MANY OF THE 1995 HEAT WAVE DEATHS WERE PREVENTABLE ACCORDING TO NOAA REPORT

The number of deaths that occurred during the July 1995 heat wave exceeded the average number of lives lost each year in the United States to floods, hurricanes, and tornadoes -- and many of these deaths could have been avoided, according to a Disaster Survey Report issued today by the National Oceanic and Atmospheric Administration.

More than 1,000 people died during the July 1995 heat wave that hit the Midwest and many cities along the East Coast. In a normal year, about 175 Americans succumb to the demands of summer heat.

Chicago experienced its worst weather-related disaster, with 465 heat-related deaths recorded during the period from July 11-27, 1995. Milwaukee was also severely affected, with 85 heat-related deaths recorded during the same time period.

"In both Chicago and Milwaukee, the National Weather Service issued warnings of the developing heat wave several days in advance, which were quickly broadcast by the local media," said Kathryn D. Sullivan, former National Oceanic and Atmospheric Administration chief scientist and leader of the national disaster survey team that investigated this event. "Given this advance warning, many, if not all, of the heat-related deaths associated with this event were preventable."

So what went wrong? According to the report, in Chicago and Milwaukee, a heat wave of this magnitude is so unusual that it was not immediately recognized as a public health emergency. The heat wave was a highly rare -- in some respects an unprecedented -- weather event because of its unusually high maximum and minimum temperatures and accompanying high relative humidities. "Unfortunately, a heat wave connotes discomfort, not violence; inconvenience, not alarm," said Sullivan.

Despite accurate National Weather Service warnings and advisories and effective media coverage, the report concludes people either did not receive or know how to use the information. Both Chicago and Milwaukee had extensive disaster preparedness plans for other weather events like floods or blizzards. However, due to the highly rare nature of the heat wave, neither city possessed an official plan for responding to heat emergencies.

The report recommends that the NWS focus preparedness efforts towards people who are most
vulnerable to the dangers of heat. Among the most susceptible are the isolated elderly living in urban areas. This is because cities such as Chicago and Milwaukee have many urban dwellings constructed of materials such as brick that may trap hot, humid air at dangerous levels.

The report also recommends that emergency response organizations at the federal, state and local levels recognize severe heat waves as potential natural disasters, and that areas at risk should be prompted to develop emergency response plans for severe heat waves.

After a significant weather event, such as a heat wave, a disaster survey team may be assigned by NOAA to evaluate the role played by the National Weather Service, provide an objective appraisal about NWS performance, and make findings and recommendations. The team’s report on the July 1995 Heat Wave is available through the National Weather Service home page on the Internet at: http://www.nws.noaa.gov/OM/omhome.htm or by contacting the NWS Office of Meteorology Customer Service Core at (301) 713-0090.
Death Toll From U.S. Heat Wave Tops 150 Mark

Written by Stephanie Kriner, Staff Writer, DisasterRelief.org

The death toll from a weeks-long heat wave across much of the central and eastern United States climbed to 150 over the weekend, but meteorologists said some relief finally is expected for the first few days of August. At least 50 people have died in the Chicago area since temperatures soared into the 90s on July 19.

From the Great Plains to New York, high heat and humidity combined with intermittent or non-existent rain has combined to make life miserable for many. In Cincinnati, eight people died in just two days. In Chicago, 26 deaths were reported over the weekend. New York City officials reported July was the hottest on record.

The deaths bring back memories of the summer of 1995 when brutal temperatures claimed more than 1,000 lives throughout the Midwestern United States, including hundreds in the Chicago area. Most of this season's dead -- like those from 1995 -- have been found in homes and apartments without fans or air conditioners.

Two children use a fan to escape the endless swelter. "You tend to think of tornadoes and hurricanes as natural disasters that kill people, but this kind of heat spell can kill more people than some tornadoes or hurricanes.

"We already have [eight] deaths, which as far as I'm concerned is the equivalent of a natural disaster like a tornado," Cincinnati Health Commissioner Malcolm Adcock told the Cincinnati Post. The heat and humidity also may be blamed for the deaths of nine skydivers in Michigan over the weekend. Their aircraft crashed shortly after takeoff and flight instructors were quick to point out that high heat and humidity can make it more difficult for planes to leave the ground.

Forecasters on Monday indicated parts of the nation would receive some modest relief for the first few days of August as a small cool front from Canada pushed temperatures down into the low 90s or upper 80s. The hard-won lessons from 1995 are being credited with keeping this year's death toll down. In Chicago, a city-wide plan has been instituted to ensure that the elderly are routinely check on and schools are turned into cooling centers.

"Considering what we saw in 1995, this would indicate the city's emergency plan is doing exactly what was intended," Fire Department spokesman Mike Cosgrove said. But the weather also could have something to do with the lower death rate. Meteorologists say Chicago's daytime high temperatures for the most part have remained five to 10 degrees below the peak of the 1995 heat wave, while nighttime lows have stayed at least 10 degrees lower. During blackouts, residents stay outside.

But as during the 1995 heat wave, most of the heat-induced deaths have been avoidable. Although Chicago officials have invited thousands of people without air conditioners to come to one of the cooling centers, only 700 have taken advantage of the offer. In Cincinnati, all the
deaths occurred in places where residents had no air conditioning or had inadequate ventilation. In one case, a victim had chosen not to run her air conditioner in order to save money.

"I think it's really ironic that we've had more people die from heat stroke this weekend than we lost in the April 9 tornadoes when five people perished," Ohio coroner Dr. Carl Parrott told Reuters. Parrott warned that more deaths could result if people don't protect themselves by finding ways to cool off.

But facing record demand for electricity, utilities are pleading with customers to conserve or risk losing air conditioning altogether. In Manhattan, hundreds of thousands already were left without air conditioning, fans or refrigeration when a blackout occurred earlier this month. People slept in the streets to escape their stifling homes. "My fish have all died, the food is a mess, my meat and milk is ruined. I live on the top-floor apartment of my house. It's very hot. I couldn't sleep," one Manhattan resident told New York 1 TV news channel during the blackout.

Other outages have affected hundreds of thousands of customers across the Northeast and mid-Atlantic regions. In order to prevent further outages, some utility companies have cut off energy for certain, predetermined customers. Others have imposed rolling blackouts, shifting short shutdowns from one group of customers to another throughout the day.

And it doesn't look like the power struggles will end anytime soon.
Tuesday February 06 09:25 PM EST
Big Office Buildings Looking For
Energy Reductions

With energy costs skyrocketing and rolling blackouts threatening to plunge offices into darkness, San Diego building owners and managers are doing what they can to keep electricity use at a minimum. Marie Giere, manager of One America Plaza downtown, said she has shut down two elevators, turned off all exterior lights, reduced some lighting in common areas, installed sensors that turn off lights when rooms are unoccupied, and recently completed a retrofit of the building's air conditioning systems.

The San Diego chapter of the Building Owners and Managers Association has even begun urging its members to cut energy use by at least 10 percent, and most seem to be complying.

But not everybody is thrilled about these changes. Jason Hughes, of the Irving Hughes commercial brokerage firm, expressed concerns about the inconvenience of longer waits for elevators and darkened parking garages. Giere said her tenants have expressed understanding regarding the elevators. Parking garages switch to 50 percent lighting at 8 p.m., but she said that has been the case for years.

Ray Berry, director of facilities for Luce Forward Hamilton & Scripps, said that while lighting levels aren't so bright and a couple of elevators are out of service, there hasn't been any major inconvenience. The law firm is a tenant in Giere's building. Such seemingly small energy-saving measures are proving to be significant. One America Plaza cut its energy use from 1.45 million kilowatt-hours in December 1999 to 1.38 million-kilowatt hours in December 2000, Giere said, despite the building's 6 percent higher occupancy over the earlier period. At 569,630 square feet, One America Plaza is downtown's largest office building.

Giere said that while janitorial services can be scheduled so the crew doesn't work all night, there are some companies in the building with overnight staff. Global money market firms such as PaineWebber and Nicholas Applegate require staffing 24 hours a day. "Plus we have a lot of other companies that burn the midnight oil," Giere said.

Joe Murphy, who oversees Wells Fargo Plaza for CB Richard Ellis, watched that building's monthly energy bill more than quadruple from $48,000 in December 1999 to $196,000 in December 2000. "We are looking at everything," said Murphy, who conceded that the 10 percent usage cutback urged by BOMA isn't easy to do. Murphy said he is working with janitors to reduce their hours, and is attempting to lessen lighting and HVAC usage. Unlike Giere, Murphy said that reducing the number of operating elevators in the building wouldn't be worth the inconvenience it would create. "The bottom line are the air conditioning and the lights," Murphy said.

BOMA President Cybele Thompson, who manages the La Jolla Executive Tower in North University City, said her building has been as energy efficient as possible for as much as six years, using methods such as adjusting thermostats and turning off half of the lights on given
floors to achieve less usage. "BOMA believes this is a mutual responsibility between managers
and tenants," Thompson said. "By working together we can do our part to conserve energy and
help prevent any further threat of blackouts."

Owners of smaller buildings, such as Brian Walsh of the Walsh Chacon commercial real estate
brokerage firm, have taken advantage of programs offered by San Diego Gas & Electric to
reduce costs, including rebates for energy-efficient lighting and HVAC systems that can
subsidize much of the expense.

The city of San Diego, which reportedly owns some 1,500 small and large buildings, has not
only been trying to save energy, it has been putting back some on the grid. Carl Nettleton, city
communications director, said the Point Loma and North City treatment facilities produce
methane, which both powers the plants and adds to the grid. "They produce about 16.2
megawatts, about 40 percent of which goes back on the grid," Nettleton said.

While building owners and managers wrestle with ways to reduce power usage, Sempra Energy has
been doing some cutting back on its own. Alex Hemerick, a Sempra spokeswoman, said the
company has a goal of cutting its energy consumption by 10 percent. Hemerick said Sempra has
adjusted thermostats and disconnected floodlights around its Ash Street building as well as 16
lights the illuminate trees surrounding the structure. She said all interior lights in the building,
except for the lobby, go dark at 6 p.m. Those who need to stay later, can use their telephone
keypads to punch in where they need power and for how long. The system then fulfills the
request.
Resales of existing homes in California in December declined 5.4 percent and the median home price rose 10.7 percent compared to the same period a year ago, the California Association of Realtors and Real Estate Solutions, a real estate information service, reported.

In San Diego County, the December 2000 median resale price was $278,910, a 0.6 percent drop from November, but 16.8 percent ahead of a year ago. At the same time, resale activity for December was down 0.8 percent from the previous month but 3.6 percent higher than the previous year. "Homebuyers' uncertainty about the future of the economy was reflected in the sales pace in many areas of the state, particularly in the San Francisco Bay Area," said C.A.R. President Gary Thomas. "The frenzied pace of home sales in the last few years as the dot-com economy boomed appears to be shifting to a more sustainable level of activity."

Closed escrow sales of existing, single-family detached homes in California totaled 479,220 in December at a seasonally adjusted annualized rate, according to information collected by C.A.R. from more than 90 Multiple Listing Services (MLS) statewide. Statewide home resale activity decreased 5.4 percent from the 506,550 sales pace recorded in December 1999. Resale activity posted a decrease of 15 percent in December 2000 compared to November 2000.

The statewide sales figure represents what the total number of homes sold during 2000 would be if sales maintained the December pace throughout the year. It is adjusted to account for seasonal factors that typically influence home sales.

The median price of an existing, single-family detached home in California during December 2000 was $249,370, a 10.7 percent increase over the $225,260 median for December 1999, C.A.R. reported. The December 2000 median price decreased slightly by 0.6 percent compared to November 2000.

Highlights of C.A.R.'s resale housing figures for December 2000 show:

C.A.R.'s Unsold Inventory Index for existing, single-family detached homes in December 2000 was 3.2 months, compared to 3.3 months for the same period a year ago. The index indicates the number of months needed to deplete the supply of homes on the market at the current sales rate.

Thirty-year fixed mortgage interest rates averaged 7.32 percent during December 2000, down slightly from 7.91 percent in December 1999, according to the Federal Home Loan Mortgage Corp. Adjustable mortgage interest rates averaged 7.05 percent in December 2000, up from 6.53 percent in December 1999.

The median number of days it took to sell a single-family home was 32 days in December 2000, down from 36 days for the same period a year ago.
The emerging energy crisis, uncertainty about the outcome of the November elections and a dip in consumer confidence took its toll on home sales in December, although regional disparities abound," said Leslie Appleton-Young, C.A.R.'s vice president and chief economist. "Double-digit declines in year-to-year sales were almost exclusively confined to Northern California, where prices continue to escalate."

A separate C.A.R. report also showed 268 of 306 California cities and communities, or 88 percent, had an increase in their respective median home prices from a year ago.

Among the highlights of the December localized data collected by C.A.R. and Real Estate Solutions:

Statewide, the 10 cities and communities with the highest median home prices in California during December 2000 were: Los Altos, $1,316,000; Mill Valley, $875,000; Saratoga, $854,550; Burlingame, $807,500; Pacific Palisades, $775,000; Malibu, $750,000; Menlo Park, $750,000; San Marino, $745,000; Lafayette, $739,000, Belmont, $729,140.

Statewide, the 10 cities and communities with the greatest median home price increases in December 2000 compared to the same period a year ago were: San Juan Capistrano, Watsonville, Union City, Aptos, Lafayette, Desert Hot Springs, West Hollywood, San Ramon, Morgan Hill, and Lancaster.
The homes may still be wood frames on freshly turned soil, but Shea Homes San Diego's sales pitch is prime: Solar electricity could help homeowners reduce their utility bills in the face of a statewide energy crisis. Atop a ridge just east of Interstate 15 in the Scripps Ranch area, San Diego's top home builder and its partners unveiled Tuesday the Shea High Performance Home program. In a new community called Scripps Highlands, 200 homes are being constructed to be 38 percent more resource-efficient than homes built under current state energy code guidelines.

Mark Brock, president of Shea Homes San Diego, conceded that the recent Stage 3 electricity emergencies provided a convenient hook for Tuesday's press conference. A tour of the solar home project was originally slated for March, when construction would be closer to completion, Brock said. "I think it is timely," he said. "The homes are selling well, but this serves as a byproduct."

The program is aided by partners including AstroPower Inc. (Nasdaq:APWR - news) of Newark, Del., with its SunChoice-brand of solar electric home power systems; Stockton, Calif.-based ConSol with its ComfortWise energy efficiency program; and Sun Systems of Scottsdale, Ariz., with a solar hot water technology.

Shea Homes also counts among its partners the San Diego Regional Energy Office, through which the homebuilder is working with the U.S. Department of Energy's "Million Solar Roofs Initiative" geared toward the installation of a million solar rooftop systems by 2020.

"The current energy crisis is happening in the context of a growing region," San Diego Regional Energy Office Project Manager Scott Anders said in a prepared statement. "By the year 2020, the region will add 1 million new residents and 360,000 new housing units. If only 10 percent of those homes were built as energy efficient and could generate as much energy as the Shea Homes High Performance Home, ... it would be the equivalent of saving enough energy to supply power to 15,000 homes."

Anders said that once complete, the project will be the largest of its kind in the nation.

Scripps Highlands homes with south-facing roofs — about 100 within the development — will feature a 1.2-kilowatt solar electric power array. About 200 homes will feature a combination of energy-saving features like a 40-gallon passive solar water heating system, "smart" glass designed to better insulate, and a specially-engineered heating and ventilation system.

Shea Homes officials say the solar panels will satisfy some 30 to 40 percent of a home's power needs, while the water heaters could reduce the amount of natural gas needed by about 50 percent.

Add-on features equipped to protect against power outages — like a solar-charged battery bank or

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- a specialized circuit breaker — and an upgrade from the standard 12 solar panels to 24 panels are also available to homeowners, Shea Homes officials said.

Environmentalism isn't necessarily cheap, though. The 444 single- and multifamily Scripps Highlands homes are hitting the market at $400,000 to $600,000. Adding non-standard solar features could cost an extra $4,000 to $6,000, according to Shea Homes officials. Brock said that while the housing market in San Diego continues to be high-priced, the energy-saving aspect of this new development offers home buyers something extra for their dollars.

"It's like going to a dealership to buy a car, and they sell you a car that produces its own gasoline," Brock said. The advantages of solar energy are many, Shea Homes officials said Tuesday. While a typical San Diego home can generate an annual electric bill topping $1,000, a Shea home offering all the energy-conserving gadgets available could pay just below $200.

Meanwhile, the average residence is reportedly responsible for the emission of twice as much global-warming pollution, like carbon dioxide, as the average car. Solar energy is often used to power home lighting, which otherwise accounts for a quarter of all electricity use in America.

Shea Homes San Diego -- which was top-ranked in net sales for 2000 by Marketpoint Realty Advisors' annual survey -- is a division of J.F. Shea Co., which is credited with work on the Hoover Dam and the Golden Gate Bridge.
Resale Home Inventory Continues To Dwindle

Though San Diego County home resales dropped 8 percent to 22,601 last year from 1999, prices seem to have stabilized for the time being, according to a recent report by the San Diego Association of Realtors. The average price of a resold single-family home was $354,709 last month, 12.9 percent higher than $314,192 in December 1999, the Association of Realtors reports. Resold attached units averaged $216,182 last month, up more than 19.5 percent from $180,913 a year earlier.

While prices at the end of 2000 were significantly higher than in 1999, they didn't climb nearly as quickly in the fall as they had earlier in the year. Detached resales in December totaled 1,592, slightly less than the 1,608 sold a-year ago. In the same month, attached resales amounted to 733, up from 299 in December 1999.

That portion of Carlsbad generally bounded by the ocean, Palomar Airport Road and Encinitas posted 1,218 resales in 2000. The average price of a resold unit in that market was $399,354 last month, compared with 1,137 sales and an average of $361,112 at the end of 1999.

Jerry Keegan, a listing agent with Coldwell Banker in Carlsbad, said he wishes he had more houses to market. "Right now the inventory is so low that there are literally more buyers than homes to sell," Keegan said. He said that even some condominiums currently are priced as high as $250,000, and he expects more inventory will be added to the market once residents gain distance from the holiday season.

A zip code that includes portions of Rancho Bernardo and Carmel Mountain Ranch had 1,148 resales last year, down from 1,282 in 1999. The average price of a resold unit in that market was $290,590 last month, up from $241,193 in December 1999.

Bill Simmons, broker/owner of Re/Max of Rancho Bernardo, said the market remains stronger than he might have expected. "Considering the things happening like the energy crisis and the economic slowdown, it's surprisingly strong. If things don't get any worse, we're going to have another strong year," he said, adding that the volatile energy situation could hurt the housing market.

In Mira Mesa, 949 units were resold throughout the year, with an average price of $225,840. Al Flore, a broker associate with Re/Max United, which covers both Mira Mesa and Scripps Ranch, said inventory also is low there. "People are just sitting and watching the (stock) market," Flore said. Flore warned that if the stock market dives, it could take the real estate market with it.

The portion of Oceanside generally bounded by El Camino Real, Mesa Drive, Carlsbad and Vista had 925 resales in 2000. The average price of a resold unit in that market was $233,619, compared with 1,043 resales and an average price of $207,193 a year ago. And the portion of Oceanside generally bounded by El Camino Real, Mission Avenue, Mesa Drive and Bonsall posted 905 resales tracked by the countywide multiple listingservice in 2000. The average price
of a resold unit there was $202,766 last month. Paula Barksdale of Barksdale Properties in Oceanside, said prices keep going up and inventory continues to dwindle. "(The price is) ... going up and up and up. It's very active, and we have a shortage of homes. We don't have enough for the demand," Barksdale said. She said there was the normal slowdown during the holidays, but that "last week it was like the lid came off."

That portion of Vista generally bounded by Bobier Drive, Oceanside, San Marcos and Carlsbad posted 855 resales. The average price of resold unit there was $223,450 in December. G.W. Medley, an agent with Coldwell Banker in Vista said the homes that sold in his area have been priced from $199,000 to $263,000. Medley said his office has already sold 20 homes this month, and has another 20 listings. Medley said people are starting to get back into the home-selling mindset following the holidays, and is confident 2001 will be another strong year. "From our predictions, it looks like it's going to be a fairly strong year for us," Medley said. "If the Feds come in and lower interest rates, that will help even more."

Obtained and made public by the Natural Resources Defense Council, March/April 2002
Nicor Gas forecasts that heating bills could nearly double this winter. The average heating bill for October through March could reach $780 which compares to $410 last winter. Higher heating costs are the result of tight supplies of natural gas. According to the U.S. Department of Energy, natural gas prices around the country will likely increase 27 percent. As a result of gas price increases, the Citizen's Utility Board (CUB) will approach the Illinois Commerce Commission looking for new payment plans for gas customers. Martin Cohen, executive director for CUB, wants more opportunities for consumers to stretch out payments on their heating bills. The predicted spike in heating costs has already spurred federal and state governments to add more money for energy assistance to low-incomes households.
Heating bills may burn Hoosiers
Experts say natural gas prices are up 10 to 40 percent

By The Associated Press

Indiana residents thrilled by falling gasoline prices probably haven't noticed that natural gas prices have been creeping higher for months. But come this winter, people who use natural gas to heat their homes will get a rude awakening when they open their utility bills. Indiana's natural gas prices are currently 10 to 40 percent higher than a year ago and could rise even more before fall arrives. Most people haven't noticed because they use so little natural gas during the summer.

But state and industry officials are already advising customers to head off sky-high heating bills by winterizing their homes, servicing their furnaces and joining budget-pricing plans to spread out winter heating costs through the year. "It's not going to be an easy winter for anybody," said David Osmon, the controller of Midwest Natural Gas, which serves customers in parts of Washington, Scott, Jackson and Jennings counties. Osmon says natural gas customers are in for a "double whammy." Not only will the price per unit of gas this winter be significantly higher than recent years, he said odds are that this winter will be colder than the past two unseasonably warm winters.

Peggy Laramie, a spokeswoman for the American Gas Association, said natural gas will likely remain expensive through the winter. But prices probably won't remain high in the long run, she said. Industry experts attribute the price increase to several factors. In 1998 and early 1999, wholesale prices for gas pumped from the ground fell below $2 per thousand cubic feet. That led suppliers to slow production just as economic development was beginning to boost demand to levels greater than projected. In May 1999, the price climbed above $2, and suppliers began pumping natural gas again. But the six- to 18-month lag time between the start of production and the time it took for that gas to reach the retail market means supplies remain tight. In January, natural gas traded for about $2.34 per thousand cubic feet on the New York Mercantile Exchange. The price peaked at about $4.40 in June, said Kathy Lomont, a spokeswoman for ProLiance Energy, an Indianapolis-based company that buys gas on the wholesale market on behalf of retailers, including Indiana Gas. In response, the Indiana Utility Regulatory Commission has approved price increases for several gas companies to reflect wholesale price increases expected in coming months. Lomont said ProLiance analysts "think prices will probably come down toward the end of the year." Still, that decline may not show up in gas bills until spring.

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Obtained and made public by the Natural Resources Defense Council, March/April 2002
1. "Rising energy costs have some juggling bills, needs"

This anecdote addresses:

a. Price and affordability;
b. the general public, especially low-income and elderly
c. natural gas for heating in California;
d. DOE Programs of Relevance: Low-income weatherization program; State Energy Program; ENERGY STAR labeling program, including for windows; gas heat pump program (in DOE/OPT); Competitive R&D; Building Codes
e. Barriers include fixed incomes.

ASSOCIATED PRESS  February 5, 2001

SUN CITY – Eighty-nine-year-old Dorothy Moore sat in her living room with the lights off, wiping away tears as she clutched a natural gas bill stamped "past due."

A self-proclaimed penny-pincher who lives on an $826-a-month Social Security check, Moore said this was the first time in her life she did not have enough money to pay her bill on time.

"I sent them what I could last month. But then I got another bill and I couldn't pay that amount either. Now it's just piling up. ... It's $106," she said. "I'm worried if I don't pay it all, they'll turn my heat off." As officials in California wrestle with a power shortage and the possibility of raising electricity rates, many of the state's poor and elderly are struggling with a different problem: some of the highest natural gas prices in the nation. The more than 9 million consumers whose homes are heated by natural gas have seen their bills soar by 50 percent or more since December.

Under deregulation, the state's two largest utilities, Pacific Gas & Electric and Southern California Edison, are blocked from passing along the higher costs of producing electricity to consumers. But natural gas providers, who do not face such constraints, said they have no other choice but to pass on to consumers the rising costs brought on by a cold winter and short supplies. For people like Moore, that means a monthly gas bill that once averaged around $32 – before the wholesale price of natural gas reached levels four times higher than a year ago – is now coming in at near $80.

"A lot of people don't realize the bills haven't gone up since 1996," said Denise King, spokeswoman for Sempra Energy, which owns Southern California Gas Company and San Diego Gas and Electric. "If you look at it overall, it isn't any more exorbitant than what the rest of the country is facing."
While natural gas prices have leveled off some, the March futures contract closed Monday at $5.70 per 1,000 cubic feet, down from recent levels as high as $9.

To ease the burden for those on fixed incomes, the utility companies are promoting assistance programs that can cut bills by 15 percent.

Nearly 2 million people, about 60 percent of those qualified, already receive some type of assistance to pay their utility bill, said Armando Rendon of the state Public Utilities Commission. That number has increased a third since last year.

A survey by the American Association of Retired People found a middle income family spends about 6 percent of its monthly income on utilities whereas fixed- and low-income families spend about 23 percent.

Thousands of telephone calls have poured into state and federal agencies and nonprofit organizations from people searching for help to pay their natural gas bills.

"People are seeing their bills and all of a sudden they're in a panic because they are used to paying a certain amount and ordinarily they can budget for it," said Gerald Brown of the Community Services Department of San Bernardino, which helps people apply for the federal Home Energy Assistance Program.

In nearby Orange County, 53-year-old Lynda Minkoff's natural gas bill doubled to nearly $50.

"Twenty dollars is a lot of money. It's a tank of gas for work. It's a couple of telephone calls to my son. It's extra groceries," she said. "I'll probably put in a few more hours at work to make up the difference."

But for the state's elderly, putting in extra hours isn't possible.

William Dietsch, 70, said he has had to dip into his savings to pay his $187 natural gas bill, which jumped from $100 in December.

"It used to be I had money left at the end of the month," Dietsch said. "Now I have more month than money left."

DOE programs can assist in a number of ways. The Weatherization Assistance Program enables low-income families to benefit from the application of energy-efficient technology, lowering their heating bills by 22%, on average. The State Energy Program provides grants to leverage non-federal resources and allow states to tailor programs to their specific needs. The Building Standards and Guidelines Programs establishes a floor
for the energy performance of new homes, ensuring that the energy bills will be lower than would otherwise be the case. The competitive research program is funding research into the development of high-efficiency condensing gas water heaters, which offer significant savings over conventional gas water heaters.

2. Heat Wave in Chicago
Source: “Home Energy,” July/August 1996
http://hem.dis.anl.gov/cgi-bin/get_HEMart.pl?67-104-105-99-97-103-111-32-104-101-

This anecdote addresses:

- access to cooling;
- the general public, especially low-income and elderly, in apartment buildings
- electricity for cooling in the Mid-West;
- Low-income weatherization, light colored roofing and cooling technology
- Barriers include inferior housing conditions for low-income residents

The heat wave in Chicago in 1995 created a great deal of human discomfort and, by many estimates, caused over 500 deaths in three days. The overwhelming majority of these deaths occurred in buildings with indoor conditions that were reported as stifling. To prevent such urban heat catastrophes in the future, we need to understand how indoor conditions during such extreme weather conditions are exacerbated by poor thermal characteristics and improper operation of the buildings. By identifying vulnerable housing structures, we can develop strategies to keep such buildings from becoming dangerously hot during a heat wave.

Epidemiological studies of last year’s heat wave deaths have revealed many cultural, social, and institutional factors. But the role of the conditions inside the buildings is attested by the fact that almost all those who died lived on the top floor and either did not have air conditioning or could not use it due to blackouts or insufficient building wiring.

Multifamily buildings in urban areas like Chicago, Philadelphia, and St. Louis are often the ones most likely to become excessively hot. The buildings’ brick walls store heat over several days and radiate it into the apartments. Particularly vulnerable buildings can be identified by their construction materials, insulation, roof and wall colors, window orientation, apartment configuration, and lack of operable windows or mechanical ventilation.

The role of the radiant temperatures on thermal discomfort is much greater during extreme conditions. One particularly dangerous feature of many apartment buildings is an uninsulated, west-facing brick wall. This wall absorbs solar gain during the late afternoon and radiates the heat inward after the sun sets. This large radiating surface prolongs unhealthy thermal conditions even after the air temperature has peaked.

Researcher Joe Huang, at Lawrence Berkeley National Laboratory (LBNL), investigated and modeled the physical conditions in prototypes of these buildings (see Figure 1).
Huang’s simulations demonstrate that mechanical ventilation is the most effective way to prevent heat buildup from day to day, and that light-colored roofing significantly lowers ceiling surface temperatures. Insulation helps to keep temperatures down on both the top and bottom floors.

Practical guidelines to reduce deaths from future urban heat waves can be implemented by cities either as a stand-alone retrofit activity or by incorporating them into a weatherization program. Obviously, these same strategies will greatly reduce thermal discomfort for many more people. Finally, many of the mitigation strategies will also reduce heating and cooling energy use enough to pay for their installation.

3. Increasing Heating Oil Prices in Homes
http://www.eia.doe.gov/pub/oil_gas/petroleum/analysis_publications/heating_brochure.htm

This anecdote addresses:

a. affordability and price;
b. the general public, especially low-income and elderly;
c. heating oil, primarily in the Northeast;
d. Low-income weatherization; ENERGY STAR Windows and Programmable Thermostats. Note that one Department of Energy technology, the flame retention heat oil burner, has completely penetrated the oil furnace market and is already saving consumers about 10%, relative to what they would have been paying.
e. Barriers include lack of information about the cost-effectiveness of adding insulation, replacing windows, installing programmable thermostats, or installing more-efficient furnace. Also, large number of households are eligible for weatherization assistance, but only around 15% have been served by the program to date nationally.

Of the 101.5 million households in the United States, approximately 7.7 million use heating oil. Residential space heating is the primary use for heating oil, making the demand highly seasonal. Most of the heating oil use occurs during October through March. The area of the country most reliant on heating oil is the Northeast, as Figure 1 below shows.

In 1997, according to the Energy Information Administrations’ Residential Energy Consumption survey, the typical household that used fuel oil for space heating paid about $650/year to heat their homes. As Figure 2 below shows, however, heating oil prices are considerably higher now than they were in 1997, and consumers are paying considerably more to heat their homes. In 1997, the price per gallon for heating oil was under $1.10/gallon, but the price as of 2/12/01 is $1.499 per gallon. This increase translates into an average increase of around $240 per year.

Citizens who use fuel oil are subject to two kinds of price volatility. First, since crude oil is a major price component of heating oil, changes in the price of crude oil will generally
affect the price of heating oil. Crude oil prices are determined by worldwide supply and demand. Demand can vary worldwide with the economy and with weather. Supply can be influenced by the Organization of Petroleum Exporting Countries (OPEC) and other factors.

Second, apart from international effects, home heating oil prices sometimes can change dramatically in a short period of time due to regional constraints. Why does this happen? If refiners, wholesalers, dealers and consumers have enough heating oil in storage and temperatures do not drop rapidly, prices hold fairly steady (assuming crude oil prices are also not changing much). However, a rapid change to colder weather can impact both supply and demand; people want more fuel at the same time that harbors and rivers are frozen or delivery systems are interrupted.

-During this time, the available heating oil in storage is used much faster than it can be replenished. Refineries normally cannot keep up with demand during these cold periods. Wholesale buyers become concerned that supplies are not adequate to cover short-term customer demand and bid up prices for available product. In the Northeast, for example, additional supplies may have to come from some distance away such as the Gulf Coast or Europe. It costs more to transport heating oil from these sources to the Northeast, and it also can take two to three weeks to arrive. During the time that resupply from distant markets is occurring, the supply of heating oil that sellers in the region have in storage drops further, buyers' anxiety about finding heating oil in the short term rises, and so do prices—sometimes sharply—until new supplies arrive.

FIGURE 1
Costs can by reduced by improving the thermal integrity of the home. Options include: weatherizing the home, through the Low-Income weatherization program; installing the proper attic insulation, installing ENERGY STAR windows, and installing an ENERGY STAR programmable thermostat.

4. L.A. Replacing Lights To Save Energy (excerpted)

This anecdote addresses:
   a. affordability and price;
   b. general public;
   c. electricity use in the West;
   d. major sector programs and/or crosscut initiatives (red LED’s currently available for replacing safety exit signs in buildings, while LED’s [solid-state lighting] are the focus of a current BTS Competitive Solicitation for building lighting applications)

The Associated Press
Sunday, February 4, 2001; 4:36 PM

LOS ANGELES — In light of California’s energy crisis, Los Angeles County will replace 5,000 red lights in traffic signals with new equipment that consumes far less electricity.

The signals’ red incandescent bulbs will be taken out in favor of longer-lasting light-emitting diodes, or LEDs.

Although they cost much more – LEDs can run $75 and up, while an ordinary bulb goes for just a dollar or two – the diodes use less power. A standard 8-inch stoplight uses 69 watts, while the new lights use about seven 7fts.
Many cities have experimented with the technology, but interest is surging now because of the state's power problems, said Virginia Lew of the California Energy Commission.

"We should have been doing this, even without the electricity crisis," said county Supervisor Zev Yaroslavsky, who pushed for the change. "It's a very good deal for us, and it also saves electricity, which is the name of the game."

County officials expect to recoup within two years the $700,000 it will cost to install the new equipment, mostly through lower electricity bills. Since the high-tech units last about five times as long as ordinary bulbs, labor costs may drop because work crews won't have to change burned-out lights so often.

The county will begin installing them by the end of the year, said Mike Nagao, a civil engineer for the county.

According to the energy commission, if the entire state swapped its 4 million traffic lights for light-emitting diodes, California would save almost $95 million each year.

5. Rising Natural Gas Bills in D.C. Area

Excerpted from article by Peter Behr and Sabrina Jones, Washington Post Staff Writers, Sunday, February 4, 2001; Page A01

This anecdote addresses:
  a. Price and affordability;
  b. the general public
  c. natural gas for heating in the Mid-Atlantic;
  d. DOE Programs of Relevance: Building Standards and Guidelines; ENERGY STAR labeling program, including for windows; gas heat pump program (in DOE/OPT); Competetive R&D Program
  e. Barriers include: fixed incomes; lack of information about the cost-effectiveness of energy efficient technologies; lack of availability of energy efficient technology, such as condensing gas water heaters, heat pump water heaters, and programmable thermostats.

The gas-heating bills that arrived a week ago at a new Manassas, Virginia subdivision sent Kelly Chiarini and her neighbors reeling. She had been expecting a bigger bill from Columbia Gas, but not one for $750 -- more than three times the October statement.

"It was cardiac arrest," said Chiarini, a computer sales representative who lives in Manassas with her husband in a four-bedroom home.

There have been no rolling electricity blackouts or flickering streetlights in the Washington area, unlike California. But an energy shock wave has rolled through the region all the same, through the gas meter.
Just a month ago, Washington area consumers were warned of 50 percent increases in natural gas prices. The reality has been far worse.

Consumers' gas bills for December and January more than doubled from a year ago, according to Washington Gas Light Co. and Columbia Gas. Baltimore Gas & Electric said bills for December service were 70 percent higher than December 1999 and some additional December charges will show up in future bills. In the Washington region, about 850,000 households use natural gas to heat their homes.

In one typical case, the owner of a 2 1/2-story Capitol Hill town house got a $686 gas bill for December, more than twice the amount for December 1999. The customer's gas charge more than doubled as well, to 85 cents a therm, a standard utility heating unit. (A $10 spot price for natural gas is equivalent to about $1 per therm.)

For consumers, the escalation in gas bills is a stark exposure to the volatility that energy deregulation can bring, when shortages give producers and marketers the leverage to push through big price increases.

Wholesale natural gas prices have been fully decontrolled since 1993. Gas charges that customers receive are still subject to regulatory review, but companies are allowed to pass through higher wholesale prices.

These higher bills are particularly painful for those on fixed incomes.

Vera Rector, 45, who has glaucoma and other illnesses and receives disability pay, has had to juggle her high energy charges with the other expenses of paying for car insurance, medication and food for herself, her 16-year-old daughter and her 4-month-old grandson. She uses food stamps, lives in government-assisted housing, and has received money from Fairfax County agencies to help her pay her bills, but it's still not enough.

"Even with that help, I'm still behind," Rector said.

In December, the gas bill from Dominion Power for her three-level Burke town house reached more than $200, too much for her to pay on time with her income of $601 a month. After her landlord put in a new furnace, her bill declined this month to about $110, but she still was behind in her payments.

Although areas of her home are so cold she doesn't go into them, Rector tries not to turn her heat up much. "We just basically stay up in the bedroom area," she said. "The top level stays the warmest."

Mark Wolfe, president of the National Energy Assistance Directors' Association said that while more federal home heating assistance is available this year than last, it may not be enough to keep up with rising costs of natural gas and other fuels, particularly for the poor, who pay up to 20 percent of their income for gas and electricity.
"If you're poor, there's no way you could have planned for this," Wolfe said. "People skimp on medicine, they skimp on food, they really cut back. We're worried we're going to see more [energy] shutoffs. It's a sign that people are having trouble coping."

Whatever their circumstances, gas customers have deluged utilities with complaints about their bills.

In other winters, Washington Gas received about 5,000 customer phone calls a day. Now the number is about 15,000, spokesman Tim Sargeant said. "We're bringing in more people to staff the telephone service lines," he said. "And we're asking for patience."

Milder weather in January eased the gas scarcity somewhat and spot prices have declined to about $6 per thousand cubic feet.

But, Doolan said, "there are many weeks between now and April. If it's bitterly cold again, we'll be back where we were and maybe higher."

Even with a big increase in new drilling, triggered by higher prices, gas supplies will be tight for the rest of the year, the Energy Department predicts. That could push gas bills next winter back up to where they are now, the department said.