees and can cut air-conditioning costs by 50 percent, advocates say.

They also can slow traffic, reduce urban stress, protect pedestrians against harmful solar rays, provide fresh fruit, offer homes to birds and wildlife, prevent evaporation from thirsty lawns and increase property values by as much as 15 percent.

"A million trees in our city would be absolutely transformative from every point of view," said David Nahai, director of the Los Angeles Regional Water Quality Control Board and vice president of the Department of Water and Power. "The benefits are priceless."

But the question remains: Who will bear the cost of the trees and decades of upkeep?

"I can't give you the overall cost," said Daniels, who was authorized by the mayor to discuss the initiative. "There's bond money, and we're developing strategies to pursue grant money."

A million trees may not come cheap.

It now costs the city Division of Urban Forestry \$15 to \$20 for a 15-gallon tree, according to the Department of Public Works. A million trees, if purchased by the city, could run \$15 million to \$20 million.

Then there's upkeep and the workers needed to perform it.

Urban Forestry now spends \$10 million a year to plant, inspect, trim or remove some of the 680,000 trees along 6,500 miles of city rights of way.

Trimming each tree once every five to 12 years costs \$80 to \$350 each. So trimming a million new trees could cost \$80 million to \$350 million.

And that doesn't include the cost of recycling the resulting green waste, now at 10,000 tons a year.

"The Bureau of Street Services doesn't maintain the trees we currently have," said Deborah Murphy, Founder of Los Angeles Walks, a pedestrian advocacy group, who called for a systematic plan to make the city green. A million new trees, she said, "would take a serious effort."

Nahai, whose DWP is a member of the Million Tree Task Force and whose agency has launched a campaign to buy thousands of new trees, asked what the cost would be of not planting a million trees.

He pointed out that air pollution causes asthma in Los Angeles children. Water pollution from perchlorate and other contaminants threatens residents. And urban runoff imperils the Southern California coast.

"We're not at the point where environmental measures can be considered a luxury, some utopian ideal," he said.

TreePeople, a Million Tree participant that for 30 years has advocated planting trees to stretch the urban canopy with such trees as California bay laurel and coast live oaks, praised the mayor's plan.

"For decades, we've been looking desperately for help in addressing a divided and polluted city," said Andy Lipkis, founder and president of TreePeople, located in the hills above Studio City.

"Well, that special and powerful potential partner has been there all along: Nature. Let's join forces. Let's heal the city."

## **Foundation salutes Bee series about dairies, air pollution**

The Fresno Bee

Monday, April 24, 2006

Fresno Bee reporter Mark Grossi has earned the 2006 Meade Clean Air Prize for a series of stories in 2005 about dairies and air pollution issues, including whether cows cause more air pollution than cars.

The award, from the Rose Foundation for Communities and the Environment, recognizes outstanding contributions by a journalist or publication in furthering the public's understanding of air pollution.

The foundation said Grossi's coverage went "far beyond the usual business vs. environment dynamic."

In his coverage, Grossi showed how low-interest "pollution control loans" were serving to help move more dairies into the San Joaquin Valley from Southern California.

The stories also profiled the range of county governmental responses, and the projected growth of dairies in counties like Tulare, where plans call for the addition of 130,000 cows to the estimated 854,898 already there, and Kern, where 24 new dairy projects are expected to add 200,000 cows.

According to the San Joaquin Valley Air Pollution Control District, the 2.5million dairy cows in the Central Valley cause more air pollution than cars, but have not been regulated until now.

Grossi, a former Knight Science Journalism Fellow at the Massachusetts Institute of Technology, has worked at The Bee since 1986.

Typically, the Meade Prize, which comes with a \$1,000 Earth Day cash award, is given to a single recipient. This year the prize was doubled - one to Grossi and another to William Kelly of the LA Weekly.

In a series of articles published in 2005, Kelly provided insight into the national debate within the environmental community about technical policy vs. people power.

Gladys Meade, founder and selection committee chair, said Grossi and Kelly were selected "because they tell their readers the story - but more importantly, they teach their readers the context behind the story, and help communities understand the political, societal and economic choices facing everyone who draws a breath in California."

The Rose Foundation, based in Oakland, awarded the 2003 Meade Prize to The Bee's "Last Gasp," a 24-page special report on deteriorating air quality in the San Joaquin Valley. Grossi was a member of the Bee's award-winning team.

## **Destinations: Fresno Metropolitan Museum**

### **The Fresno area offers plenty for museum lovers**

By Sarah Soghomonian, For The Times-Delta  
Visalia Times-Delta, Monday, April 24, 2006

Editor's Note: Think there is nothing to do in the Valley? Not so. Join us as we explore some favorite places most Mondays in the Times-Delta. Have a favorite place we haven't visited?

Let us know. Call Laura Florez at 735-3274 or simply send us an e-mail to News@VisaliaTimesDelta.com and put "Destinations" in the subject line.

Tulare County residents often flock to Fresno for shopping, dining and entertainment. But there is another reason to make the drive - a cluster of museums.

"A lot of people say the only culture Fresno has is agriculture," said Jack Fortner, a Fresno musician and frequent museum visitor. "That's not true. There are lots of destinations here."

It's a fact. There are enough museums in Fresno to fill a full day.

Here's a look at four of the best known:

### **Fresno Art Museum**

From the moment visitors walk through the glass doors - which are art by themselves - of the Fresno Art Museum, they know something special is in store.

And it's ever-changing. Through June 4, the main attraction is the work of Vosdanik Manouk Adoian, better known as Arshile Gorky (1904-1948). The abstract expressionist's work is world renowned. Gorky's work is on loan from exhibitors from across the world.

Gorky's most famous painting, "The Artist and His Mother," is on display. It took 10 years to complete and was based on a picture of an 8-year-old Gorky with his mother, who died of starvation.

After hearing about the Gorky exhibit, Lesa Schwartz of Fresno and her friend Mona Ashby of Auberry decided to spend an afternoon exploring the Fresno Art Museum. "I think everyone should have a little culture," Schwartz said.

Aside from the Gorky exhibit, visitors can enjoy the work of several other artists, including Ann Weber. Her large-scale cardboard sculptures, which fill the lobby of the museum, started out as

garbage - literally. Weber used cardboard she collected from trash bins to make the modern works of art.

### **Fresno Metropolitan Museum**

The mother of all Fresno museums, the Fresno Metropolitan Museum is undergoing major renovation. But the Met has found alternate ways to reach the public.

Cindy Farley of Auberry brings her 7-year-old son Tyler Bishop to the science center a few times a year.

"He likes science a lot," she said. "It's hands-on. You can play. And it's fun for grown-ups, too."

Aside from the Ask Reeves Science Center, the Fresno Metropolitan Museum is offering a series of off-site exhibits and events throughout Fresno.

In May, San Francisco-based artist Amy Balkin will create a "statistic garden" in the newly developed Spano Park. Balkin will use flowers to create a data chart that will feature statistics pertaining to Fresno, such as land use, water access, [air pollution](#) and asthma rates.

The Fresno Metropolitan Museum has also partnered with the Fresno Grizzlies baseball team for the Science of Baseball exhibit at Grizzlies Stadium.

The exhibit can be viewed during Grizzlies' home games with paid admission. Baseball fans of all ages will have a blast testing their reaction time and learning how hitting the "sweet spot" of the bat is all that separates a homer from a fly out.

### **Discovery Center**

The Discovery Center has been entertaining and educating Valley youth for 50 years.

"Our mission is to provide the community with an engaging hands-on science experience," said Roni Weil, executive director. "In order for children to understand science, they have to do science."

The seven-acre park provides many opportunities for kids and adults to get up close and personal with science.

The Discovery Center is home to a real Gemini Space capsule, built in 1961 with the intentions of being shot into space. A flaw was discovered in the capsule, which prevented it from being used by NASA. Now Discovery Center visitors have the chance to play astronaut by sitting inside the capsule.

The center's other attractions include a pond full of life, including blue gill, mosquito fish, pond turtles and crawfish. There's a farm full of red worms that feed on organic material in the soil.

Local schools often take field trips to The Discovery Center. The center reaches about 35,000 kids a year through on-site and off-site visits.

Kids and adults alike can see the stars up close Friday nights, starting in mid-May. The Central Valley Astronomers bring telescopes and guide visitors through the night sky.

### **Legion of Valor Museum**

History comes alive inside the Legion of Valor Museum located inside the Fresno Veterans Memorial Auditorium. It's filled with military artifacts, uniforms, medals and artillery.

The main goal of the museum is to educate, said Willie Crenshaw of Visalia, a Korean War veteran who volunteers weekly at the museum. "We try to explain to the people what went on," he said.

Sections of the museum are dedicated to specific slices of history. For example, a Pearl Harbor room is filled with memorabilia and stories of those who were there.

Visitors come in contact with Nazi arm bands, Japanese artillery and Italian army berets.

As for the American forces, all of the branches of the military are represented.

The volunteers are more than willing to tell stories and pass on their experiences with visitors as they look at the mementos.

[S.F. Chronicle commentary, Sunday, April 23, 2006:](#)

## **Do-goods, hard lives**

By Chip Giller

For most Americans, the term "environmental protection" brings up images of wilderness preserves and nobly suffering megafauna like grizzly bears or Arctic caribou -- see, for reference, every Sierra Club fundraising brochure ever.

It's too bad. Despite the attention lavished on endangered salmon and old-growth redwoods, the fact is that many of this country's most intractable environmental problems profoundly and disproportionately affect people -- specifically, the poor. Our small rural towns and crowded inner cities don't contain many photogenic vistas, but they contain plenty of suffering.

If you're struggling to make ends meet, your home, your workplace, your body and your family are subject to the worst ravages of environmental degradation and toxic exposure. And as recent history has tragically revealed, you are more vulnerable to environmental catastrophes like Hurricane Katrina.

This is nothing new: Economic hardship has always aligned with environmental devastation, from the mining-ravaged hollows of Appalachia and toxic slums of inner cities to the desolate family farms and undernourished tribal communities in the heartland.

Ask Charlotte Keys of Jesus People Against Pollution. She knows better than to think of environmentalism as a suburbanite's luxury or a hippie's hobby. Her hometown of Columbia, Miss., perched on the east bank of the Pearl River, was the site of a factory that produced an ingredient for Agent Orange.

In 1977, an explosion at the plant, coupled with the illegal dumping of thousands of drums of chemical waste, led to widespread toxic exposure, Superfund status and a long-term health crisis that still grips the community. Keys founded her group in 1992 to educate her neighbors about the hazards they face.

It's not surprising that the chemical company chose to locate in the heart of the impoverished Mississippi Delta. A quick look at the 2000 Census shows nearly 25 percent of the area's residents live below the poverty line; that means cheaper labor and land.

More than 10 million Americans live within a mile of a Superfund site, and those living in low-income areas lack the fiscal resources and political clout to secure timely cleanup assistance, much less to defend their turf from dangerous industries in the first place.

Over and over, we are told that such disproportionate suffering is the price we must pay for economic development. That the need for jobs trumps the need for clean water, clean air and healthy land. But to pit these goals against one another is to force working people to choose between their livelihoods and their quality of life -- or worse, between their livelihoods and life itself.

It's an impossible choice, and one that need not be made. Innovative organizations around the country are working to improve economic and environmental conditions simultaneously.

Surprisingly, the corporate world may end up doing as much as activists or policymakers to spread the word that green means green. While some industries do offload bottom-line costs on

the backs of the working poor, others realize that improving local environmental conditions builds economies and creates jobs.

A number of courageous, forward-thinking industry leaders have been able to find profit in sustainable industries barely imagined a decade ago: green architecture, emissions trading, organic foods and clean-energy technology, for starters.

Take Seventh Generation, a 17-year-old company that makes nontoxic household-cleaning products. Its mission statement advocates for "a society whose guiding principles include: environmental sustainability, social justice and compassion for all living creatures."

It offers fair wages and full benefits to all employees, participates in civic groups in every community where it operates, and carefully screens its suppliers. Oh, and its revenues grew by 40 percent in 2004, to around \$100 million. Guess "doing well by doing good" is more than hippie hype.

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[Tulare Advance-Register commentary, Saturday, April 22, 2006:](#)

### **Governor has been environment champion**

Once again, the nation's annual Earth Day celebration is upon us. It's a time when we should all reflect upon the great strides we've made together to protect and preserve our natural resources. It should also be a time when we rededicate ourselves to a commitment to resource conservation, thereby making concern for our planet an important part of our daily lives. Together, there is much that we've done, but there is still much more that we have yet to do.

When I think of Earth Day, I'm reminded of a U.S. president whose role in the annual event's beginning is often overlooked. It was John Kennedy who embarked upon a five-city conservation tour in 1962 that stirred the country into consciousness and launched a groundswell of public support for the creation of an Earth Day. Eventually, thanks to the Kennedy tour and the tireless efforts of Earth Day founder and Wisconsin U.S. Sen. Gaylord Nelson, the first Earth Day took place in 1970.

In California on Earth Day 2006, I believe it's important to look back on our accomplishments in the hope that these reflections will guide our future. Today, the [air we breathe and the water we drink is cleaner](#), and our respect for the environment is arguably greater than it's ever been. There's more to do for sure, but it's been through personal commitment and environmental leadership that we've come this far.

Through the past efforts of President Kennedy, Sen. Nelson and others and more recently, Gov. Arnold Schwarzenegger, our environmental future is being secured.

Since he was elected, Schwarzenegger has done much to preserve and protect our precious environment and diverse natural resources. As Californians, we cherish our ocean, land and water, but these gifts are also treasured by people across the country and around the world. On behalf of all Californians, we are committed to action and we've set in motion a series of steps that will carry us into the years ahead and well beyond. The governor has kept his promise to the environment.

- The Sierra Nevada Conservancy was created with the bipartisan support of State Assemblyman John Laird and state Sen. Tim Leslie. As the largest of the state's nine conservancies, the Sierra Nevada covers 25 million acres.

The conservancy will afford local government wide discretion and provide grants for environmental protection, resource conservation, recreational opportunities and economic growth. It will establish a natural resource legacy for generations to come. It is impossible to

think about the Sierra Nevada Conservancy without also envisioning the majestic Sierra Nevada and the lush forests that grace her slopes. We are deeply committed to the protection of our forests, both federal and state. We believe that truly roadless areas should remain roadless.

And we intend to continue to work to ensure that these protections remain in place. We have also developed an adaptive management and monitoring consortium. This collaborative effort involves a variety of stakeholders, academics and environmental groups, all committed to the integrity and future of the Sierra Nevada Framework.

- The state's acquisition of the Hearst Ranch in 2005 will protect one of the largest remaining areas of open space along California's coast. The Hearst property encompasses 82,000 acres in San Luis Obispo County and includes 13 miles of beach and will provide for the preservation of parkland, habitat, open space and agricultural land. A plan for preservation and conservation will ensure that this spectacular place will exist for the enjoyment of generations, present and future.
- Our Ocean Action Plan established goals to protect marine life, safeguard clean water and support an ocean-dependent economy. Under the plan, the California Ocean Protection Council has created a national model for ocean policy and coastal protection.
- California's Marine Life Protection Act Task Force has forwarded recommendations to the Department of Fish and Game and the California Fish and Game Commission. Based on an extensive public and scientific process, the recommendations will be used to determine the future of marine protected areas along California's coast.
- Time and again, Schwarzenegger had been unyielding in his fight to prohibit oil and gas exploration off California's coast. In a recent letter to U.S. Interior Secretary Lynn Scarlett the governor wrote, "I continue to believe that California reaps tremendous benefits from our ocean and coastal environments and I am unwilling to put the environment at risk for the sake of new energy exploration."
- To protect our environment and help make America more energy independent, we launched the Hydrogen Highway, a network of hydrogen fueling stations up and down our state.
- We've partnered with the state Public Utilities Commission to enact the governor's Million Solar Roofs Initiative so new homes are powered by the sun's energy, not by polluting oil and gas. And to offset the negative impact of global warming, the governor made history by setting groundbreaking goals for bold new greenhouse gas emissions reduction targets. Our recycling rates remain high, but should be higher.

As we celebrate another Earth Day, let us take pride in what we've done and renew our commitment to accomplish together that which we've yet to do. It was John Muir who said, "But in every walk with Nature, one receives far more than he seeks." And so it is a walk we must continue to take together into another year and into the future.

Under Gov. Schwarzenegger's leadership California's most precious resources; ocean, land and water, will be protected and preserved, as John Muir would have wanted them to be, for this generation and the generations of those yet to follow in our footsteps.

*Mike Chrisman is a Visalia rancher and fourth generation Californian. He serves as Gov. Arnold Schwarzenegger's secretary for resources.*