

Fireplace use discouraged today

Modesto Bee, Friday, January 26, 2007

People in Stanislaus and Merced counties are asked to refrain from using fireplaces and older wood stoves today because of concerns about air quality. Forecasters say the air will be unhealthy for sensitive people — children, older adults and those with chronic breathing problems. The "burning discouraged" advisory comes from the San Joaquin Valley Air Pollution Control District. The next step is a ban on burning.

On the Net: www.valleyair.org

California air regulators ban toxic dry-cleaning chemical

By SAMANTHA YOUNG - Associated Press Writer

in the Sacramento Bee, Modesto Bee, Fresno Bee, S.F. Chronicle, N.Y. Times, Washington Post, Contra Costa Times, LA Daily News and Tracy Press, Friday, January 26, 2007

California air regulators on Thursday enacted the nation's first statewide ban of the most common chemical used by dry cleaners.

By 2023, no more dry-cleaning machines that use the toxic solvent - perchloroethylene - will be permitted in the state.

The regulation by the California Air Resources Board begins to phase out the fluid next year, banning dry cleaners from buying machines that rely on the solvent. The state's 3,400 dry cleaners who now use it must get rid of machines that are 15 years or older by July 2010.

"Dry cleaners have known this is a problem for quite some time," board member Dorene D'Adamo said. "There is a cost to society, and believe me taxpayers are paying for it."

The rule was approved unanimously by the seven-member board and was embraced by environmental and health advocates. They urged the air board to accelerate the ban because of the chemical's health effects as a potential carcinogen. The solvent has contaminated one in 10 wells in California.

Meanwhile, cleaners said eliminating the most common dry cleaning solvent could drive them out of business because alternative methods are unproven and more costly.

"It could shut down some mom-and-pop operations - the little guys that can't afford it," said Bob Blackburn, president of the California Cleaners Association.

The cost of converting could be significant for dry cleaners, 85 percent of which are small business with a slim profit margins. Replacing a machine that uses perchloroethylene can cost between \$41,500 and \$175,000.

What will the changes mean for customers? The air board estimates that the additional expense of the new equipment will boost a \$15 bill between \$1.20 to \$1.60.

What alternative should be allowed in California is still under debate. Dry cleaners that have made the switch to other systems sought to sway the board in favor of their preferred choice.

Although the air board did not endorse a substitute, the regulation would give cleaners a \$10,000 incentive to buy a machine that uses carbon dioxide or a so-called wet cleaning system.

Environmentalists urged the board to ban the most common alternative, which uses hydrocarbons. Critics said it could lead to increased ozone pollution.

"It seems to me there needs to be some clarity," said air board member Ron Rogers, a San Diego County supervisor. "I think some of the primary options are really questionable at best."

The board's vote follows similar action five years ago by the South Coast Air Quality Management District in Southern California. That agency became the first regulatory body in the country to ban perchloroethylene, forcing more than 2,000 dry cleaners to stop using the chemical by 2020.

Last year, the U.S. Environmental Protection Agency banned the chemical for dry cleaners located in residential buildings nationwide by 2020. But those operations are a small fraction of the nation's cleaners, said Jon Meijer, vice president of the International Fabricare Institute, an industry association based in Maryland.

In California, for example, only 50 of the state's 5,210 dry cleaners operate out of residential buildings.

"Is anyone else doing what California is doing? Absolutely not," said Sandra Giarde, executive director of the California Cleaners Association.

California declared perchloroethylene a toxic chemical in 1991. State health officials told the air board Thursday that it can cause esophageal cancer, lymphoma, cervical and bladder cancer. The solvent, which has a strong, sweet odor, also can affect the central nervous system.

Business owners disputed those claims.

"We believe perc has served the industry well for many years with no related health problems," said John Horst, owner of Margaret's Cleaners in La Jolla, which has operated for more than 50 years.

Blackburn, 68, the association president is a second-generation dry cleaner who said his own health was fine.

"The health issue is a non-issue in my book," he said.

About 70 percent of the state's dry cleaners currently use the chemical and will be affected by the regulation.

Dry cleaners operating in residential buildings will have to comply sooner, removing their perchloroethylene machines by July 2010. Health advocates want the board to apply the earlier timeline to dry cleaners operating within 300 feet of schools, retirement homes, day cares and medical buildings.

"We're concerned this doesn't protect other sensitive sites," said Luis Cabrales of the Coalition for Clean Air.

California power companies barred from buying dirty power

By TERENCE CHEA - Associated Press Writer

in the Sacramento Bee and Fresno Bee, Friday, January 26, 2007

California power companies will be barred from buying electricity from most coal-fired power plants after state utility regulators adopted new limits on emissions of heat-trapping gases linked to global warming.

Thursday's 4-0 vote by the Public Utilities Commission prohibits investor-owned utilities from entering long-term contracts to obtain electricity from sources that emit more carbon dioxide than a modern natural gas plant. The so-called "greenhouse gas emissions performance standard" takes effect Feb. 1.

"It represents a significant milestone in our ongoing efforts to address the challenge of climate change," PUC President Michael Peevey said.

The new rules - along with similar regulations for municipal utilities later this year - are expected to affect energy markets across the West. While there are almost no coal-fired plants in California, about 20 percent of the state's electricity comes from coal plants in Nevada, Wyoming, Utah and other Western states.

The new emissions standard is aimed at encouraging investment in cleaner energy sources such as wind and solar, while discouraging use of coal and other high-polluting sources.

Coal is inexpensive and plentiful, but releases high levels of carbon dioxide, a gas blamed for trapping heat in the earth's atmosphere and raising temperatures worldwide.

The standard, which is expected to take effect Feb. 1, was adopted as part of California's strategy to combat climate change by reducing emissions of greenhouse gases. Legislation signed into law last year required the state to adopt emissions standards for investor-owned and municipal utilities.

The PUC regulates the state's three investor-owned utilities - Pacific Gas & Electric Co. in San Francisco, Southern California Edison in Rosemead and San Diego Gas and Electric, owned by Sempra Energy in San Diego. Together, they supply power to more than 70 percent of Californians.

The three utilities said Thursday they support the emissions standard and did not anticipate much impact on electricity rates. Coal only makes up 1 percent of electricity at PG&E, 3 percent at SDGE and 7 percent at SCE, company officials said.

The California Energy Commission is drawing up a similar emissions standard for municipal utilities, which import a greater share of their electricity from out-of-state coal plants. The CEC is expected to issue its rules by July.

Municipal utilities in Anaheim, Los Angeles, Pasadena and Truckee ran into strong opposition when they tried to secure long-term contracts with out-of-state coal plants before the emissions standard took effect.

Environmentalists praised the PUC's emissions standard Thursday, saying it could encourage other states to adopt similar rules.

"It will help transition California's energy market to one that produces less greenhouse gas emissions," said Jim Metropulos of the Sierra Club. "Other states may look at it and decide that they also want to transition from dirty coal power to cleaner, green power."

But Luke Popovich of the Washington-based National Mining Association, which represents the coal industry, said restricting emissions would drive up energy costs because coal makes up about half of the nation's electricity supply. Such restrictions will do little to combat global warming unless other countries adopt similar limits, he added.

"We don't think it makes sense for the United States to unilaterally deny itself use of its most abundant energy source, which is coal," Popovich said. "It is hardly going to solve anything unless we get China and India and other rapidly expanding economies into some sort of control regime."

Bob Finkelstein, who heads The Utility Reform Network in San Francisco, said California ratepayers may pay a little more now, but will benefit from cleaner-energy sources in the long run.

"Consumers now and later will be better off if we start planning today for an energy future that doesn't have dirty coal," he said.

Living near busy roads tied to kids' lung risk

Impact on breathing is long-term health threat, study says

By Chris Bowman - Bee Staff Writer

Sacramento Bee and Modesto Bee, Friday, January 26, 2007

Growing up near a freeway stunts a child's breathing capacity for a lifetime, significantly increasing the risk of serious lung and heart diseases later in life, according to researchers who monitored thousands of Southern California children for up to eight years.

The landmark study, led by a team of University of Southern California scientists and released Thursday, delivers a sobering answer to a long-standing question about the health effects of being raised near a busy roadway where air is chronically polluted.

These children not only are more likely to develop asthma, but their lung development can be permanently cut short, increasing their odds of having a heart attack or a life-threatening respiratory condition, starting as early as their 50s.

"It's a big risk factor," said James Gauderman, the author and principal investigator of the study by researchers at USC's Keck School of Medicine.

"If you've got less lung capacity, and you get hit with the flu or pneumonia, you've got less reserve to fall back on," Gauderman said.

The findings carry profound policy implications nationwide for agencies that monitor and regulate air pollution, for locally elected officials who determine where to place new roads and housing tracts, and for education officials who buy property for new schools, California air quality regulators said Thursday.

"This is a pretty significant finding. It strengthens the information we need for some of our control programs," said Richard Bode, chief of the health and exposure branch of the state Air Resources Board.

Earlier studies measuring the environmental fallout on neighbors of Southern California freeways prompted the state regulators to go beyond their traditional scope of regional air quality and begin examining local "hot spots."

In the past six years, studies have focused on predominantly low-income neighborhoods near heavy industry, ports, railyards -- including the Union Pacific hub in Roseville -- and at schools on busy roads, such as Arden Middle School at Watt Avenue and Arden Way.

The USC study draws data from the state-funded Children's Health Study, a long-term investigation of respiratory health that has been tracking thousands of schoolchildren since 1993. The children, now in their 20s, lived in 12 Southern California communities, from the relatively clean towns of Lompoc and Santa Maria in Santa Barbara County to smoggier Long Beach and Riverside.

The project is the largest air pollution health effects study ever undertaken, Gauderman said

While earlier findings from the children's project were more applicable to urban Southern California, results of the new freeways study should resonate nationwide, Gauderman said.

Even in communities with overall good air quality, Gauderman said, "If children are living near a busy road, then our results suggest that they are at increased risk for these kinds of health effects."

The study, scheduled to be published Feb. 17 in the Lancet medical journal, correlated the data from community air quality samples and annual lung function tests with the locations of the children's homes, relative to freeways and other busy roadways.

More than 3,600 children participated for up to eight years. Investigators examined the link between their exposure to traffic pollution at home and their lung development, measured by how much air the child could forcefully exhale into a device called a spirometer.

The researcher accounted for factors that could skew results such as socioeconomic status, smoking and breathing disorders such as asthma.

They found that the overall lung capacity of children living within a mile from a freeway was 3 percent below normal.

The performance of their tiniest airways, where oxygen is delivered to the bloodstream, was about 7 percent below normal.

The reduced breathing capacity is unnoticeable among children because their lungs are still growing. Even after the lungs stop developing, about age 18, the deficit appears to have no effect because their lung capacity, which has lots of reserve, is at its peak.

Lung capacity declines naturally with age, beginning in the 30s and 40s. For those with lungs already compromised by air pollution, the deficit is all the greater.

"These individuals start off living with reduced lung function, so that when they reach middle age, they could be at greater risk for respiratory and cardiovascular disease," Gauderman said. "Most people expect to be active in the 50s."

Earlier research in the children's health project indicated that moving to cleaner environments could improve children's breathing.

"But it is not known at this point whether they completely regain what they lost by their time in a polluted environment," Gauderman said.

The next study will seek to identify which of the many tailpipe pollutants is most responsible for the reduced breathing capacity, he said.

Living Near Freeways Hurts Kids' Lungs

By Steven Reinberg, HealthDay Reporter
Washington Post, Friday, January 26, 2007

Children growing up alongside freeways risk having their lung development impaired, which can increase the likelihood of serious respiratory diseases later in life, researchers report.

Other studies have shown that children living next to highways are more likely to develop respiratory problems, such as asthma. But this is the first study to show that long exposure to car and truck exhaust actually affects the growth of the lungs, and hence their capacity.

The report is published in the Jan. 26 online issue of *The Lancet*.

"Exposure from tailpipe emissions from motor vehicles potentially carries chronic health risks to children's lung development," said lead researcher W. James Gauderman, an assistant professor in the Department of Preventive Medicine at the University of Southern California, Los Angeles. "We found that kids who live closer to freeways had significantly less lung capacity, compared with kids who lived further from freeways."

In the study, Gauderman and his colleagues followed 3,677 children for eight years, tracking their lung development. The children were 10 at the start of the study, and came from 12 southern California communities. The air quality differed in each community.

The researchers found that lung growth in children who lived within 500 meters of a freeway (about a quarter of a mile) was significantly less than children who lived 1,500 meters or more from a freeway.

Gauderman's group also found that exposure to freeways and regional air pollution had negative and independent effects on the growth of lung function. In addition, there was a significant drop in percentage of expected lung function among 18-year-olds who lived within 500 meters of a freeway.

Gauderman thinks that these effects on lung development are serious. "Lung capacity is something that once a child is done growing, that amount of lung capacity they have is carried with them throughout their adult life," he explained.

Lung capacity is further reduced as people age, Gauderman said. "Reduced lung capacity is a known risk factor for cardiovascular disease and respiratory diseases, such as emphysema," he added.

"What we worry most about are kids who have compromised lung function to start out with," Gauderman said. "When they are older, they will have a significantly increased risk for respiratory diseases."

One expert thinks that the problem is real, but the solution is elusive, and only changes in neighborhoods or automobile emissions seem likely to have an impact.

"Prior studies and common sense both suggest that breathing in a great deal of automobile exhaust cannot be good for the healthy development of children's lungs," said Dr. David L. Katz, an associate professor of public health and director of the Prevention Research Center at Yale University School of Medicine.

These data show a clear and clinically important association between the proximity of a child's home to a major freeway and deficits in lung function by age 18, Katz said. "The deficits observed in the force and volume of each breath suggests increased risk of asthma and bronchitis, as well as a decreased capacity for physical exertion," he said.

What these investigators cannot do is fix the problem, Katz said. "Can we redesign urban neighborhoods so that no home or school is near highway traffic? Can we reduce the volume and/or composition of car exhaust so that highways no longer represent threats to the lungs of growing children?" he asked.

Delayed alert in refinery fire sparks concern

Leaders meet with Chevron's neighbors to discuss breakdown

By Karl Fischer

Contra Costa Times, Friday, January 26, 2007

Contra Costa public officials pledged to fix breakdowns that delayed community warnings during last week's fire at the Chevron refinery but said little about why it started or how to prevent future fires.

The public and Contra Costa County government must wait until next month for more details about the 100-foot flames that erupted from the facility at 5:18 a.m. Jan. 15, sending thick smoke over San Francisco Bay.

Dr. Wendel Brunner, the county's public health director, told a crowd of about 150 gathered at Washington Elementary School in Point Richmond on Wednesday that air samples collected in the neighborhood during the daylong fire contained no more toxins than usual for areas around the refinery.

"We were fortunate in this case because of the winter weather pattern," Brunner said. "The vast majority of the smoke blew out over the Bay. In many ways, we skated on this."

"In terms of toxic chemicals, there was not a major impact on the community," he later said.

Some at the meeting were not comforted by his words.

"The fact is: We need to focus on what caused this accident," said Henry Clark, director of the West County Toxics Coalition. "Chevron was engaged in some kind of maintenance operation on Martin Luther King Jr. Day that resulted in an accident. Did Chevron have proper permits for that operation? Did it have proper ... staff to do that work?"

Randy Sawyer, director of the county's hazardous materials program, said Thursday that refineries don't need permits to perform maintenance unless they are making major alterations.

County Supervisor John Gioia called the town hall meeting to discuss why one of the county's methods of warning neighborhoods about industrial accidents -- its automated phone-dialing system -- began notifying Point Richmond residents of a shelter-in-place order more than an hour after the fire began.

There were two delays, Gioia said. The first came between 5:33 a.m., when warning sirens started sounding in the area, and 6:09 a.m., when county emergency personnel gave the order to use the Telephonic Emergency Notification System.

The second came between 6:09 a.m. and 6:34 a.m., when the Tennessee operator of the TENS system actually began calling residents. A software glitch at the operator's end caused that delay, forcing the county to repeat the order twice, said sheriff's Lt. Jeff Hebel, who works in the Office of Emergency Services.

"The system is a redundant system. Most of (the community-warning systems) worked, but one of the most important ones, the TENS system, did not work up to standard," Hebel said.

Both the county and the contractor, Dialogic Communications, acknowledged that a software problem caused the delays. The county is shopping for a new contractor to provide the service, Hebel said, not because of the mistake but because the county wants to use new technology.

Sawyer said his agency studied the problems and would look for ways to improve notification practices. A spokesman from the Bay Area Air Quality Management District said his agency also was investigating and could level fines if Chevron violated regional air-quality regulations.

Several City Council members spoke at the meeting, including Mayor Gayle McLaughlin, who asked why the county did not give Chevron responsibility for activating the TENS system. Refinery officials can activate the community-warning sirens, she noted.

Hebel said industry and county officials recently began discussing giving industry the ability to activate the phone warning system and also were testing technology that could deliver warnings to cell phones.

Chevron Fire Chief Mark Ayers, the only company official to speak at the meeting, said the oil giant that set up shop in Richmond more than 100 years ago wants to be a good neighbor.

"I would like to apologize tonight for the impact we had on the community," Ayers said. "I want to assure you that the Chevron refinery and every employee is committed to safety. We don't like fires; we don't want to have fires. We want to be a good neighbor, and that's why I'm here tonight."

Although spectacular, the fire left only two Chevron workers with minor injuries. Several people praised Chevron's safety record as well as the work of Chevron and city firefighters.

Others criticized the company.

"We cannot put our lives, our health on the line for Chevron's profits," said Torm Nompraseurt of the Laotian Organizing Project, one of many community groups in attendance.

Nompraseurt came to the meeting with Richmond High School senior Jackie Saephanh, who lives about three blocks from the refinery. She said her family did not receive any phone notification from the county.

County officials have said they ordered phone notification only in the Point Richmond neighborhood, the area usually affected by incidents at Chevron.

"I was sleeping. My mom and dad left about 5:30 ... they heard the sirens, but thought it was the (monthly test)," Saephanh said. "We didn't find out what happened until the next day. I am outraged that the rest of the people close to the refinery were not notified."

Student entrepreneurs compete

High school teams embark on 4-month project

By Jed Chernabaeff, Staff writer

Visalia Times-Delta, Friday, Jan. 26, 2007

Dozens of Tulare County's high school students took an oath Thursday to steal ideas, challenge authority, ask questions, fail often and spectacularly, celebrate mistakes, embrace problems and never give up.

It was an oath administered by Ed Sobey, a developer of science and inventing programs, for use in classrooms and learning centers and on television. It officially puts students on the path to becoming "bushwhackers."

"Bushwhackers are creative people. They make things, and make things happen," Sobey told the students during an hour-long presentation. "You have to be, you want to be, a bushwhacker."

Sobey's presentation and oath kicked off The Gas Company's Student Entrepreneur Challenge, a competition that pits teams of high-school students against each other for a \$1,000 prize.

To win top honors, students must develop business or economic ideas that relate to the San Joaquin Valley Partnership, a campaign designed to boost the economy and the quality of life in the Valley. The partnership addresses key local issues like college attendance, crime, and [air quality](#).

Over the next four months, teams from Tulare, Kings and Fresno counties will pick an issue and be assigned a mentor from an associated industry, said Colby Wells of The Gas Company. In May, the teams will present their plans and be judged by a panel at College of the Sequoias.

"This program is unique for our students in Tulare County," said Rob Herman, spokesman for the Tulare County Office of Education, a co-sponsor of the event. "They will gain skill in business [and] product development and experience in giving presentations."

Another co-sponsor, the Lyles Center for Innovation and Entrepreneurship, a business division at California State University, Fresno, also will help with mentoring the students.

High school students at Thursday's event weren't sure which Valley issue they would tackle. But El Diamante High School senior Alex Gong, 18, who will attend California State University, Fresno, said the competition should help him pursue a career in entrepreneurship.

Sobey's instruction will help, too, he said.

"I learned that you need to see an idea and make your own path," Gong said. "Taking a risk, that's all business is. Trial and error."

Golden West High School seniors Bryce Beatie and Holly Collins, both 18, are involved in other business programs at school. They said they couldn't pass up this particular competition.

"I think I have a little case of senioritis, but this kind of stuff is so fun and so up my alley," said Beatie, who will attend college in Reno. "It's what I want to do with my life."

Collins, who will attend California State University, Fresno, said Sobey's presentation was motivating.

"I learned that you can't be afraid of failure," she said, "and you have to learn from it."

Green building's surprising energy savings

New-home design can also help environment, improve health

By Katherine Salant - Inman News

in the Lodi News Sentinel, Friday, January 26, 2007

"Use common sense to make sense."

It sounds like Ben Franklin, but the speaker in this case is David Johnston, a green-building consultant in Boulder, Colo. His Ben Franklin-sounding aphorism, he said in a recent interview, has proved to be a useful, shorthand way of explaining sustainable green-building principles and practices.

Although these have been embraced by more and more home builders, there is still much confusion among the general public as to what exactly makes a house green. One way to keep things straight, Johnston said, is simply to remember to "use common sense to make sense."

For example, Johnston is regularly asked if a green house is one that is petroleum-product-free. His common sense answer: "If you eliminate everything that contains petroleum, you can't enjoy the accoutrements of a 21st century lifestyle." All the heating and cooling equipment and standard appliances contain plastic, he pointed out, adding that "even something as basic as a toilet has plastic parts."

The make-sense part of green building, Johnston went on to say, has to make sense both environmentally and economically. For example, building materials that have recycled content are generally considered to be a plus because recycling can significantly reduce both the volume of the waste stream and pressure on overflowing landfills.

But, speaking like the hard-headed home builder that he once was, Johnston said you shouldn't select a product solely on this basis. A product with recycled content may be much more costly than the conventional product it is intended to replace, and it may not perform any better.

Materials have to make sense from a health perspective as well, Johnston said. Many building materials are made with unstable, volatile organic compounds, called VOCs. They can off gas into the air for weeks and sometimes years after they are installed in your house. Of the hundreds of VOCs that have been identified, the one that concerns most people is formaldehyde, a potent eye and nose irritant that can cause respiratory problems. It has been classified by the World Health Organization as a confirmed human carcinogen.

You can easily avoid it by using one of the many building products now available with low or no VOC content, Johnston said. Though the non-VOC products often cost more, this is one instance where a higher cost is worth it, he added.

Segueing from materials to other aspects of green-home builders Johnston talked about household energy use. His common sense rule: Use as little as possible. His common sense reason: to save money and the planet. If you use less energy, you'll save money on your utility bills. You'll save even more as the price of natural gas, fuel oil and electricity inevitably goes up.

If you use less energy you'll help save the planet because you will be reducing the greenhouse gas emissions associated with your house. Unbeknownst to most homeowners, buildings are the largest source of the greenhouse gas emissions that are causing global warming. In the United States, half of building-related emissions are from houses.

Johnston feels that energy issues are so important, he urges homeowners to put them front and center in the design of any new house -- "from the first sketch of a floor plan to the final dotting your I's and crossing your T's."

But, Johnston hastened to say, energy savings should not come at the cost of having a great-looking house with lots of windows and great views. The trick is to get all this and save energy.

Johnston's common sense strategy for supplying household energy needs: Use what's free before using what you have to pay for. That is, tap as much free solar energy as you can for your heating and lighting needs before turning to conventional solutions.

To do this, you really do have to think about energy from the start because the feasibility of passive solar solutions depends on how you place your house on your building site, the first step in any building project. To capture the sun's rays for heating your house during the winter, your living areas must be oriented to the south. You can keep the same spaces cool in the summer by adding overhangs. With some additional refinements to the overhangs, the sun can also supply your lighting needs during the day.

To maximize the benefit of passive solar heating and cooling, you need to carefully tailor your building envelope to reduce heat loss or heat gain through the walls and roof. This generally requires adding insulation to the walls, attic and basement in amounts far above code requirements and upgrading windows to get ones with a low-emission coating that helps to keep the heat inside during winter and outside in summer.

Unless you live in Hawaii or Santa Barbara, Calif., where passive solar strategies can supply all your heating and cooling needs, you'll still need a furnace for those cold days when the sun's heat is not enough to keep you comfortable. But with your upgraded building envelope, you can use a smaller furnace and air conditioning condenser, and that is a cost savings, Johnston said.

You'll also need electric lights for nighttime use and cloudy days. Surprisingly, lighting accounts for about 12 percent of household energy use in the average household. Solar daylighting shaves part of this, but you can shave it further with compact fluorescent bulbs, commonly called CFLs, Johnston said. They use about 75 percent less energy to produce the same amount of light as an incandescent bulb, and they last six to eight times as long. CFLs can be screwed into almost any conventional light socket and their color correction has vastly improved in recent years.

The other part of the home energy puzzle that green building can affect is the sizeable energy draw for hot water. The luxury of having 40 to 50 gallons available 24/7 consumes another 12 percent of household energy use. But, Johnston said, it's another instance where you can tap free solar energy by installing a solar collector on your roof. For those cloudy days, though, you'll need a backup hot-water heater.

The other 35 percent of the energy that the average household consumes is out of a builder's hands, because it is the "plug loads" that homeowners bring into the house when they move in -- appliances, computers, home-entertainment equipment, and all the other doodads that most households accumulate. The most effective way to reduce this load is to purchase Energy Star products, now available in more than 40 categories.

How does Johnston's "common sense to make sense" work in real time on a real house?

To find out I contacted McStain Neighborhoods, a small production-home-building firm in Boulder that has built sustainable, green houses for more than 40 years. The firm builds about 350 houses a year in the Denver and Boulder markets.

Like all home builders, McStain evaluates everything from a cost-benefit perspective. But, unlike almost all the others in the United States, McStain has a research and development department that carries out in-depth reviews of about 50 new products and building techniques a year. Periodically, the firm builds a test house that incorporates the most promising of these innovations. The test houses are eventually sold, but the firm continues to monitor them for several years afterwards, said McStain marketing head Barr Hall.

Jeff Medanich, who heads up McStain's research efforts, said that much of his work is a balancing act, spending more here but saving more there so that in sum, the cost of an innovation is relatively small.

Medanich offered as an example McStain's current exterior wall construction. Instead of the dimensional wood studs that are used by most home builders (a single piece of wood sawn from a tree log), McStain uses finger jointed studs, which are made up of several smaller pieces of recycled scrap lumber that are glued together. These cost more but their superior quality means that fewer are tossed as unusable -- only about 4 percent compared with 20 percent of the dimensional studs. The cost difference is a wash, but the finger-jointed studs have the added benefit of lowering costs down the line. Because they are straighter, the walls are plumb, and this makes the work of subsequent trades go more smoothly and faster.

'Clean Cars' Debate Pits Cost Against Health

By Lisa Rein, Staff Writer

Washington Post, Friday, January 26, 2007

The bill could slow global warming, slash cancer-causing pollutants and make Maryland the next front in a movement to impose stricter emissions standards on cars and trucks. Or it could force higher car prices on buyers, restrict their choices and make sport-utility vehicles and minivans all but extinct.

Environmental groups and automakers on opposite sides of an ambitious "Clean Cars" regulation faced off at a packed state Senate hearing yesterday, where proponents told lawmakers that the proposed rules would improve the health of Maryland residents and the Chesapeake Bay and opponents insisted that they would hurt consumers and the state's economy.

"You will hear Chicken Little testify that the sky will fall if we enact these changes," Sen. Brian E. Frosh (D-Montgomery), the bill's co-sponsor, told lawmakers. He quoted from testimony then-Ford Motor Co. President Lee Iacocca gave to Congress opposing the Clean Air Act in 1970 as a "threat to every person in America."

"I would urge you, when you hear from opponents, to take into account their previous predictions," Frosh said.

Under a bill that has the backing of Gov. Martin O'Malley (D), starting in 2011, every new car in Maryland would have to be more fuel-efficient to reduce carbon dioxide emissions that contribute to greenhouse gases. Carmakers also would have to reduce other pollutants, including carcinogens and nitrogen compounds that foul the bay.

And automakers would be required to sell a percentage of such advanced-technology vehicles as hybrids and cars powered by natural gas. By 2016, when the changes would be fully phased in, carbon dioxide emissions would be reduced by about 30 percent, supporters predict.

Motorists would not need to retrofit their vehicles, but they could not circumvent the rules by buying from out-of-state dealerships: They would be blocked from registering those cars in Maryland, based on the vehicle identification number, officials said.

How new cars would be adjusted to meet the standards is a matter of dispute, with industry representatives saying they would have to build lighter, more fuel-efficient vehicles that would cost buyers an extra \$3,000. It could also make it difficult for Marylanders to own new-model vans and SUVs, which would likely not meet the tougher standards.

"Ask the proponents: What's the fleet going to look like?" William Kress of the Alliance of Auto Manufacturers, which represents eight carmakers, told the Senate Committee on Judicial Proceedings. "You need to know the cost of putting in this program. Dealers will be in the position of trying to sell cars that are not available to all drivers."

Environmental groups counter that the rules could be met through technology already on the assembly line -- including advanced fuel injectors, better exhausts and systems that allow cylinders to rest when a car is cruising. Average car prices would rise by \$1,064, they say, but cleaner cars would save more money in fuel costs in the long run -- anywhere from \$245 to \$460 a year.

The "Clean Cars Act" stalled in the General Assembly the past three years because of opposition from automakers. The industry is fighting hard again this year, with lobbyists opening their wallets for an invitation-only dinner Wednesday for committee members at Ruth's Chris Steak House in Annapolis.

But with backing from the new governor and the passage of legislation last year to curb pollution from coal-fired power plants, proponents are optimistic. Maryland would follow the lead of California, New York, New Jersey and other states fighting climate change by restricting tailpipe emissions.

As automakers challenge California's law in court, North Carolina, Arizona and New Mexico are considering similar bills. In his State of the Union address, President Bush called for tougher mileage standards for cars and light trucks.

But no state can serve as a test case for Maryland consumers, because the carbon dioxide rules, the controversial change in the bill, are not yet in effect in other states.

Maryland accounts for 2 percent of the nation's new car and truck market, about 350,000 vehicles a year.

Catalytic converters in cars made today filter smog-forming particles, but the best way to reduce carbon dioxide and other gases that might contribute to climate change is to use less fossil fuel, scientists say. That means fuel economy would need to improve, to 43 miles a gallon from the current average of 22.2 miles a gallon for light trucks and 27.5 for passenger cars, officials said.

Industry officials, pointing to the growing popularity of hybrids in Maryland, said lawmakers should give buyers more incentives to buy alternative-fuel cars.

"We're educating lawmakers that the best way to do this is to bring cleaner, safer and more fuel-efficient vehicles to the market," said Charles Territo, spokesman for the Alliance of Automobile Manufacturers.

But environmental groups say those technologies represent a fraction of car sales and won't do enough to curb pollution.

"Alternative-fuel cars should be part of the picture, but you can't reduce global warming as much as you need to with just those fuels," said Brad Heavner, state director for Environment Maryland.

10 Arrested in China Pollution Protest

By Christopher Bodeen, The Associated Press
Washington Post, Friday, January 26, 2007

SHANGHAI, China -- Police in southern China arrested 10 farmers embroiled in a dispute with a paper mill over pollution they say is killing their crops and fouling their water sources, villagers and media reports said Friday.

The men were taken away in a pre-dawn raid on Jan. 12, accused of "obstructing public duties," said Li Yongjin, a resident of the town of Botang in the impoverished region of Guangxi.

"They've given us no information about when they'll be able to get out," he said by telephone.

The arrests came a day after local officials told the villagers to prepare for a mediation session with managers from the Zhongtaifu mill, Li said.

The dispute reflects a common complaint in China: Industries move into areas where land is cheap, then release untreated, heavily polluted wastewater and fumes into the countryside.

With local governments unwilling to step in and often acting in collusion with factory owners who bring welcome tax revenues, farmers frequently seek outside help or mount their own, often violent protests aimed at shutting down the offenders.

Botang residents had used only legal channels to reach a settlement, however, repeatedly petitioning officials at the county and regional governments in the six years since the mill opened, according to villagers and the Boxun.com news Web site, which frequently reports on sensitive issues from outside China.

Chen Jian, an official with the environmental protection bureau in the regional capital of Nanning, said the plant had been ordered closed, but continued to operate.

"There is a serious pollution problem with the Zhongtaifu paper factory," Chen said. "If that is the case, the government is obligated to take measures to close down that factory."

Chen said the bureau was petitioning the government of Wuzhou, whose administrative region includes Botang, to enforce the closure order.

Phone calls to Botang government offices and the local police station rang unanswered. The Zhongtaifu paper mill had no listed number and general manager Zhou Jianping did not answer calls to his cell phone.

"We're surrounded by dirty, stinking air," Li said.

"The rice here is black. The fruit is either black or white. Rice and fruit are our main industries _ it's horrible," he said.