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Climate Change Clips (12/98 to 4/99) [2]

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Martha L. Wofford

03/29/99 12:19:32 PM

Record Type: Record

To: See the distribution list at the bottom of this message
cc: Meagan M. Earley/WHO/EOP
Subject: Climate Clips

There was a fairly long piece on *Discovery News* last night that was very good on the impacts side. I will try to get a copy.

Philadelphia Inquirer

March 29, 1999

Countries to tie trade to ecology

The eight leading industrial nations also called for steps that could reduce pollution.

REUTERS

SCHWERIN, Germany -- Leading industrial nations agreed yesterday that binding environmental standards should be included in future international trade agreements, German Environment Minister Juergen Trittin said.

Trittin, speaking after two days of talks with ministers from the Group of Eight countries, said the agreement was a "clear signal to government leaders to meet ecological needs in developing economic and trade ties."

In a paper drawn up at the talks, ministers also dropped their opposition to the introduction of taxes on fuels used by planes and ships to help contain carbon dioxide emissions.

The ministers called for further reductions in the release of carbon dioxide and other "greenhouse" gases believed by many scientists to cause global warming.

But they were unable to agree on proposals to allow countries to trade "emission rights" -- said by backers to be a key mechanism for cutting down on overall pollution.

A global climate treaty signed in 1997 in Kyoto, Japan, would let polluting states meet stricter clean-air standards by buying credits from states that have already cut their gas output.

At the Kyoto conference, countries agreed to cut greenhouse gas emissions by 5.2 percent from 1990 levels by 2012.

The results of the weekend talks, held in the eastern German city of Schwerin, will be submitted to the Group of Eight summit in Cologne in June.

The Group of Eight nations are the United States, Japan, Germany, France, Britain, Italy, Canada and Russia.

Spokesman Review/Spokane.net

**State lectured on global warming
Legislators urged to take role in addressing climate change**

Laurence M. Cruz - Associated Press

OLYMPIA _ A panel of climate experts on Friday invited state lawmakers to take a larger role in dealing with the Pacific Northwest effects of global warming.

"There are a lot of decisions you make every session concerning issues that go out 20 to 50 years in the future," said University of Washington research scientist Philip Mote, who joined researchers from the Pacific Northwest National Laboratory in Richland for the presentation.

Despite the information already available on global warming, the issue is easily ignored because it seems too distant, too uncertain and too expensive to fix, Mote said. Early warnings about the Y2K computer problem were greeted much the same way, he added.

"So we waited. Serious preventive action finally began only when the deadline loomed too close," he told the Senate Natural Resources, Parks and Recreation Committee. "And we still don't know whether we have done enough to avoid a catastrophe."

Using a new regional climate model aimed at making the seemingly abstract threat more real, the panel painted an unusually detailed picture of how the region may change if carbon dioxide emissions double -- as predicted -- by the year 2080.

Dwindling snowpacks and rising snowlines could leave Cascade Mountain ski resorts high and dry. Those same resorts were buried this winter in snowdrifts 30 feet deep. Higher temperatures also would increase the chances of winter flooding and summer drought, panelists said.

A half-dozen lawmakers attending the hearing left it full of ideas for actions they could take to help the region adapt to the climate changes.

Sen. Ken Jacobsen, D-Seattle, said a good starting point would be to form a special agency dealing with climate change.

Sen. Dan Swecker, R-Rochester, said the workshop made him question basic attitudes toward the value and uses of dams and reservoirs.

"While (dams) have obvious negative impacts, maybe

we can't afford to be without them," he said.

Storing water off the main river stem would allow fish to move freely up and down river, and storing it at higher altitudes would keep the water cooler, which many fish prefer, the former fish farmer said.

Sen. Harriet Spanel, D-Bellingham, suggested that regular train service between her district and Olympia would help cut carbon dioxide emissions.

"That's more within our realm," she said.

Sen. Karen Fraser, D-Lacey, said she would support some form of landslide insurance as a short-term goal. In the longer term, she advocated "a new form of environmental mitigation," whereby companies that create a damage in one area -- carbon dioxide emissions, for example -- would have to create an offsetting benefit in another -- by not cutting trees, for example.

"Timber land owners could make money by leaving their trees standing," she said.

The climate model, created by the Pacific Northwest National Laboratory, is special because it can look at climate changes in small areas -- down to about a half-mile square -- compared with the more typical 16 to 48 miles square.

The information compiled from the model is being given to the U.S. Environmental Protection Agency to estimate how predicted changes in water resources would affect vegetation.

Fox News

Small Temperature Changes

Can Drastically Affect Ecosystems

1.24 p.m. ET (1824 GMT) March 26, 1999

By Paul Recer

Associated Press

WASHINGTON — A temperature change of only a few degrees can disrupt a community of animals, according to a researcher who studied how hot and cold affects the delicate balance of starfish and mussels in Oregon's tidal waters.

Eric Sanford of Oregon State University said his study, published today in the journal *Science*, suggests that if a key species in a community of animals is particularly sensitive to temperatures, a slight warming or cooling can start a whole cascade of rapid changes affecting every animal in an ecosystem.

Sanford said in an interview that he found a 5-degree change in temperature is enough to change dramatically the feeding habits of the starfish, a five-armed

creature that feeds mainly on mussels and is common along the Pacific coast of the United States.

The finding, said Sanford, has important implications for understanding the effects of global warming.

"Many people have assumed that the effects of climate change would be gradual," the researcher said in an interview. "But this shows that if an important species in a community is highly sensitive to temperature, then the effects of a small temperature change can happen rapidly."

In his study, Sanford tracked the feeding patterns of starfish kept in the laboratory at different temperatures. He checked his results by manipulating the population of starfish and mussels in two areas along the Oregon coast.

Sanford found that a temperature drop of 5 degrees caused the starfish to virtually stop feeding on the mussels. This allows the mussels to rapidly expand in population.

Conversely, when the water temperature was increased by 5 degrees, Sanford said starfish went on a feeding binge, quickly reducing the population of mussels.

Either way, he said, there are dramatic changes in the tidal community of animals.

When mussels are not controlled by starfish, said Sanford, their population explodes. The mussels attach themselves to every surface in the near-shore tidal zone, crowding out barnacles, algae and other organisms.

"If you take away the sea stars, then you go from an ecosystem with a diverse population of species to a system where there is essentially only one species," Sanford said.

When starfish eat too much, he said, the reef-like mussel communities quickly start falling apart. These reefs, Sanford said, are homes for crab, sea cucumbers and worms, all important parts of the ecosystem.

Temperatures along the Oregon coast are affected by upwelling, cold deep waters surging to the surface. The frequency of upwellings, said Sanford, is determined by winds that, in turn, are affected by global temperatures.

If cold upwellings become less frequent, starfish may eat more mussels, said Sanford; if the upwellings happen more often, thus cooling the tidal waters, starfish will eat less, allowing the mussel population to suddenly explode.

Pittsburgh Post-Gazette

Forum: Nuclear power - unsafe, dirty and expensive

It's time to disable an obsolete industry, says David Hughes, and support 21st-century methods of generating electricity

Sunday, March 28, 1999

Twenty years ago today, the worst nuclear plant accident in the nation occurred at the Three Mile Island plant. In connection with the anniversary, the nuclear industry has been waging a coordinated campaign to revive nuclear power in the United States. We are being told that nuclear energy is safe, clean (the answer to global warming) and an economical way to produce electricity.

None of these claims withstand scrutiny.

It is well known that nuclear power production creates the deadliest and longest living wastes known to man. The technology to safely dispose of this waste has yet to be developed and it is becoming increasingly clear that safe storage is simply impossible to achieve.

Nuclear plants only seem safe because government safety standards and Nuclear Regulatory Commission oversight have been too lax. There are problems at U.S. nuclear plants just about every day, ranging from incidental to serious.

Some of these problems are close to home. At a plant in Perry, Ohio (near Cleveland), partly owned by Duquesne Light, the zirconium tubes covering the uranium fuel pellets are perforating, causing potentially dangerous radiation leaks within the reactor. The leaks are exposing plant workers to extra radiation and increasing the likelihood that more radiation would be released into the atmosphere in case of a serious accident.

Nine such leaks have been detected at Perry since it began operation in 1987. The latest ones were discovered last September, but apparently Duquesne Light and FirstEnergy (the plant manager) decided to wait until their regularly scheduled maintenance, beginning yesterday before doing anything about them. (Duquesne Light, by the way, intends to sell its share in the plant this year to FirstEnergy.) Last month the Union of Concerned Scientists succeeded in getting the NRC to hold hearings on the leaks. So far, the NRC has taken no action.

There is a new concern about nuclear power. In states (including Pennsylvania) where electric deregulation has occurred, nuclear plants will have to run practically all the time to be competitive. Unlike other generators, nuclear plants are not designed to operate continuously. Safety is likely to be a casualty of the bottom line.

Nuclear power is not the clean energy its apologists claim. The smelting process used to make commercial grade fuel for nuclear plants contributes to greenhouse gases. Secondly, in addition to the waste problem, nuclear plants pollute our air, only you cannot see, smell or taste what they emit. Some of the most toxic gases known to man are by-products of the fission process and are routinely vented from the "off gas" building at nuclear plants.

You may remember when we were told that nuclear power would be "too cheap to meter." Well, it is not. In fact, nuclear is one of the most expensive ways to produce electricity.

When nuclear proponents provide their figure of what nuclear cost to produce electricity they often leave out the cost of building the plant. Indeed, it was the high cost (\$10 billion) to build the Perry 1 and Beaver Valley 2 nuclear plants that now cause Duquesne Light customers to have to pay some of the highest rates in the country. And, it is the high cost of nuclear plants that accounts for most of the "transition" charge on your new electric bill, no matter who supplies your generation.

A gas-fired plant can be built for \$350 per kilowatt (kW); wind turbines are being installed at less than \$1,000/kw. A nuclear plant costs \$3,000 to \$4,000 per kw to build. Nuclear fuel is relatively cheap compared to other fuels, but only if you ignore spent fuel permanent storage costs. When these and plant decommissioning costs are included, nuclear power is prohibitively more expensive, on a total cost basis, than other energy sources. Even nuclear power advocates are frightened by the prospect that these costs will be astronomical.

The fact is that nuclear power is obsolete.

There are cutting-edge energy technologies available now that are competitive and more environmentally healthy. Despite being on the short end of government research and development funding, renewable energy technologies' share of U.S. generating capacity (11 percent compared with 14 percent for nuclear) is growing at double-digit rates.

According to a recent study by the Worldwatch Institute, nuclear power "has reached its peak and will begin a sustained decline in the year 2002 to its eventual demise." Even France, the world leader in nuclear power usage with 70 percent of its electricity nuclear-generated, has established a moratorium on nuclear plant construction.

In the United States, no new power plants have been ordered since the mid-1970s. Many utility companies, including Duquesne Light, are planning to unload their nuclear plants. Existing nuclear plants are being purchased for next to nothing, demonstrating their low market value. Only its position near the top of the corporate welfare rolls enables the nuclear industry to hang on.

Nuclear power proponents argue that the United States cannot afford to phase out nuclear power. Studies by the Rocky Mountain Institute show that we could significantly reduce our electricity demand by using energy more efficiently. A concerted national effort, a "war against wasting energy," combined with increased use of new, safe and clean energy technologies would enable the phase out of nuclear power.

It is time for our political leaders to recognize that nuclear power is not worth further investment. As we head into the 21st century, Americans should demand increased utilization of 21st-century energy technologies.

Message Sent To: _____

Martha L. Wofford

03/31/99 04:06:02 PM

Record Type: Record

To: See the distribution list at the bottom of this message

cc:

Subject: Climate Clips

**Washington Post
DIGEST**

Compiled from reports by the Associated Press, Bloomberg News, Dow Jones News Service, Reuters and Washington Post staff writers
Wednesday, March 31, 1999; Page E01

Lower economic growth in Eastern Europe, the former Soviet Union and parts of Asia has led the federal Energy Information Administration to reduce its forecasts for carbon emissions in 2010. The EIA said it expects the emissions, which have been blamed for global warming, to be 4 percent lower than originally predicted but still 39 percent above 1990 levels. Reduced carbon emission should make it easier for nations that signed the Kyoto Protocol on global warming to meet emissions targets.

**Los Angeles Times
Wednesday, March 31, 1999**

Electric-Hybrid System to Be Tested in Pickups

Autos: General Motors will be the first auto maker to demonstrate the technology in light trucks.

By DONALD W. NAUSS, Times Staff Writer

NEW YORK--General Motors Corp. said Tuesday that it will begin testing a small fleet of electric-hybrid full-size pickup trucks in California and New York next year.

GM, which pioneered the introduction of electric vehicles in California, will become the first auto maker to demonstrate hybrid technology in light trucks.

The hybrid project underlines that the industry recognizes the limitations of battery-powered electric vehicles and is pushing into more advanced technologies in the race to replace the internal-combustion engine.

"Hybrid-electric vehicles represent a potential near-term solution for improving fuel economy and, in most cases, improving emissions," GM President G. Richard Wagoner said at the New York International Auto Show.

GM, the world's largest auto maker, plans to test

10 Chevrolet Silverado and GMC Sierra pickups that feature both a conventional gasoline internal-combustion engine and an electric motor powered by an advanced lead-acid battery.

All of the world's major auto makers are working on advanced vehicle technologies, including battery-powered electrics, hybrids and fuel-cell vehicles. As gas-gulping light trucks--minivans, sport-utility vehicles and pickups--gain in popularity, the companies are facing greater regulatory pressure to reduce tailpipe emissions and improve fuel economy.

Ten percent of vehicles sold in California beginning in 2003 must be zero-emission. Although hybrids do produce some emissions, they qualify for some zero-emission credits. In addition, California will begin phasing in rules in 2004 that require light trucks to meet the same emissions standards as cars.

Just a few years ago, battery-powered electrics were seen as a potential alternative to gas-powered cars and trucks. But the cost and range limitations of electric vehicles have dimmed their prospects for widespread use. GM has leased only about 600 of its two-seat EV1 electric cars in a little more than two years.

Now the industry is turning attention and resources to hybrids, which are regarded as the best near-term alternative to traditional engines. Hybrids are costlier and more complex than today's vehicles but offer similar range, better fuel economy and lower emissions.

Fuel cells, which use hydrogen and oxygen to create electricity to power a vehicle, are considered a longer-term bet if cost and other hurdles can be overcome.

Toyota Motor Corp. already sells a small hybrid sedan, the Prius, in Japan; it plans to introduce the car in the U.S. next year. Honda Motor Co. will beat Toyota to the U.S. market later this year with its VV hybrid, which gets 70 miles per gallon.

GM's test vehicles will use a "power-assist" technology similar to that used by the Toyota and Honda hybrids. The VV, for example, relies on the combustion engine for normal driving and taps the electric motor only when extra power is needed, as at start-up or for passing.

GM will not sell the hybrid pickups but will put them in its own fleets to gather data about the vehicles' performance. It compares the approach to the extensive preview drive program it conducted before bringing the EV1 to market.

Although GM is the first auto maker to commit to a hybrid demonstration program with a light truck, Ford Motor Co. and DaimlerChrysler have shown concept trucks with either hybrid powertrains or fuel-cell systems.

"We want to understand the suitability of hybrids for larger vehicles," said Robert Purcell, GM's chief of advanced vehicle technologies. "We believe there may be a fundamental advantage to hybrids in larger classes of vehicles."

In a speech to several hundred journalists Tuesday, Wagoner said the recent consolidation of the industry has in part been prompted by the need to share technology costs as the demand for clean engine systems increases. For instance, GM increased its stake in Isuzu Motors largely to obtain the Japanese company's truck and diesel engine technology.

GM announced in January 1998 that it would put an electric-hybrid vehicle in production by 2001. That is three years behind Toyota, but GM

officials scoffed at suggestions that they are falling behind in the race to bring advanced-technology vehicles to market. They note that the company was the first to market an electric vehicle, has helped develop advanced batteries and is working on various hybrid vehicles as well as fuel cells.

"We want to make a business out of this," said Dennis Minano, GM's chief environmental officer.

In other auto show news, GM unveiled its remodeled full-size sport-utility vehicles: the 2000 Chevy Suburban and 2000 GMC Yukon. The vehicles are evolutions of the current models, offering more interior space and enhanced handling, power, fuel economy and safety features.

Ford, meanwhile, unveiled its 2000 Taurus, the flagship mid-size sedan that has been a disappointment since it was given a radical ovoid design in 1995. The 2000 model has been given a more understated, conservative look likely to be more appealing to family-oriented buyers.

While downplaying design, Ford is emphasizing the Taurus' safety features. It is the first Ford vehicle to feature a new "smart" air bag system that engages in a variety of ways depending on crash circumstances. The vehicle also features head and chest side air bags and a trunk-release latch to prevent accidental entrapment.

Birds May Sing a Song of Climate Change

CNN.com

March 30, 1999

Winter songbird populations may serve as a short-term ecological indicator of climate change, according to a University of Michigan study showing a link between temperatures in the Great Plains over the last 30 years and the abundance of several common species of winter songbirds.

Chad Laurent, a sophomore at the U-M School of Natural Resources and Environment, has studied the relationship between winter temperatures from 1960 to 1990 and the populations of 14 species of winter songbirds using statistics from the National Audubon Society's annual Christmas Bird Count. His research shows that particular bird populations are directly affected by winter temperatures.

"One year's winter temperatures alone don't seem to affect the abundance of certain species," said Laurent. "But when you look at average temperatures for three years, you can begin to see the correlation. Birds who track temperature move very quickly in response to temperature variations."

Laurent examined the abundance patterns of 14 songbird species, including the black-capped chickadee, the horned lark, the white-breasted nuthatch, the American goldfinch, the American tree sparrow, and the dark-eyed junco, in four Great Plains states: North Dakota, South Dakota, Nebraska and Kansas.

His research correlated low, medium and high abundance of temperature-linked species with average winter temperatures over several different periods of time, from one to five, 10, and 30 years. The study refines previous research by Prof. Terry J. Root, of the School of Natural

Resource and Environment, which has shown that some species of wintering birds are associated primarily with vegetation while others are associated mainly with temperatures.

"Since watching and feeding winter songbirds is such a popular pastime in this country," says Laurent, "elucidating the effects that global warming has on bird abundance has tremendous potential to increase public awareness of the problem."

Laurent will present his research, part of the university's Undergraduate Research Opportunity Program, April 14 on Capitol Hill in Washington, D.C. For more information, contact Diane Swanbrow, University of Michigan, (734)647-4416, email: swanbrow@umich.edu.

Global Warming May Increase Ozone Hole

CNN.com

29 March

Despite international measures to reduce atmospheric concentrations of ozone destroying halogens to protect the ozone layer, global warming may lead to a weakening of the ozone layer, according to international scientists.

A team of German, Swiss and British scientists reported in the March 26 issue of the journal Science that while future climate change is expected to heat up the lower atmosphere it is likely to cool the air at the altitude of the ozone layer in the stratosphere.

Cooler air in the stratosphere may lead to increased polar stratospheric clouds, which are believed to play an essential role in ozone hole chemistry. In particular, the cloud particles may settle lower atmospheric layers, thereby removing trace gases which under normal circumstances lead to a deactivation of ozone-destroying chlorine. In other words, in a colder stratosphere the sediment particles may inhibit an important mechanism protecting ozone.

The scientists say this sedimentation process is sensitive to temperature changes. This process has been known for years to lead to massive chemical changes in the trace gas distribution of the Antarctic stratosphere, which is about 10 degrees colder than the Arctic. They conclude that conditions in the Arctic are presently at a threshold for vertical redistribution of ozone-protecting trace gases due to the precipitation of the cloud particles.

In the future, due to greenhouse gas emissions, these processes might become strongly enhanced and postpone the anticipated healing of the ozone layer over the northern polar region to late in the next century, they said.

Wall Street Journal

BP Amoco in Talks to Buy Arco

March 29, 1999

BP Amoco PLC, continuing its quest to build a global oil juggernaut,

confirmed that it is in serious talks with Atlantic Richfield Co. "concerning a possible combination transaction." People familiar with the situation say BP Amoco is looking to acquire Atlantic Richfield in a stock deal valued at about \$25 billion. The talks, which still could fall through, come on the heels of BP's \$48.2 billion purchase of Amoco Corp. at year end and would make BP Amoco about equal in oil production to a merged Exxon Corp. and Mobil Corp.

Currently, BP Amoco is in the top three, along with Royal Dutch/Shell Group and Exxon. With Atlantic Richfield-known as Arco-BP Amoco would fill a gap in its arsenal on the West Coast, where Arco is one of the largest gasoline refiners, and consolidate its position in Alaska, where both companies are big players. Combined, the company would have reserves of nearly 11.8 billion barrels of oil and 45 trillion cubic feet of natural gas. The company also would produce slightly more crude oil a day than a combined Exxon-Mobil. While the company would have the world's third-largest natural-gas holdings, the acquisition could pave the way for the development of Alaska's vast natural-gas reserves.

Global Ambitions

The talks, coming so soon after the Amoco acquisition, reflect the outsize global ambitions of BP Chief Executive John Browne. Since taking the helm of then British Petroleum in 1995, Mr. Browne has transformed the oil company into a global giant that is now referred to as a "serial consolidator" in banking circles.

The talks also continue the merger mania that has intensified since oil prices slid to their lowest levels in a more than a decade, putting further pressure on companies to trim costs. Since BP agreed to buy Amoco last summer, the biggest industrial combination completed to date, Exxon has agreed to merge with Mobil, and France's Total SA has hitched up with Belgian oil concern Petrofina SA.

By merging, BP and Arco would control the majority of the Alaskan oil production, potentially raising antitrust issues. But as oil companies have combined, the U.S. Federal Trade Commission has shown little concern with oil exploration and production because prices tend to be set in world markets. Instead, the FTC's primary concerns have been with refining and marketing, where companies can control pricing on a regional and local basis.

A marriage of BP and Arco would cap an acquisitive year for the once state-owned British oil giant. Arco executives approached BP shortly after it announced its merger with Amoco in August, said a person familiar with the situation. What attracted BP was Arco's assets in Alaska, the Gulf of Mexico and five West Coast states in the U.S., where Arco has a leading position in gasoline refining and marketing.

By merging with Arco, BP hopes to generate economies of scale in Alaska, reducing production costs, making Alaskan oil more competitive, and potentially spurring new investment. Together, the two companies control about three-quarters of Alaskan oil production, which stands at about 1.1 million barrels a day.

Alaska Reserves

But the real prize for BP could be in producing the vast untapped Alaskan natural-gas reserves. BP is known to be considering a pilot project to use proprietary technology to convert the natural gas into a liquid that could flow through the Alaskan pipeline. BP, Arco and Exxon have the largest stakes in the 25 trillion cubic feet of natural gas in Alaska. In its current form, the Alaskan natural gas is too expensive and too far from markets to be commercially viable, and no company counts it as an asset on its books. BP hopes its new conversion technology would allow it to profit from bringing liquefied Alaskan gas to market via tanker.

BP also was attracted by Arco's assets in the Gulf of Mexico, where it is among the most profitable producers, and by its extensive Indonesian natural-gas reserves. A deal could raise fears that BP leadership is taking on too much while it is still integrating Amoco. But a person familiar with the deal said the absorption of Amoco is three-quarters complete, giving BP's top executives time to negotiate with Arco.

For Arco, the seventh-largest oil company in the U.S. in terms of revenue, a marriage with BP would be good news. Arco's fortunes were built in the late 1960s with the discovery of the massive Prudhoe Bay field in Alaska. But, in recent years, the company's fortunes have been falling as production in Alaska has slowed.

To make matters worse, Arco, which is one of the few major oil companies without a chemicals business, has suffered from the steep slide in oil prices. And Arco has hit a lot of dry holes, with abandoned well costs accounting for roughly half of its total exploration expenses in the past five years.

What Arco does have, however, is a firm toehold in the West Coast refining and retail market, the most lucrative market in the U.S. Arco's share of this so-called downstream market on the West Coast stands at about 22%. BP, by contrast, isn't a player in the market, having sold most of its assets to Tosco Corp. Founded in 1866 as the Atlantic Petroleum Storage Co., Arco's current name was adopted in 1966 after Richfield Oil Corp. was merged into the company. Since then, a number of other oil companies have been acquired, including Sinclair Oil Corp. in 1969 and Anaconda Co. in 1977. Arco's stock rose \$1.3125 to \$66.375 in New York Stock Exchange composite trading Friday. Meanwhile, BP Amoco stock closed up \$1.125 to \$100.4375 on the Big Board.

Daimler's Tiny Smart Car Falter After a Fast Start

New York Times

March 28, 1999

PARIS -- Smart cars are struggling to live up to their name. DaimlerChrysler's Micro Compact Car Smart subsidiary has reduced 1999 sales goals to 100,000, from 130,000, and plans to close its factory in Strasbourg, France, for two weeks next month. And in an effort to reach its new goal, Smart has cut prices, added equipment and planned a three-month ad campaign.

"Switzerland is doing better than expected, and Germany is doing well," said Hans-Jurg Schar, executive vice president for marketing and sales at Micro Compact Car Smart, "but we have to really improve in Italy and France."

This month, Smart added \$275 of equipment to the basic car, including seat cushions, a 12-volt plug for accessories, better glass and a hand grip for the passenger. Prices were cut by \$900, to a base price in Italy and France of about \$9,300.

The microcar -- it is half as long as a Cadillac Seville -- was the dream of Nicholas Hayek, originator of the Swatch watch. He formed the Micro Compact joint venture with Daimler-Benz in 1997, but was forced out last October amid rising development costs and management disagreements.

In terms of marketing, Smart has had two basic problems: a stiff ride and a high price. "The colors are fresh, and everybody stops to look," said Corinne Fleuet, manager of an Avis car rental agency in Paris. Her five-car fleet is rented every weekend -- for about \$75 a day -- by curious Parisiens. "Many of them say they want to buy one," she said, "until they learn the price."

Mr. Schar concedes that Smart buyers complain about the "price-value" relationship, even though many have high incomes and already own one or two cars. "And in Germany and France the suspension is an issue," he said.

The hard ride is a result of changes made to keep the car stable during high-speed lane changes. Sales began in October, and despite criticism of the suspension in the automotive press, Smart reached its 1998 sales goal of 20,000 cars. But sales slowed in January; in February Smarts were involved in minor but widely publicized accidents on snowy German roads. Avis halted rentals in Germany until the cars were fitted with snow tires.

The news had no effect on sales, Mr. Schar said, but it was another hitch. "We presumed that drivers would stay away from the accelerator in unstable driving situations," said Helmut Wawra, development director for the Smart. But they didn't, so engineers will add a software package, "Trust Plus," that will cut power if the wheels start to slip. Smart already had a stability control that selectively applied the anti-lock brakes to prevent spinouts.

A competitor, Patrick Le Quement, vice president for design at Renault, says the whole idea of a two-seater more expensive than Renault's four-seat Twingo is off base. The Smart, he said in an interview in Renault's in-house magazine, "Avec," this month, is a phenomenon of fashion aimed at those who only want to drive something different. And he quoted the writer Jean Cocteau: "Nothing goes out of fashion as quickly as fashion."

States News Service

March 29

UMWA Chief Blasts Environmentalists - (WASHINGTON, D.C.) - United Mine Workers President Cecil Roberts is blasting environmentalists who are pushing the global warming treaty signed in Kyoto, Japan. Roberts says environmentalists are being closed-minded. He says the treaty will do nothing to remedy greenhouse gas emissions because third-world countries will be exempt. He says the coal industry is trying to reach a compromise on the treaty but isn't finding much interest.

Some slightly older international clips that I missed:

GERMANY TURNS UP THE HEAT ON GREENHOUSE GASES

Reuters

Mar 25, 1999

BRUSSELS, March 25 (Reuters) - The European Union's German presidency will call an emergency meeting of environment ministers unless diplomats agree quickly on a common strategy to limit greenhouse gases, EU sources said on Thursday.

"They (Germany) said they'd leave their existing proposals on the table, and if there's no agreement on that basis, they'll call a special meeting on May 18," an EU source said. The 1997 Kyoto protocol on climate change allows countries to trade obligations to reduce emissions of gases that cause global warming by, for example, shifting cuts from one country to another.

It also allows industrialised countries to get credit for cuts if they finance emission-reducing projects elsewhere. The EU wants a ceiling on such trading to ensure that countries fulfil the bulk of their commitments by cutting their own domestic emissions. So far, it has failed to agree a common approach to these so-called "flexible mechanisms."

Meeting in Brussels on Wednesday, all 15 EU states agreed that there should be a limit on emissions trading, but they failed to approve a complicated blueprint drawn up by Germany, which would calculate a specific tradable amount of carbon dioxide for each country.

A number of countries felt the German plan was too rigid. The Netherlands wants to achieve 50 percent of its own cuts through flexible mechanisms, the official said. Sweden, Finland and Ireland also favour more flexibility. Negotiators will have one more attempt at agreeing a formula at a meeting shortly after Easter. If that fails, ministers will be summoned to Brussels on May 18, the EU source said.

Under the December 1997 Kyoto accord, the EU has to cut its emissions of six greenhouse gases by eight percent between 2008 and 2012, with different percentages applying to each of the 15 countries.

NORWAY WANTS NOK 5.0 BILLION IN "GREEN" ENERGY

Reuters

22 March

OSLO - Norway's government proposed late last week to invest 5.0

billion crowns (\$640 million) over the next 10 years in renewable energy sources such as wind, bio-fuel and heat pumps. Oil and Energy Minister Marit Arnstad presented an energy white paper on Friday laying out a framework for Norway's energy sector, the first in more than a decade.

The centrist coalition also said in its white paper it was opposed to gas-power plans and that it would extend metals maker Elkem's right to produce around one terawatt hour per year in the controversial Sauda hydro-electric system in southwest Norway, until 2030. A Norwegian consortium made up of state oil company Statoil, forestry group Norske Skog and Elkem, is planning a 800 megawatts gas-fired power station in Skogn, central Norway.

Norway relies almost solely on hydro-electric power, but imports from neighbouring countries in dry periods. The centrist coalition holds only 42 of 165 seats in parliament. The opposition Labour Party, which holds 65 of 165 seats in the centrist coalition government, is pro gas power provided certain environmental standards are maintained. The last time the government presented a white paper on energy was in 1986-87.

GREEN ENERGY BOOST

BBC News

Tuesday, March 30, 1999

The UK Government is to increase its spending on research into renewable forms of energy as part of its plans to tackle global warming. Research and development spending is to rise to ?43 million over the next three years, to investigate the potential of wind and solar energy and other non-polluting forms. The government has pledged to generate 10% of UK electricity renewably within a decade, because of fears that fossil fuels like oil are heating the atmosphere.

A step along the road

The Energy Minister, John Battle, announcing the publication of a consultation paper on the prospects for renewable energy, said the 10% target "should not be seen as an end in itself". Mr Battle said the target should be simply "a step forward on the road to making renewables a strong, world-beating industry". "The UK industry employs 3,500 people. Through creating an export drive, and by further developing the industry and the UK market, up to 45,000 jobs could be created." He said the paper showed there was tremendous potential for renewables to become a fully competitive part of the UK's energy supply.

And they would be vital in helping the government to reach its target of reducing greenhouse gases by 12.5% by 2012, and carbon dioxide emissions, in particular, by 20% by 2010. The consultation paper offers options for possible ways to support renewables while they are reaching market prices. Mr Battle also announced the launch of a new wave power programme, which will assess whether wave energy technology can be successfully developed. Three pilot wave energy projects in Scotland have attracted funding to allow the technology to be evaluated.

Demands for more

Crop energy and even the recycling of waste could join wind, wave and solar power as viable sources of energy. But green pressure groups have said that the government's plans are "too little, too late". Greenpeace has said that much more than 10% of the UK's energy must come from greener methods if it is to make any real difference to the problem of climate change. It said recently that offshore wind farms alone could supply 300% of the UK's electricity needs.

Message Sent To:

Todd Stern/WHO/EOP
Dirk Forrister/WHCCTF/EOP
David B Sandalow/CEQ/EOP
Shelley N. Fidler/WHCCTF/EOP
Elliot J. Diringer/CEQ/EOP
Beth A. Viola/CEQ/EOP
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John D. Gibson/WHCCTF/EOP
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April 1999

Divider Title: _____

Nuclear Industry Keeping Close Eye on Calvert Cliffs

By LINDSEY LATTON
Washington Post Staff Writer

A1

The Calvert Cliffs Nuclear Plant hisses on the shore of Chesapeake Bay, its two reactors splitting apart uranium atoms to drive steam turbines that deliver more than 13 million megawatts of electricity each year to customers in Baltimore and across central Maryland.

It has been this way for a generation, and the federal government has deemed it safe. Now Calvert Cliffs, owned by Baltimore Gas and Electric, has become the first nuclear power plant in the nation to seek renewal of its operating license.

And the nuclear power industry—which operates 102 other plants nationwide—awaits the ver-

dict as a signal of its future. No new nuclear plant has been built since the 1979 Three Mile Island disaster, and if the Nuclear Regulatory Commission rules Calvert Cliffs unfit to continue operation, that could foreshadow the end of the era of nuclear power generation.

It has been a controversial era almost from the start, and the controversy continues as Calvert Cliffs seeks its license renewal.

Under political pressure to cut red tape, the NRC says it will not hold formal public hearings on the application. The NRC says its decision will speed the process—and clear the way for other plants to seek license renewal. Without

PLANT, From A1

hearings, the NRC says, it can shave one to three years off the renewal process and make a decision within 29 months.

Critics say the agency is ignoring the public in a decision that could affect public health and safety.

"The public hearing process is unquestionably at the heart of nuclear safety," said Stephen Kohn, of the National Whistleblowers Center, which has filed a complaint in the U.S. Court of Appeals to force a public hearing. "For the NRC to bypass that, is just outrageous."

The NRC shifted to a fast track after threats from Congress and persuasion from utilities, which are facing competition in deregulated markets and need to know as they craft business strategy whether their nuclear plants will be running years from now.

"We're cognizant of the concerns expressed by Congress and the nuclear industry that a drawn-out hearing process could delay business decisions that they need to make to try to position themselves in a competitive marketplace," said Neil A. Sheehan, an NRC spokesman. "We're not the only agency that's been told to streamline.... We are not going to apologize for that."

The decision to apply for renewal of Calvert Cliffs' license was driven by business considerations. The plant now operates under two 40-year operating licenses—one for each reactor—that expire in 2014 and 2016. But when BGE executives decided last year to replace four aging steam generators at a cost of \$300 million, they opted to apply for renewal to protect their investment. The company also is trying to craft a long-term market strategy as Maryland begins to deregulate the electric industry starting in July 2000.

If the NRC grants Calvert Cliffs a new license, other utilities with nuclear plants and similar concerns about market strategy also may file for early license renewal.

In the 20 years since the Three Mile Island plant suffered a partial meltdown that sent radioactive gases spewing into the air in central Pennsylvania, the NRC has been accused of regulating too little and too much. Last spring, at a hearing before a Senate subcommittee, Republican lawmakers called the NRC "top heavy" and sluggish in handling license renewals. The Republicans threatened to slash 700 positions from the NRC's 2,934-person staff. The agency dodged that bullet, but NRC Chairman Shirley Ann Jackson began making changes.

The NRC stopped its regular ratings of the safety performance of nuclear plants, a kind of report card issued every 18 months for each plant. Instead, it will give quarterly reviews of greater breadth but less depth, Sheehan said. And it may drop its "Watch List," in which the most troubled plants in the country are listed and then receive additional regulation until they improve. Critics complained it was too subjective. Last year, the NRC ended formal hearings for license transfers even though some NRC staff members believed the hearings were required by Congress.

The NRC's shift away from formal public hearings is the latest step in its drive to become more expedient. "The whole agency is in the midst of changing the way it does business," Sheehan said.

The Nuclear Energy Institute, which represents the country's 103 nuclear plants, says it makes sense to jettison cumbersome regulation, give plants greater responsibility in assessing safety and speed up decisions.

"The industry has steadily improved its safety and performance and we don't need more prescriptive regulation, just more efficient and effective regulation," said Steven C. Kerekes, spokesman for the institute. "Safety is still the paramount goal, as it should be."

He called complaints that the public is being shut out of license renewal "bogus."

Operators of plants across the country are watching the Calvert Cliffs case, ready to follow its lead, Kerekes said. A second nuclear plant, the Oconee plant in South Carolina owned by Duke Energy Corp., applied for license renewal four months after Calvert Cliffs filed last year. As in the Calvert Cliffs case, a public interest group, the Chattooga River Watershed Coalition, petitioned the NRC for a formal hearing and was denied. It is appealing that decision to the NRC.

"The idea that they can throw out these intervenors with hardly a whisper is just astonishing," said Peter Bradford, who served as an NRC commissioner from 1977 to 1982, a term defined by the Three Mile Island accident.

Federal laws allow the NRC to renew operating licenses but do not spell out the process for renewal. So the agency has been figuring it out as it goes along, deciding which issues it will judge, which it will ignore and who has a right to be involved.

"You've got an agency making the rules and running oversight on themselves," said Nicole Hayler, of the Chattooga River Watershed Coalition in South Carolina.

The Washington Post

THURSDAY, APRIL 1, 1999

 Martha L. Wofford

04/02/99 10:22:20 AM

Record Type: Record

To: See the distribution list at the bottom of this message

cc: Meagan M. Earley/WHO/EOP

Subject: Climate Clips

There's also a NYT clip from yesterday that I have a hard copy of, but am having trouble getting electronically. Will bring to staff.

**Ennvironmental groups mixed on
BP Amoco/ARCO deal**

NEW YORK, April 1 (Reuters) - BP Amoco's announced takeover of Atlantic Richfield Co. Thursday drew mixed reviews from environmental watchdog groups, who said BP Amoco is expected to expand oil exploration in Alaska and may be backing away from promises to stem global warming.

Carwil James of the Greenpeace USA Climate Campaign said BP Amoco's chief executive John Browne is turning an about-face from comments he made less than two years ago, when he said his company was willing to take precautionary measures to stave off global warming.

Browne on Thursday said the BP Amoco alliance with ARCO will "provide a strong incentive for significant investment in existing and future fields."

James said this flies in the face of any previous statements about combating climate change.

"The Alaskan Arctic which BP Amoco has targeted for new oil exploration is warming at a rate three to five times faster than the rest of the globe," James said.

Innovest, a company that advises that it's profitable to invest in companies with good environmental records, says that BP Amoco's relatively good record may be threatened by ARCO's past record and a poor system for managing environmental risk.

Innovest, said BP's environmental record fell a bit when it took over Amoco last year, but that ARCO presents even more danger to its relatively good record when it comes to protecting the environment.

"Bringing ARCO up to BP environmental standards will likely be more difficult than it was with Amoco since Amoco had relatively good eco-efficiency and performance," Innovest said in a press release.

**San Jose Mercury News
Metro**

**Students and faculty want Stanford
University to use its \$4.7 billion
endowment to make a statement
on global warming**

By Michael Learmonth

IN 1987, STANFORD UNIVERSITY galvanized the anti-apartheid movement on college campuses across the nation. In a stunning display of solidarity, it became the first university to use the financial clout of its endowment to discourage corporate America from supporting South Africa's racist regime. A decade later, Stanford made another statement by pulling its endowment out of the tobacco industry.

Today, a group of graduate students and faculty is asking Stanford to take another unprecedented step. The issue this time is global warming and a Washington, D.C.-based nonprofit organization called the Global Climate Coalition.

In 1997, a 100-nation global conference on climate change in Japan produced a document known as the Kyoto Protocol. If ratified by the Senate, the protocol would commit the United States to reducing worldwide greenhouse gas emissions. Corporations such as Exxon, Mobil, Chevron, Ford and General Motors have vigorously opposed any international treaty addressing climate change. Instead, they have poured money into the Global Climate Coalition, which calls itself "a voice for business in the global warming debate." The GCC has been extremely successful, spending millions promoting the notion that global warming isn't a problem, and if it were, solutions should not involve international treaties or any regulations on industry that could cost American jobs.

Due in part to the lobbying efforts of the GCC, it's unlikely that President Clinton will submit a bill in support of Kyoto to the Congress before he leaves office.

But some Stanford faculty members and students want the Stanford board of trustees to use the clout of the university's \$4.7 billion endowment to get the corporations to stop funding the GCC.

Among the big names on a petition making the rounds is Don Kennedy, a former Stanford University president and now a Bing Professor

of Environmental Science.

It was on Kennedy's watch as president that Stanford made its statement on South Africa. He would now like to see Stanford use its influence and voting powers as a large shareholder to convince corporations to withdraw support of the GCC.

"They are opposed to any efforts at all to mitigate the addition of gases that contribute to global warming," Kennedy says. "And they are spending lots of money to do it. It seems to me shareholders ought to question them on how they're spending our money."

As a private institution, Stanford keeps its portfolio under tight wraps, but it is known to include large investments in Texaco, Chevron and other GCC members. Corporate support allowed the GCC to spend \$13 million in one month last year "debunking" the existence of global warming phenomena.

Circulating the petition on campus is Ozone Action, a little nonprofit group dedicated to taking on the GCC.

The GCC is "a front group that's funding a misinformation campaign to deny the legitimate threat of global warming," says Jen Block, an Ozone Action organizer with a sticker on her laptop that says "Mean Corporations Suck."

Ozone Action volunteers are also rallying students at the University of Washington and Harvard University. Its first victory came last month when students and faculty at the University of Washington passed a resolution calling on the trustees to divest from GCC members.

Frank Maisano, a Washington, D.C.-based spokesman for the GCC, seems amused that his organization has become the target of campus unrest.

"If anybody is talking about misleading information, it's them," he says. An international treaty such as Kyoto, he says, would unfairly burden U.S. companies and reduce profits for shareholders of GCC member companies. The irony of it all, he says, is that even the foundations funding the



work of nonprofits like Ozone Action, like the MacArthur, Rockefeller and W. Alton Jones foundations, also have investments in GCC member companies.

"Our members are some of the strongest companies on Wall Street for the average investor," Maisano says. "At the same time they're helping fund these foundations."

Yet the letter, signed by students and faculty including Kennedy and the renowned Stanford biologist Paul Ehrlich, isn't asking that Stanford divest from these companies, just that it use its powers as a major shareholder to get them to rescind their membership in the GCC.

"That's exactly what we did with South Africa," Kennedy says. "We chose to start a dialogue with companies that were doing business there in hopes of getting them to change their practices."



Kennedy predicts that if Stanford and other nonprofit investors open discussions with GCC members, some of them may decide to follow former GCC members British Petroleum and Shell out of the coalition.

That would be fine with John-O Niles, a cheery blond graduate student from Vermont. Niles, 29, came to Stanford after spending several years in Africa helping care for sick and wounded gorillas. As a graduate student and policy analyst, he's studied the Kyoto Protocol and considers it the best chance for addressing the globe's two most pressing environmental problems: climate change and deforestation.

Niles says 75 percent of greenhouse gases are produced by burning fossil fuels and 25 percent are caused indirectly by rain-forest destruction. Under Kyoto, the U.S. would be able to mitigate its own carbon production by helping other nations preserve their rain forests. That way, Niles says, the U.S. could take care of its obligation to the planet for the next 50 years and preserve the "green swath of forest around the equator" that cools the earth and harbors 50 percent of the world's species.



Niles says Kyoto would benefit Silicon Valley's biotech and electronics industries. Biotech

firms would benefit from the biological diversity such a treaty would preserve, and the computer industry would be put in a more competitive position for consumer dollars as the price of more polluting durable goods, such as automobiles, goes up.

By making a statement, Niles believes Stanford is in a position to galvanize support for Kyoto.

"If the U.S. doesn't ratify it, the whole thing dies," Niles says. "If Stanford looks at this thing and approves it, that will create a national debate."

Global energy demand to grow 2.1%

Slower growth means emissions targets easier to reach

By Rex Nutting, CBS MarketWatch
Last Update: 1:16 PM ET Mar 31, 1999

WASHINGTON (CBS.MW) -- The economic collapse in Asia and Russia has forced the Energy Department to lower its estimates of long-range global energy demand by 4 percent over the next 20 years.

Worldwide energy demand is expected to grow at a 2.1 percent annual rate through 2020 to 611.8 quadrillion BTUs, with the fastest growth in Central and South America and developing Asia, the government said. Energy consumption in the developing world will grow at a 3.6 percent pace and should surpass that of the industrialized world by 2020, the government said.

Oil (CL=K9) is expected to remain the biggest source of energy, growing 1.8 percent annually to 110 million barrels a day by 2020. Production is expected to keep up with demand, with capacity growing to 112.2 million barrels. Two-thirds of the growth in capacity will be within the Organization of Petroleum Exporting Countries, particularly in the Persian Gulf. Production in the United States and the North Sea will fall.

Consumption of natural gas will more than double over the period to 173.8 trillion cubic feet while nuclear energy declines. Coal consumption is expected to grow 1.7 percent annually to 138.3 quadrillion BTUs.

The new long-range forecasts will have little impact on energy markets in the short-term. Traders pay more attention to short-term factors like inventories, supply shocks and weather. See Futures Movers.

The biggest impact from the forecast may be on the contemplated reduction in global carbon emissions to reduce global warming. Lower energy use in the former Soviet Union, in particular, will make it easier to meet the goals of the climate change treaty negotiated in Kyoto, Japan.

Under the Kyoto protocol (which has yet to be ratified by any major industrialized nation), the industrialized nations must reduce their carbon

emissions to 4 percent below 1990 levels, either by reducing their own emissions or by "buying" emissions credits from other nations.

Following Russia's collapse last summer, the department now predicts that energy use in the former Soviet Union will remain below 1990 levels at least until 2020, giving Russia and the other former republics the opportunity to sell emissions credits to the West, if trading procedures can be implemented.

American Demographics Magazine, April 1999 **Green Attitude**

By Lisa E. Phillips

A new generation of consumers is emerging, one that expects earth-friendly products and wallet-friendly prices.

As most 29th anniversaries go, Earth Day 1999 is slipping by relatively unnoticed. But don't think you'll be so lucky next year -Earth Day turns the big 3-0 in 2000, right in the thick of the presidential primary season. Al Gore may be keeping quiet about the Kyoto Protocol now as he hones another campaign message, but you can bet he'll be on the stump -figuratively, of course-about the health of the planet this time next year.

If the economy is still prospering, Americans will be listening. Close to nine out of ten (87 percent) of adults say they are "concerned" about the condition of the environment in the United States, and almost half (44 percent) say they are "very concerned," according to a twice-a-year tracking poll conducted by Environmental Research Associates (ERA), a division of Integrated Marketing Services in Princeton, New Jersey. In the same poll, air pollution was named by 34 percent of the respondents as the most serious environmental issue facing the U.S., compared to water pollution, a distant second, named by only 12 percent.

"People know a lot more about the environment today. They're much smarter about the issues," says Lois Kaufman, president of IMS and cofounder of ERA. "Air and water pollution are the top issues now. They know recycling and packaging are under control. Now they're concerned about food safety and other issues."

But we're a fickle lot, and we're just as concerned about another type of green-the kind that goes in a wallet. Americans' attitudes-mainly those of seniors, boomers, and Gen Xers-have swung back and forth on environmental topics since Roper Starch Worldwide began tracking such concerns in the 1970s, and ERA in the 1980s. The height of concern occurred, not coincidentally, during the last economic boom in the late 1980s. The recession of 1991-92 dampened our earth-first zeal, and only in the last two years have Roper and ERA seen an upsurge-to late-'80s levels-of concern for all things environmental.

Change is coming, though: The first generation of Earth Day children-the ones who learned about ecology beginning in pre-kindergarten-are beginning to graduate from high school and are taking their environmental values into the workplace and the marketplace.

Born between 1979 and 1994, these Generation Y kids are 60 million strong, and have definitely learned their lessons well. ERA's study, "The Power of Children," shows that children of all ages are significantly more concerned about the environment than their parents are-almost half have asked their parents to do something to help the environment (such as recycling), and their parents did.

Still, Kaufman notes, there's already a dedicated e-consumer group out there: One in two Americans switches product brands based on environment-friendliness, according to an ERA poll released last November. The list includes household cleansers, food and beverages, health and beauty aids, paper goods, cars, gasoline, batteries, computer products, pesticides, and cigarettes.

"Almost 50 percent of consumers look for environmental labeling on products, which is amazing to me," says Kaufman. "Even though the media haven't reported on environmental issues the way they once did, people are changing their living patterns and brand loyalties based on things like a company's reputation for helping or harming the environment."

Despite those findings, Roper's "1998 Green Gauge Report" found that consumers at both ends of the environmental spectrum—the activists and the unconcerned—say they are not willing to pay a premium for greener goods. (See "Growing the Green Market," August 1997.) Activists who have changed their own lifestyles to incorporate more earth-friendly products and practices don't think they should be charged extra to do so, and people who have little concern for the environment don't see the value in paying more for products.

What they are willing to do, it seems, is change their lifestyles and buying patterns.

Alternative fueled vehicles are slowly gaining ground, according to the Energy Information Administration, part of the U.S. Department of Energy. This year, the EIA estimates, there will be 418,000 alternative-fuel cars in the U.S., up 7.5 percent over 1992. Cars, trucks, and sport utility vehicles account for one-third of all carbon dioxide emissions, according to the Public Interest Research Group, and a Gore presidential campaign isn't going to ignore that statistic. President Clinton's Budget 2000 proposes to spend more than \$4 billion on global-warming issues. The largest share of that—\$3.6 billion—will go toward the Climate Change Technology Initiative, in the form of tax incentives over five years for the purchase of "energy-efficient homes, cars, and appliances." Though the federal government imposes no limits on the amount of CO₂ vehicles and power plants can emit, California's strict emissions laws have made alternative-fuel cars (not just city buses) a reality—if not a mainstream one.

Honda is the leading maker of alternative-fuel cars. Its low-emission vehicle models of the Accord and Civic each produce 70 percent lower emissions of nonmethane organic gases and of course conform to California's standards. The Ultra-Low Emission Vehicle Accord is available in Washington, D.C., California, and 13 states nationwide. The Honda Civic GX runs on compressed natural gas. A tank will take you 270 miles and offer a combined city/highway fuel economy of 28/34 mpg. Honda's electric car, the EV Plus, comes with dual airbags, power windows and doors, and auto climate control, as well as advanced nickel-metal hydride batteries that run for about 100 city miles on a single charge.

Who's the market for these cars? Young, affluent, single adults who live in cities, as well as self-described environmentalists and those who live in coastal regions, are more likely than average to show interest in buying an electric car, according to ERA. But public awareness for alternative fuel cars remains low, with 74 percent of adults reporting they haven't heard of such a thing.

Historically, women are more concerned about environmental issues, both Roper and ERA have found, but men are more aware of the choices for alternative fuel cars. To raise sales, the advice is to target young mothers. "Women are playing a greater role in car purchase behavior," says IMS president Kaufman. "Car marketers should target women, because they're most concerned with issues like environmental health and safety. You'd have a great campaign."

Taking it further:

Environmental Research Associates, (609) 683-4035; Roper Starch Worldwide, (212) 599-0700. Map provided by CACI Marketing Services, (800) 292-CACI.

MAKING THE E-CAR GO

Americans rate environmental automobile improvement priorities on a scale of 1 (low) to 10 (high)	
Uses less gasoline	8.23
Reduces harmful tailpipe emissions	8.16
Is partially or entirely recyclable	7.57
Is made partially or entirely out of recycled materials	7.53
Uses alternative fuel other than electricity	7.23
Runs on electricity	6.89
Uses a combination of gasoline and electricity	6.64
Base: 1,001 adults Source: Environmental Research Associates	

Unions: Mine Industry in Jeopardy

Friday April 2, 2:11 am Eastern Time

By MARTHA BRYSON HODEL
Associated Press Writer

CABIN CREEK, W.Va. (AP) -- United Mine Workers
President Cecil Roberts didn't take the top job in the
wellspring of organized labor thinking the end of the union
was in sight.

But he can see its demise -- an end, he says, made possible through a mix of cheap coal, costly
pollution controls and unrealistic demands of environmental activists.

"Like our brothers and sisters in the steel industry, the men and women who mine this nation's
coal are under assault as never before," he said. "The American coal industry might well be
eliminated."

At Roberts' order, about 30,000 union miners across the country planned a a 24-hour,
contract-sanctioned work stoppage today, originally meant to honor co-workers killed on the
job.

This time, however, the day will memorialize the frail condition of America's most basic of
smokestack industries. To Roberts, the future of the U.S. coal industry -- and the cheap
electricity it provides -- hinges on several things:

-- Stiffer air pollution standards beginning next year under the federal Clean Air Act, the first stage of which cost thousands of jobs in the high-sulfur coal fields of northern Appalachia and the Midwest.

-- A looming international global warming treaty that would limit developed countries' emissions from the burning of fossil fuels, especially coal, while exempting big producer-consumers like China and Brazil.

-- Environmental challenges to the industry's most productive mining techniques, especially the mountaintop removal strip mining that has been the focus of protests in West Virginia.

On these issues, the union known for its fierce opposition to coal operators has allied itself with the industry, including longtime nemesis Arch Coal Inc. of St. Louis, the nation's second-largest coal producer.

The alliance has disappointed environmentalists, who had counted on the union's rabble-rousing reputation to put it on their side.

"Don't they understand that this could mean more jobs?" asked Laura Forman, a spokeswoman for the Ohio Valley Environmental Coalition.

"If they can't use mountaintop removal to strip it, they'll mine it underground," a much more labor-intensive method, she contends.

Roberts called that idea "ridiculous."

"If somebody could tell me how to mine this much coal with picks and shovels, I'd be glad to hear it," he said. "But it can't be done."

Roberts, the union's president since 1995, said he has an obligation to UMW members. He accused some environmentalists of living in a fantasy world.

"I have to live in the real world," he said.

In the real world, coal prices have dropped steadily since the post-oil embargo peaks of the late 1970s. Roberts remembers coal selling for \$100 a ton; now it goes for \$20.

Roberts also must confront the problems of an industrial-age union at the end of the 20th century -- how to make his union grow while mine employment rapidly dwindles, and how to finance health care and benefits for a growing pool of retirees.

Between 1993 and 1998 alone, the number of U.S. coal miners fell from 101,322 to an estimated 80,000, according to the National Mining Association.

From a pre-World War II peak of a quarter-million, the number of union-represented miners sunk to 30,606 in 1997, based on data compiled by the U.S. Energy Information Administration.

Roberts isn't ignoring the growing portion of nonunion mining jobs. He appeared in Cabin Creek recently for a rally just before 85 workers at Day Mining Co. voted for union representation after a long organizing campaign.

The union has also been recruiting workers from other industries: ambulance drivers and health care workers in southern West Virginia, corrections officers in western Pennsylvania, city

employees and firefighters in Gallup, N.M.

At age 52 and a native of Cabin Creek, Roberts' personal profile could be the profile of his union or any of its members.

He is a sixth-generation coal miner whose grandfathers died in mining accidents. His parents, Evelyn and Cecil Roberts Sr., are union pensioners who still live in Cabin Creek about 15 miles east of Charleston.

No stranger to a fight, Roberts said the job now for the union founded in 1890 is to assure its survival in the 21st century. He said he won't stand by and watch members lose their jobs: "It's unfair, unwarranted and wrong."

Sacramento Bee

March 20, 1999

ANTARCTICA'S HINTS OF GLOBAL WARMING

David Helvarg

I am glad to count myself among the handful of Washington reporters who missed the impeachment trial of the president. I was off covering a far more important story in Antarctica.

My trip convinced me that a hundred years from now Americans will look back at late-20th-century scientific research done in places such as Antarctica and wonder how society could have been distracted by the sexual misadventures of a politician.

For the past 30 years climatologists have predicted that global warming would occur most rapidly at the poles, a fact now confirmed by scientists in Alaska, Canada and Greenland, at the North Pole and on the Antarctic Peninsula. The peninsula is a 700-mile-long rocky kite tail curving out from the coldest, driest, highest continent on Earth. The peninsula is also, as I discovered, a wildlife-rich habitat undergoing a frighteningly rapid change.

At Palmer Station, one of three Antarctic bases administered by the National Science Foundation, I spoke with the chief scientist, Bill Frasier, who has been studying the Antarctic climate since 1974.

"When I was a graduate student, we were told that climate change occurs but we'd never see the effects in our lifetime," Frasier told me. "But in the last 20 years I've seen tremendous changes. I've seen islands pop out from under glaciers; I've seen species changing places and landscape ecology altered."

While global temperatures have, on average, warmed by 1 degree Fahrenheit over the last century -- paralleling increased industrial output of carbon dioxide and other greenhouse gases -- the Antarctic Peninsula has seen a jump of more than 5 degrees in just 50 years, including an incredible 10-degree average warming during its winter months. As a result, huge pieces of the ice shelf -- some sections are as large as the state of Delaware -- have begun calving off its eastern shore.

And scientists are now discussing the possibility that the adjacent Western

Antarctic Ice Sheet could experience a sudden meltdown, raising global sea levels by more than 15 feet over the next century (instead of 1 to 3 feet, as currently predicted).

That event could, among other things, turn the Trump Tower mezzanine into waterfront property. While most experts believe this melting will occur sometime after the 21st century, by the time they know for sure it will probably be too late to do anything about it.

Today's warming poses a more immediate threat to Antarctica's abundant wildlife. And here too there are implications that extend to the rest of the world, researchers told me.

Tiny shrimplike creatures called krill -- the most abundant animal on earth in terms of their total biomass -- are the broad base of Antarctica's food chain, consumed in vast quantities by penguins, seals and whales. (A single blue whale eats 4 tons a day.) Without access to sea ice, krill shrink, lose weight and are vulnerable to early death.

A decline of krill due to melting of the ice shelf could wreck much of the Antarctic ecosystem that depends on them.

Rising temperatures also increase precipitation -- which, in Antarctica, takes the form of snow. Excessive spring snow has disrupted the nesting and breeding of Adelie penguins, leading to the extinction of many of their colonies. At the same time, more adaptable species such as chinstrap penguins, elephant seals and fur seals are increasing their numbers, threatening to displace sea ice-dependent animals such as Weddell seals, crabeater seals and leopard seals.

What these changes in the Antarctic Peninsula suggest is that rapid warming could speed up a global chain reaction of extinctions that -- thanks to the impact of humans -- is already under way.

"Weedlike" species that are highly adaptable to disrupted habitat (pigeons, rats, deer and elephant seals) will displace more specialized creatures (tigers, monarch butterflies, river dolphins and Adelie penguins) that depend on unique ecosystems such as tropical rain forests, coral reefs and the Antarctic ice shelf.

Rising temperatures may kill off certain plant species as well. At Palmer Station, I met Tad Day, a plant biologist who studies Antarctica's only two flowering plants: hairgrass and pearlwort. He has found that warming improves growth of pearlwort but appears to have a negative impact on hairgrass. Hairgrass, which was the dominant species in Antarctica, is now being displaced by pearlwort, a mosslike plant.

"Global warming," Day told me, "has the capacity to shift the competitive balance of species in ways that, until we get out there and do the research, we don't understand yet, and that could have important consequences on our ability to produce food and fiber."

Increasingly reliable climate models now predict a 2- to 6-degree planetary warming in the next century, with regional shifts in agriculture that will

favor the industrial north at the expense of the poorer nations of Africa and Latin America. There will also be increases in extreme weather events, coastal storms and the spread of tropical diseases.

In that light, the work of Antarctic scientists like the ones I met suggests that -- for better or worse -- environmental change will define much of the politics of the 21st century, whether in Washington or at the South Pole.

David Helvarg is a television documentary producer and the author of "The War Against the Greens." This piece appeared in the New York Times.

Wednesday March 31, 10:41 am Eastern Time

Company Press Release

ENERGYguide.com Launches Earth Day 1999 Contest to Highlight Link Between Energy Efficiency and the Envi

NEWTON, Mass.--(BUSINESS WIRE)--March 31,1999-- Web site's ECOcalc tool allows consumers to see how they can through energy efficiency; Win a \$500 online shopping spree of energy-efficient, earth-friendly products

ENERGYguide.com announced a new contest which highlights the ability of every consumer to make a contribution to Earth Day by becoming more energy efficient. ENERGYguide.com is the consumers' source for energy and environmental information, buying energy-efficient appliances and products online, and comparing and selecting a "green" power source in states where electricity has been deregulated. The contest will be open to Web site visitors during the month of April.

Renewable "green" energy is increasingly becoming part of the nation's power mix and is available to consumers. However, every time we mow our lawns, watch television, or turn on lights, there are emissions to the environment of gases like CO₂, acknowledged to be the chief contributor to the threat of global warming. To help leave a sustainable environment for future generations, we can reduce the amount of CO₂ emissions by making energy-efficient choices now.

Among the many resources for consumers on ENERGYguide.com is ECOcalc. This tool allows consumers to gauge the environmental impact of energy decisions and demonstrates how simple things can help the environment. ECOcalc shows the potential environmental savings, measured in reduced emissions of CO₂, of such actions as changing thermostat settings, replacing existing bulbs with energy-efficient compact fluorescent bulbs, and using solar power to heat water.

For example, a Massachusetts resident enters zip code, number of rooms (8), number of people (4), style of home (single-family), central air conditioning, and electric heat. In this case, ECOcalc calculates that by replacing 20 percent of light bulbs with energy-efficient bulbs, lowering the thermostat by one degree in the winter and raising it one degree in the summer, the family would save \$218 dollars on their annual electricity bill - but also 2062 pounds (over a ton!) of CO₂ emissions per year.

Consumers can register on ENERGYguide.com to win energy-efficient products, including light bulbs, thermostats, fans, humidifiers, and even lawn mowers. The grand prize is a \$500 shopping spree. Three runners-up will win \$100 shopping sprees, and two contestants will win instant \$100 shopping sprees. Entries must be received by midnight EST Friday, April 30, 1999 and the winners will be selected on Wednesday, May 12, 1999.

"The changes happening in the energy industry have created a range of new opportunities for consumers to reduce energy consumption and utility bills as well as reduce the environmental impact of their activity," said Harvey Michaels, CEO of Nexus Energy Software, a 20-year veteran of the energy software industry. "But, without assistance, most consumers find it difficult to research, compare, and choose among the alternative options. ENERGYguide.com wants to help consumers make smart and environmentally-friendly energy decisions, ranging from energy efficiency in the home to choosing a 'green' power supplier."

About ENERGYguide.com

Designed and operated by Nexus Energy Software, ENERGYguide.com simplifies energy choices. Consumers can use personal energy calculator tools to understand the energy efficiency of different products and how they can lower energy bills and help the environment. These same energy-efficient products can then be purchased online. The Web site also allows consumers to identify energy offers in their area based on their zip code, compare those offers, and sign up online for a new energy supplier. In addition, ENERGYguide.com has the most comprehensive, customer-friendly information on utility deregulation for every state. ENERGYguide.com is not an affiliate of any energy company.

About Nexus Energy Software

Nexus Energy Software, based in Newton, Mass., is the leading provider of energy and environmental-related Internet and PC products for consumers and small businesses. Nexus products create a channel for communications and commerce between consumers and energy companies. For more information on Nexus, please go to www.nexusenergy.com or visit ENERGYguide at www.ENERGYguide.com.

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ENERGYguide.com Launches Earth Day 1999 Contest to Highlight Link

Between Energy Efficiency and the Environment

Additional Tips Can Be Found at ENERGYguide.com

Heating Tips

--Lowering the thermostat by as little as one degree Fahrenheit typically reduces your heating bill one to three percent. Most energy experts recommend setting the thermostat to 68 degrees Fahrenheit or less, and several degrees cooler overnight. Make sure you lower your thermostat if you are leaving the house for any period of time; you use much less energy to heat the house up when you return than to keep it heated while you are away. A programmable thermostat lets you easily lower the thermostat during periods when no one is home, as well as lower the temperature overnight without having to freeze in the morning while waiting for the heat to rise. You might save as much as 20 percent on your heating costs and recover your investment in the first year.

--Take advantage of the heat from the sun. Open shades on the southern and eastern windows during the day. Close these shades when the sun goes down to keep the heat from escaping.

Cooking Tips

--With electric cooktops, use flat-bottomed pots and pans that completely cover the burner. Any burner surface that is not touching the cookware is wasting energy.

--Don't peek! Each time you open the oven door the temperature drops 25 to 50 degrees. Avoid lifting pot lids for the same reason.

Food Storage Tips

--Keep your freezer at a temperature between zero to five degrees Fahrenheit. Settings below this use more energy and are not necessary.

--Keep your refrigerator out of direct sunlight and in as cool a location as possible. Keep away from oven, stoves, water heaters, etc.

--Keep foods covered to prevent moisture build-up. Your refrigerator has to work harder if the air inside is humid.

Lighting Tips

--Consider the cost of lighting your home. Do you realize that the money you spend on light bulbs is probably only five to ten percent of the total cost? The other 90-95 percent is the cost of electricity to run those bulbs. That's why you should look for more efficient rather than cheaper light bulbs, and that's why compact fluorescent lights are so appealing.

Timers that automatically turn lights on and off can reduce your energy use and at the same time increase safety by making a house seem occupied even when people are away.

Water Heating and Laundry Tips

--Wrap and reap (the energy savings). Wrapping your water heater with an insulating blanket can save \$20 annually if you have gas hot water or \$50 if you have electric. To see if your tank needs an insulation blanket, place your hand on the tank. If it feels warm then you need a blanket.

--Sort clothes by degree of dirtiness. Use shorter wash cycles for lightly soiled clothes.

Cooling Tips

--Consider using a dehumidifier instead of turning on the air conditioning. You will be comfortable at much higher temperatures if you reduce the humidity.

--Don't let a room air conditioner bake in the sun. Room air conditioners work best when kept cool. Installing the unit in a north-facing wall is ideal. Another option is to take advantage of shade from trees.

Message Sent To: _____

Martha L. Wofford

04/02/99 10:22:20 AM

Record Type: Record

To: See the distribution list at the bottom of this message

cc: Meagan M. Earley/WHO/EOP

Subject: Climate Clips

There's also a NYT clip from yesterday that I have a hard copy of, but am having trouble getting electronically. Will bring to staff.

**Ennvironmental groups mixed on
BP Amoco/ARCO deal**

NEW YORK, April 1 (Reuters) - BP Amoco's announced takeover of Atlantic Richfield Co. Thursday drew mixed reviews from environmental watchdog groups, who said BP Amoco is expected to expand oil exploration in Alaska and may be backing away from promises to stem global warming.

Carwil James of the Greenpeace USA Climate Campaign said BP Amoco's chief executive John Browne is turning an about-face from comments he made less than two years ago, when he said his company was willing to take precautionary measures to stave off global warming.

Browne on Thursday said the BP Amoco alliance with ARCO will "provide a strong incentive for significant investment in existing and future fields."

James said this flies in the face of any previous statements about combating climate change.

"The Alaskan Arctic which BP Amoco has targeted for new oil exploration is warming at a rate three to five times faster than the rest of the globe," James said.

Innovest, a company that advises that it's profitable to invest in companies with good environmental records, says that BP Amoco's relatively good record may be threatened by ARCO's past record and a poor system for managing environmental risk.

Innovest, said BP's environmental record fell a bit when it took over Amoco last year, but that ARCO presents even more danger to its relatively good record when it comes to protecting the environment.

"Bringing ARCO up to BP environmental standards will likely be more difficult than it was with Amoco since Amoco had relatively good eco-efficiency and performance," Innovest said in a press release.

**San Jose Mercury News
Metro**

**Students and faculty want Stanford
University to use its \$4.7 billion
endowment to make a statement
on global warming**

Copy

By Michael Learmonth

IN 1987, STANFORD UNIVERSITY galvanized the anti-apartheid movement on college campuses across the nation. In a stunning display of solidarity, it became the first university to use the financial clout of its endowment to discourage corporate America from supporting South Africa's racist regime. A decade later, Stanford made another statement by pulling its endowment out of the tobacco industry.

Today, a group of graduate students and faculty is asking Stanford to take another unprecedented step. The issue this time is global warming and a Washington, D.C.-based nonprofit organization called the Global Climate Coalition.

In 1997, a 100-nation global conference on climate change in Japan produced a document known as the Kyoto Protocol. If ratified by the Senate, the protocol would commit the United States to reducing worldwide greenhouse gas emissions. Corporations such as Exxon, Mobil, Chevron, Ford and General Motors have vigorously opposed any international treaty addressing climate change. Instead, they have poured money into the Global Climate Coalition, which calls itself "a voice for business in the global warming debate." The GCC has been extremely successful, spending millions promoting the notion that global warming isn't a problem, and if it were, solutions should not involve international treaties or any regulations on industry that could cost American jobs.

Due in part to the lobbying efforts of the GCC, it's unlikely that President Clinton will submit a bill in support of Kyoto to the Congress before he leaves office.

But some Stanford faculty members and students want the Stanford board of trustees to use the clout of the university's \$4.7 billion endowment to get the corporations to stop funding the GCC.

Among the big names on a petition making the rounds is Don Kennedy, a former Stanford University president and now a Bing Professor

of Environmental Science.

It was on Kennedy's watch as president that Stanford made its statement on South Africa. He would now like to see Stanford use its influence and voting powers as a large shareholder to convince corporations to withdraw support of the GCC.

"They are opposed to any efforts at all to mitigate the addition of gases that contribute to global warming," Kennedy says. "And they are spending lots of money to do it. It seems to me shareholders ought to question them on how they're spending our money."

As a private institution, Stanford keeps its portfolio under tight wraps, but it is known to include large investments in Texaco, Chevron and other GCC members. Corporate support allowed the GCC to spend \$13 million in one month last year "debunking" the existence of global warming phenomena.

Circulating the petition on campus is Ozone Action, a little nonprofit group dedicated to taking on the GCC.

The GCC is "a front group that's funding a misinformation campaign to deny the legitimate threat of global warming," says Jen Block, an Ozone Action organizer with a sticker on her laptop that says "Mean Corporations Suck."

Ozone Action volunteers are also rallying students at the University of Washington and Harvard University. Its first victory came last month when students and faculty at the University of Washington passed a resolution calling on the trustees to divest from GCC members.

Frank Maisano, a Washington, D.C.-based spokesman for the GCC, seems amused that his organization has become the target of campus unrest.

"If anybody is talking about misleading information, it's them," he says. An international treaty such as Kyoto, he says, would unfairly burden U.S. companies and reduce profits for shareholders of GCC member companies. The irony of it all, he says, is that even the foundations funding the

work of nonprofits like Ozone Action, like the MacArthur, Rockefeller and W. Alton Jones foundations, also have investments in GCC member companies.

"Our members are some of the strongest companies on Wall Street for the average investor," Maisano says. "At the same time they're helping fund these foundations."

Yet the letter, signed by students and faculty including Kennedy and the renowned Stanford biologist Paul Ehrlich, isn't asking that Stanford divest from these companies, just that it use its powers as a major shareholder to get them to rescind their membership in the GCC.

"That's exactly what we did with South Africa," Kennedy says. "We chose to start a dialogue with companies that were doing business there in hopes of getting them to change their practices."

Kennedy predicts that if Stanford and other nonprofit investors open discussions with GCC members, some of them may decide to follow former GCC members British Petroleum and Shell out of the coalition.

That would be fine with John-O Niles, a cheery blond graduate student from Vermont. Niles, 29, came to Stanford after spending several years in Africa helping care for sick and wounded gorillas. As a graduate student and policy analyst, he's studied the Kyoto Protocol and considers it the best chance for addressing the globe's two most pressing environmental problems: climate change and deforestation.

Niles says 75 percent of greenhouse gases are produced by burning fossil fuels and 25 percent are caused indirectly by rain-forest destruction. Under Kyoto, the U.S. would be able to mitigate its own carbon production by helping other nations preserve their rain forests. That way, Niles says, the U.S. could take care of its obligation to the planet for the next 50 years and preserve the "green swath of forest around the equator" that cools the earth and harbors 50 percent of the world's species.

Niles says Kyoto would benefit Silicon Valley's biotech and electronics industries. Biotech

firms would benefit from the biological diversity such a treaty would preserve, and the computer industry would be put in a more competitive position for consumer dollars as the price of more polluting durable goods, such as automobiles, goes up.

By making a statement, Niles believes Stanford is in a position to galvanize support for Kyoto.

"If the U.S. doesn't ratify it, the whole thing dies," Niles says. "If Stanford looks at this thing and approves it, that will create a national debate."

Global energy demand to grow 2.1%
Slower growth means emissions targets easier to reach

By Rex Nutting, CBS MarketWatch
Last Update: 1:16 PM ET Mar 31, 1999

WASHINGTON (CBS.MW) -- The economic collapse in Asia and Russia has forced the Energy Department to lower its estimates of long-range global energy demand by 4 percent over the next 20 years.

Worldwide energy demand is expected to grow at a 2.1 percent annual rate through 2020 to 611.8 quadrillion BTUs, with the fastest growth in Central and South America and developing Asia, the government said. Energy consumption in the developing world will grow at a 3.6 percent pace and should surpass that of the industrialized world by 2020, the government said.

Oil (CL=K9) is expected to remain the biggest source of energy, growing 1.8 percent annually to 110 million barrels a day by 2020. Production is expected to keep up with demand, with capacity growing to 112.2 million barrels. Two-thirds of the growth in capacity will be within the Organization of Petroleum Exporting Countries, particularly in the Persian Gulf. Production in the United States and the North Sea will fall.

Consumption of natural gas will more than double over the period to 173.8 trillion cubic feet while nuclear energy declines. Coal consumption is expected to grow 1.7 percent annually to 138.3 quadrillion BTUs.

The new long-range forecasts will have little impact on energy markets in the short-term. Traders pay more attention to short-term factors like inventories, supply shocks and weather. See Futures Movers.

The biggest impact from the forecast may be on the contemplated reduction in global carbon emissions to reduce global warming. Lower energy use in the former Soviet Union, in particular, will make it easier to meet the goals of the climate change treaty negotiated in Kyoto, Japan.

Under the Kyoto protocol (which has yet to be ratified by any major industrialized nation), the industrialized nations must reduce their carbon

emissions to 4 percent below 1990 levels, either by reducing their own emissions or by "buying" emissions credits from other nations.

Following Russia's collapse last summer, the department now predicts that energy use in the former Soviet Union will remain below 1990 levels at least until 2020, giving Russia and the other former republics the opportunity to sell emissions credits to the West, if trading procedures can be implemented.

American Demographics Magazine, April 1999 Green Attitude

By Lisa E. Phillips

A new generation of consumers is emerging, one that expects earth-friendly products and wallet-friendly prices.

As most 29th anniversaries go, Earth Day 1999 is slipping by relatively unnoticed. But don't think you'll be so lucky next year -Earth Day turns the big 3-0 in 2000, right in the thick of the presidential primary season. Al Gore may be keeping quiet about the Kyoto Protocol now as he hones another campaign message, but you can bet he'll be on the stump -figuratively, of course-about the health of the planet this time next year.

If the economy is still prospering, Americans will be listening. Close to nine out of ten (87 percent) of adults say they are "concerned" about the condition of the environment in the United States, and almost half (44 percent) say they are "very concerned," according to a twice-a-year tracking poll conducted by Environmental Research Associates (ERA), a division of Integrated Marketing Services in Princeton, New Jersey. In the same poll, air pollution was named by 34 percent of the respondents as the most serious environmental issue facing the U.S., compared to water pollution, a distant second, named by only 12 percent.

"People know a lot more about the environment today. They're much smarter about the issues," says Lois Kaufman, president of IMS and cofounder of ERA. "Air and water pollution are the top issues now. They know recycling and packaging are under control. Now they're concerned about food safety and other issues."

But we're a fickle lot, and we're just as concerned about another type of green-the kind that goes in a wallet. Americans' attitudes-mainly those of seniors, boomers, and Gen Xers-have swung back and forth on environmental topics since Roper Starch Worldwide began tracking such concerns in the 1970s, and ERA in the 1980s. The height of concern occurred, not coincidentally, during the last economic boom in the late 1980s. The recession of 1991-92 dampened our earth-first zeal, and only in the last two years have Roper and ERA seen an upsurge-to late-'80s levels-of concern for all things environmental.

Change is coming, though: The first generation of Earth Day children-the ones who learned about ecology beginning in pre-kindergarten-are beginning to graduate from high school and are taking their environmental values into the workplace and the marketplace.

Born between 1979 and 1994, these Generation Y kids are 60 million strong, and have definitely learned their lessons well. ERA's study, "The Power of Children," shows that children of all ages are significantly more concerned about the environment than their parents are-almost half have asked their parents to do something to help the environment (such as recycling), and their parents did.

Still, Kaufman notes, there's already a dedicated e-consumer group out there: One in two Americans switches product brands based on environment-friendliness, according to an ERA poll released last November. The list includes household cleansers, food and beverages, health and beauty aids, paper goods, cars, gasoline, batteries, computer products, pesticides, and cigarettes.

"Almost 50 percent of consumers look for environmental labeling on products, which is amazing to me," says Kaufman. "Even though the media haven't reported on environmental issues the way they once did, people are changing their living patterns and brand loyalties based on things like a company's reputation for helping or harming the environment."

Despite those findings, Roper's "1998 Green Gauge Report" found that consumers at both ends of the environmental spectrum-the activists and the unconcerned-say they are not willing to pay a premium for greener goods. (See "Growing the Green Market," August 1997.) Activists who have changed their own lifestyles to incorporate more earth-friendly products and practices don't think they should be charged extra to do so, and people who have little concern for the environment don't see the value in paying more for products.

What they are willing to do, it seems, is change their lifestyles and buying patterns.

Alternative fueled vehicles are slowly gaining ground, according to the Energy Information Administration, part of the U.S. Department of Energy. This year, the EIA estimates, there will be 418,000 alternative-fuel cars in the U.S., up 7.5 percent over 1992. Cars, trucks, and sport utility vehicles account for one-third of all carbon dioxide emissions, according to the Public Interest Research Group, and a Gore presidential campaign isn't going to ignore that statistic. President Clinton's Budget 2000 proposes to spend more than \$4 billion on global-warming issues. The largest share of that-\$3.6 billion-will go toward the Climate Change Technology Initiative, in the form of tax incentives over five years for the purchase of "energy-efficient homes, cars, and appliances." Though the federal government imposes no limits on the amount of CO2 vehicles and power plants can emit, California's strict emissions laws have made alternative-fuel cars (not just city buses) a reality-if not a mainstream one.

Honda is the leading maker of alternative-fuel cars. Its low-emission vehicle models of the Accord and Civic each produce 70 percent lower emissions of nonmethane organic gases and-of course-conform to California's standards. The Ultra-Low Emission Vehicle Accord is available in Washington, D.C., California, and 13 states nationwide. The Honda Civic GX runs on compressed natural gas. A tank will take you 270 miles and offer a combined city/highway fuel economy of 28/34 mpg. Honda's electric car, the EV Plus, comes with dual airbags, power windows and doors, and auto climate control, as well as advanced nickel-metal hydride batteries that run for about 100 city miles on a single charge.

Who's the market for these cars? Young, affluent, single adults who live in cities, as well as self-described environmentalists and those who live in coastal regions, are more likely than average to show interest in buying an electric car, according to ERA. But public awareness for alternative fuel cars remains low, with 74 percent of adults reporting they haven't heard of such a thing.

Historically, women are more concerned about environmental issues, both Roper and ERA have found, but men are more aware of the choices for alternative fuel cars. To raise sales, the advice is to target young mothers. "Women are playing a greater role in car purchase behavior," says IMS president Kaufman. "Car marketers should target women, because they're most concerned with issues like environmental health and safety. You'd have a great campaign."

Taking it further:

Environmental Research Associates, (609) 683-4035; Roper Starch Worldwide, (212) 599-0700. Map provided by CACI Marketing Services, (800) 292-CACI.

MAKING THE E-CAR GO

Americans rate environmental
automobile improvement priorities on
a scale of
1 (low) to 10 (high)

Uses less gasoline

8.23

Reduces harmful tailpipe emissions

8.16

Is partially or entirely recyclable

7.57

Is made partially or entirely out of recycled
materials

7.53

Uses alternative fuel other than electricity

7.23

Runs on electricity

6.89

Uses a combination of gasoline and electricity

6.64

Base: 1,001 adults Source: Environmental Research
Associates

Unions: Mine Industry in Jeopardy

Friday April 2, 2:11 am Eastern Time

By MARTHA BRYSON HODEL

Associated Press Writer

CABIN CREEK, W.Va. (AP) -- United Mine Workers
President Cecil Roberts didn't take the top job in the
wellspring of organized labor thinking the end of the union
was in sight.

But he can see its demise -- an end, he says, made possible through a mix of cheap coal, costly
pollution controls and unrealistic demands of environmental activists.

"Like our brothers and sisters in the steel industry, the men and women who mine this nation's
coal are under assault as never before," he said. "The American coal industry might well be
eliminated."

At Roberts' order, about 30,000 union miners across the country planned a a 24-hour,
contract-sanctioned work stoppage today, originally meant to honor co-workers killed on the
job.

This time, however, the day will memorialize the frail condition of America's most basic of
smokestack industries. To Roberts, the future of the U.S. coal industry -- and the cheap
electricity it provides -- hinges on several things:

-- Stiffer air pollution standards beginning next year under the federal Clean Air Act, the first stage of which cost thousands of jobs in the high-sulfur coal fields of northern Appalachia and the Midwest.

-- A looming international global warming treaty that would limit developed countries' emissions from the burning of fossil fuels, especially coal, while exempting big producer-consumers like China and Brazil.

-- Environmental challenges to the industry's most productive mining techniques, especially the mountaintop removal strip mining that has been the focus of protests in West Virginia.

On these issues, the union known for its fierce opposition to coal operators has allied itself with the industry, including longtime nemesis Arch Coal Inc. of St. Louis, the nation's second-largest coal producer.

The alliance has disappointed environmentalists, who had counted on the union's rabble-rousing reputation to put it on their side.

"Don't they understand that this could mean more jobs?" asked Laura Forman, a spokeswoman for the Ohio Valley Environmental Coalition.

"If they can't use mountaintop removal to strip it, they'll mine it underground," a much more labor-intensive method, she contends.

Roberts called that idea "ridiculous."

"If somebody could tell me how to mine this much coal with picks and shovels, I'd be glad to hear it," he said. "But it can't be done."

Roberts, the union's president since 1995, said he has an obligation to UMW members. He accused some environmentalists of living in a fantasy world.

"I have to live in the real world," he said.

In the real world, coal prices have dropped steadily since the post-oil embargo peaks of the late 1970s. Roberts remembers coal selling for \$100 a ton; now it goes for \$20.

Roberts also must confront the problems of an industrial-age union at the end of the 20th century -- how to make his union grow while mine employment rapidly dwindles, and how to finance health care and benefits for a growing pool of retirees.

Between 1993 and 1998 alone, the number of U.S. coal miners fell from 101,322 to an estimated 80,000, according to the National Mining Association.

From a pre-World War II peak of a quarter-million, the number of union-represented miners sunk to 30,606 in 1997, based on data compiled by the U.S. Energy Information Administration.

Roberts isn't ignoring the growing portion of nonunion mining jobs. He appeared in Cabin Creek recently for a rally just before 85 workers at Day Mining Co. voted for union representation after a long organizing campaign.

The union has also been recruiting workers from other industries: ambulance drivers and health care workers in southern West Virginia, corrections officers in western Pennsylvania, city

employees and firefighters in Gallup, N.M.

At age 52 and a native of Cabin Creek, Roberts' personal profile could be the profile of his union or any of its members.

He is a sixth-generation coal miner whose grandfathers died in mining accidents. His parents, Evelyn and Cecil Roberts Sr., are union pensioners who still live in Cabin Creek about 15 miles east of Charleston.

No stranger to a fight, Roberts said the job now for the union founded in 1890 is to assure its survival in the 21st century. He said he won't stand by and watch members lose their jobs: "It's unfair, unwarranted and wrong."

Sacramento Bee

March 20, 1999

ANTARCTICA'S HINTS OF GLOBAL WARMING

David Helvarg

I am glad to count myself among the handful of Washington reporters who missed the impeachment trial of the president. I was off covering a far more important story in Antarctica.

My trip convinced me that a hundred years from now Americans will look back at late-20th-century scientific research done in places such as Antarctica and wonder how society could have been distracted by the sexual misadventures of a politician.

For the past 30 years climatologists have predicted that global warming would occur most rapidly at the poles, a fact now confirmed by scientists in Alaska, Canada and Greenland, at the North Pole and on the Antarctic Peninsula. The peninsula is a 700-mile-long rocky kite tail curving out from the coldest, driest, highest continent on Earth. The peninsula is also, as I discovered, a wildlife-rich habitat undergoing a frighteningly rapid change.

At Palmer Station, one of three Antarctic bases administered by the National Science Foundation, I spoke with the chief scientist, Bill Frasier, who has been studying the Antarctic climate since 1974.

"When I was a graduate student, we were told that climate change occurs but we'd never see the effects in our lifetime," Frasier told me. "But in the last 20 years I've seen tremendous changes. I've seen islands pop out from under glaciers; I've seen species changing places and landscape ecology altered."

While global temperatures have, on average, warmed by 1 degree Fahrenheit over the last century -- paralleling increased industrial output of carbon dioxide and other greenhouse gases -- the Antarctic Peninsula has seen a jump of more than 5 degrees in just 50 years, including an incredible 10-degree average warming during its winter months. As a result, huge pieces of the ice shelf -- some sections are as large as the state of Delaware -- have begun calving off its eastern shore.

And scientists are now discussing the possibility that the adjacent Western

Antarctic Ice Sheet could experience a sudden meltdown, raising global sea levels by more than 15 feet over the next century (instead of 1 to 3 feet, as currently predicted).

That event could, among other things, turn the Trump Tower mezzanine into waterfront property. While most experts believe this melting will occur sometime after the 21st century, by the time they know for sure it will probably be too late to do anything about it.

Today's warming poses a more immediate threat to Antarctica's abundant wildlife. And here too there are implications that extend to the rest of the world, researchers told me.

Tiny shrimplike creatures called krill -- the most abundant animal on earth in terms of their total biomass -- are the broad base of Antarctica's food chain, consumed in vast quantities by penguins, seals and whales. (A single blue whale eats 4 tons a day.) Without access to sea ice, krill shrink, lose weight and are vulnerable to early death.

A decline of krill due to melting of the ice shelf could wreck much of the Antarctic ecosystem that depends on them.

Rising temperatures also increase precipitation -- which, in Antarctica, takes the form of snow. Excessive spring snow has disrupted the nesting and breeding of Adelie penguins, leading to the extinction of many of their colonies. At the same time, more adaptable species such as chinstrap penguins, elephant seals and fur seals are increasing their numbers, threatening to displace sea ice-dependent animals such as Weddell seals, crabeater seals and leopard seals.

What these changes in the Antarctic Peninsula suggest is that rapid warming could speed up a global chain reaction of extinctions that -- thanks to the impact of humans -- is already under way.

"Weedlike" species that are highly adaptable to disrupted habitat (pigeons, rats, deer and elephant seals) will displace more specialized creatures (tigers, monarch butterflies, river dolphins and Adelie penguins) that depend on unique ecosystems such as tropical rain forests, coral reefs and the Antarctic ice shelf.

Rising temperatures may kill off certain plant species as well. At Palmer Station, I met Tad Day, a plant biologist who studies Antarctica's only two flowering plants: hairgrass and pearlwort. He has found that warming improves growth of pearlwort but appears to have a negative impact on hairgrass. Hairgrass, which was the dominant species in Antarctica, is now being displaced by pearlwort, a mosslike plant.

"Global warming," Day told me, "has the capacity to shift the competitive balance of species in ways that, until we get out there and do the research, we don't understand yet, and that could have important consequences on our ability to produce food and fiber."

Increasingly reliable climate models now predict a 2- to 6-degree planetary warming in the next century, with regional shifts in agriculture that will

favor the industrial north at the expense of the poorer nations of Africa and Latin America. There will also be increases in extreme weather events, coastal storms and the spread of tropical diseases.

In that light, the work of Antarctic scientists like the ones I met suggests that -- for better or worse -- environmental change will define much of the politics of the 21st century, whether in Washington or at the South Pole.

David Helvarg is a television documentary producer and the author of "The War Against the Greens." This piece appeared in the New York Times.

Wednesday March 31, 10:41 am Eastern Time

Company Press Release

ENERGYguide.com Launches Earth Day 1999 Contest to Highlight Link Between Energy Efficiency and the Envi

NEWTON, Mass.--(BUSINESS WIRE)--March 31, 1999-- Web site's ECOcalc tool allows consumers to see how they can through energy efficiency; Win a \$500 online shopping spree of energy-efficient, earth-friendly products

ENERGYguide.com announced a new contest which highlights the ability of every consumer to make a contribution to Earth Day by becoming more energy efficient. ENERGYguide.com is the consumers' source for energy and environmental information, buying energy-efficient appliances and products online, and comparing and selecting a "green" power source in states where electricity has been deregulated. The contest will be open to Web site visitors during the month of April.

Renewable "green" energy is increasingly becoming part of the nation's power mix and is available to consumers. However, every time we mow our lawns, watch television, or turn on lights, there are emissions to the environment of gases like CO₂, acknowledged to be the chief contributor to the threat of global warming. To help leave a sustainable environment for future generations, we can reduce the amount of CO₂ emissions by making energy-efficient choices now.

Among the many resources for consumers on ENERGYguide.com is ECOcalc. This tool allows consumers to gauge the environmental impact of energy decisions and demonstrates how simple things can help the environment. ECOcalc shows the potential environmental savings, measured in reduced emissions of CO₂, of such actions as changing thermostat settings, replacing existing bulbs with energy-efficient compact fluorescent bulbs, and using solar power to heat water.

For example, a Massachusetts resident enters zip code, number of rooms (8), number of people (4), style of home (single-family), central air conditioning, and electric heat. In this case, ECOcalc calculates that by replacing 20 percent of light bulbs with energy-efficient bulbs, lowering the thermostat by one degree in the winter and raising it one degree in the summer, the family would save \$218 dollars on their annual electricity bill - but also 2062 pounds (over a ton!) of CO₂ emissions per year.

Consumers can register on ENERGYguide.com to win energy-efficient products, including light bulbs, thermostats, fans, humidifiers, and even lawn mowers. The grand prize is a \$500 shopping spree. Three runners-up will win \$100 shopping sprees, and two contestants will win instant \$100 shopping sprees. Entries must be received by midnight EST Friday, April 30, 1999 and the winners will be selected on Wednesday, May 12, 1999.

"The changes happening in the energy industry have created a range of new opportunities for consumers to reduce energy consumption and utility bills as well as reduce the environmental impact of their activity," said Harvey Michaels, CEO of Nexus Energy Software, a 20-year veteran of the energy software industry. "But, without assistance, most consumers find it difficult to research, compare, and choose among the alternative options. ENERGYguide.com wants to help consumers make smart and environmentally-friendly energy decisions, ranging from energy efficiency in the home to choosing a 'green' power supplier."

About ENERGYguide.com

Designed and operated by Nexus Energy Software, ENERGYguide.com simplifies energy choices. Consumers can use personal energy calculator tools to understand the energy efficiency of different products and how they can lower energy bills and help the environment. These same energy-efficient products can then be purchased online. The Web site also allows consumers to identify energy offers in their area based on their zip code, compare those offers, and sign up online for a new energy supplier. In addition, ENERGYguide.com has the most comprehensive, customer-friendly information on utility deregulation for every state. ENERGYguide.com is not an affiliate of any energy company.

About Nexus Energy Software

Nexus Energy Software, based in Newton, Mass., is the leading provider of energy and environmental-related Internet and PC products for consumers and small businesses. Nexus products create a channel for communications and commerce between consumers and energy companies. For more information on Nexus, please go to www.nexusenergy.com or visit ENERGYguide at www.ENERGYguide.com.

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ENERGYguide.com Launches Earth Day 1999 Contest to Highlight Link

Between Energy Efficiency and the Environment

Additional Tips Can Be Found at ENERGYguide.com

Heating Tips

--Lowering the thermostat by as little as one degree Fahrenheit typically reduces your heating bill one to three percent. Most energy experts recommend setting the thermostat to 68 degrees Fahrenheit or less, and several degrees cooler overnight. Make sure you lower your thermostat if you are leaving the house for any period of time; you use much less energy to heat the house up when you return than to keep it heated while you are away. A programmable thermostat lets you easily lower the thermostat during periods when no one is home, as well as lower the temperature overnight without having to freeze in the morning while waiting for the heat to rise. You might save as much as 20 percent on your heating costs and recover your investment in the first year.

--Take advantage of the heat from the sun. Open shades on the southern and eastern windows during the day. Close these shades when the sun goes down to keep the heat from escaping.

Cooking Tips

--With electric cooktops, use flat-bottomed pots and pans that completely cover the burner. Any burner surface that is not touching the cookware is wasting energy.

--Don't peek! Each time you open the oven door the temperature drops 25 to 50 degrees. Avoid lifting pot lids for the same reason.

Food Storage Tips

--Keep your freezer at a temperature between zero to five degrees Fahrenheit. Settings below this use more energy and are not necessary.

--Keep your refrigerator out of direct sunlight and in as cool a location as possible. Keep away from oven, stoves, water heaters, etc.

--Keep foods covered to prevent moisture build-up. Your refrigerator has to work harder if the air inside is humid.

Lighting Tips

--Consider the cost of lighting your home. Do you realize that the money you spend on light bulbs is probably only five to ten percent of the total cost? The other 90-95 percent is the cost of electricity to run those bulbs. That's why you should look for more efficient rather than cheaper light bulbs, and that's why compact fluorescent lights are so appealing.

Timers that automatically turn lights on and off can reduce your energy use and at the same time increase safety by making a house seem occupied even when people are away.

Water Heating and Laundry Tips

--Wrap and reap (the energy savings). Wrapping your water heater with an insulating blanket can save \$20 annually if you have gas hot water or \$50 if you have electric. To see if your tank needs an insulation blanket, place your hand on the tank. If it feels warm then you need a blanket.

--Sort clothes by degree of dirtiness. Use shorter wash cycles for lightly soiled clothes.

Cooling Tips

--Consider using a dehumidifier instead of turning on the air conditioning. You will be comfortable at much higher temperatures if you reduce the humidity.

--Don't let a room air conditioner bake in the sun. Room air conditioners work best when kept cool. Installing the unit in a north-facing wall is ideal. Another option is to take advantage of shade from trees.

Message Sent To: _____

Russian Woes May Aid U.S. Emissions Goals

By JOHN H. CUSHMAN Jr.

WASHINGTON, March 31 — The United States and other industrial countries may find it easier and cheaper than expected to comply with a proposed treaty to fight global warming, thanks largely to reduced fuel consumption in Russia, the Government's energy-forecasting agency said today.

Because the agreement on global warming allows international trading of pollution credits as a way to control emissions of heat-trapping greenhouse gases like those that come from burning fossil fuels, more of the cuts that the treaty seeks may come from the former Soviet Union and less from the United States, the Energy Information Administration said in its annual long-range forecast.

That would mean that the United States, the world's leading source of greenhouse gases, could meet the treaty's targets without completely reversing its recent increases in emissions, which have grown with energy use as the domestic economy blossomed. But substantial reductions in emissions would still be needed.

The agreement, negotiated in Kyoto, Japan, in 1997 and signed last year by the Clinton Administration, has not been ratified by the Senate, where it faces significant opposition from lawmakers who say it would be too costly and would cause disruptive cuts in energy use.

The Kyoto Protocol calls for the United States to cut its emissions of

A global-warming treaty could benefit ailing economies.

greenhouse gases within 10 to 15 years to a level 7 percent below its emissions in 1990. Emissions in 1997 were 10 percent above the 1990 level and the energy agency has forecast that by 2010 they will be 33 percent above the 1990 level unless measures are imposed to reduce them.

But even as the United States and some other countries continue to burn more fossil fuels and to emit more carbon dioxide, the main greenhouse gas, Russia and its neighbors are burning and emitting less than previously forecast, the agency said today.

Under the treaty, countries that give off more greenhouse gases than the treaty allows may buy surplus reductions from countries that give off less than their targets.

The energy agency said the continuing depression in Russia and other former Soviet states was holding down energy use and would probably produce a huge bubble of emissions credits by the time the treaty is supposed to come into force, between 2008 and 2012. The expected emissions of carbon dioxide in Eastern Europe and the former Soviet Union in the year 2010 are likely to be 13 percent lower than predicted last year, the new forecast said.

These countries will have at least 374 million metric tons worth of carbon credits available to sell to other countries, it said. Last year, the agency forecast that these countries would have only 196 million metric tons of carbon credits. (Under the treaty, emissions of all greenhouse gases are tallied in units of carbon, one of the elements released when fossil fuels are burned.)

For countries like the United States whose emissions are growing far beyond the limits set by the treaty, the change is significant.

To meet the targets of the Kyoto Protocol, industrialized countries would need to eliminate about 822 million metric tons of carbon from their anticipated emissions.

"If the industrialized nations that have agreed to carbon emissions caps can purchase these credits, this level of trading alone would allow their carbon emission levels to rise by an average of 7 percent over 1990 levels, and still meet the Protocol's average emissions target of 7 percent below 1990 levels," the energy agency said.

Worldwide, the agency said, carbon emissions are expected to be 39 percent greater in 2010 than they were in 1990. While that is 4 percent less than the agency predicted last year, it suggests that the world as a whole is doing far less than needed to head off the risks of global warming.

Watch for colorful Part 2's of
The New York Times Magazine.

The debate over nuclear power continues

Your editorial "Media meltdown" (March 26), discussing the 20th anniversary of the meltdown of a nuclear reactor at Three Mile Island, the worst commercial nuclear disaster in this nation's history, missed the point of the lesson we must learn about nuclear power.

The threat posed to human health and safety is imminent because of unsafe reactors and the dangerous waste they generate. We seriously must consider how we generate electricity and how we deal with the environmental impact.

The Times has not adequately covered the ongoing threats to human health and safety in the inherently dangerous activity of splitting atoms. In 1985, the U.S. Nuclear Regulatory Commission testified to Congress that the risk of a meltdown at a U.S. reactor was 45 percent in the next 20 years. Do we really want to continue producing electricity in such a dangerous way when many safer alternatives exist?

America's 103 nuclear power plants generate radioactive waste that will remain hazardous for 240,000 years. Neither the atomic industry nor the federal government, which actively has promoted nuclear energy, has found a safe way of isolating the deadly waste from the environment in the long term.

Let's not forget how hazardous nuclear power is to our families. A rapid phaseout of nuclear power is

the only option that guarantees prevention of another disaster such as Three Mile Island.

KOREY HARTWICH

Organizer/legislative associate
Critical Mass Energy Project
Public Citizen
Washington

On March 28, 1979, a series of failures at the Three Mile Island nuclear power plant outside Harrisburg, Pa., cut off the flow of cooling water to the Unit 2 reactor, causing a partial meltdown of the core.

While it was sad and still is described as "the worst accident in American nuclear power," the only real harm done was the stress caused by the unwarranted hysteria that followed. As a result, the United States is virtually alone in not seeing nuclear power as a source of abundant, safe and environmentally friendly energy.

Nuclear power is widely and safely used around the world. Thirty-eight plants are under construction in 14 countries. France, which led Europe in reducing carbon dioxide emissions between 1980 and 1990, cutting them 26 percent on a per capita basis, gets almost 75 percent of its power from the atom. Worldwide, there are 442 nuclear plants in 30 countries, supplying 17 percent of the world's electricity and keep-

ing man-made carbon dioxide emissions 8 percent below what they otherwise would be.

It is ironic that the global warming treaty conference was held in Kyoto, Japan, a nation that has a right to be suspicious of the atom and yet plans to add 20 nuclear power plants to the 52 it already has in operation. Japan relies on the atom for a third of its electricity.

In 1996, America, then with 103 nuclear power plants, reduced carbon emissions by 147 million metric tons, more than double the 70 million-ton reduction plan called for in President Clinton's 1993 Global Climate Action Plan. Nuclear-generated electricity has accounted for 90 percent of all carbon dioxide emission reductions by U.S. electric utilities since 1973. In 1996, the carbon dioxide emissions avoided by the nation's use of nuclear power were the equivalent of taking three-quarters of all American cars off the road. America's nuclear reactors last year prevented the burning of 268 million tons of coal, 62 million barrels of oil and 983 billion cubic feet of natural gas.

If global warming is a threat, and if man-made emissions are a contributing factor, both debatable points on which the science is still unclear, we should be splitting atoms and not hairs.

DANIEL JOHN SOBIESKI
Chicago

The Washington Times

SATURDAY, APRIL 3, 1999

When Trucks and Buses Pollute

MARYLAND IS moving to eliminate a pet peeve of its car drivers: a double standard when it comes to air pollution. While car owners have had to submit their vehicles to emissions tests for the past 15 years, those big, smoke-belching diesel trucks and buses have been exempt. But now a bit of justice is in the air.

Under a measure headed for the law books, the state would begin testing the exhaust-pipe emissions from bus and truck diesels, which have been among the biggest polluters on the roads. Operators of offending vehicles would be fined. The proposal, pressed in Annapolis by State Sen. Jennie Forehand of Montgomery, passed the legislature after being blocked for 11 years by trucking lobbyists.

Now the Maryland Motor Truck Association supports the bill, chiefly because this

version would not require testing of all diesels, only those that appear to be below state air quality standards. One important provision: The program would apply to out-of-state trucks as well as those registered in Maryland.

Only a small number of states test diesel admissions; authorities say Maryland would become the first state in the mid-Atlantic region to fine operators of polluting diesel trucks and buses. State police and transportation authority officers are to run the tests at weighing stations, or they may pull trucks over along the highway for tests. Maryland-registered trucks that fail would be ordered to undergo repairs within 30 days.

There should be no excuse in any state for exempting diesel trucks or buses. The idea is to clean up the air, not to say who may or may not foul it.

The Washington Post

SATURDAY, APRIL 3, 1999

Study Sees Acid Rain Threat In Adirondacks and Beyond

Finding Could Aid a Push to Curb Pollutants

By JAMES DAO

For years, scientists have viewed the Adirondack Mountains in New York, where hundreds of lakes and streams can no longer sustain life because of chronically high acidity, as the region that suffers the most from acid precipitation.

To combat the problem, Senator Daniel Patrick Moynihan, the New York Democrat, has proposed legislation that would reduce the airborne pollutants — sulfur and nitrogen — that cause acid precipitation. But he has found minimal support in Congress, where some members think the problem remains isolated to New York and its neighbors, and others believe that the government has done enough to address the issue.

Now a new Federal report may provide important ammunition for New York's fight. The report, a comprehensive survey of recent research, concludes that despite important strides in reducing air pollution, acid precipitation remains a serious problem in the Adirondacks and is a growing threat in the southern Appalachians, Colorado's Front Range and elsewhere.

New York officials and environmentalists say the report will help broaden political support for Mr. Moynihan's legislation, breaking down the regionalism that has stymied such measures in the past.

So far, no member of Congress from south of New York has offered to co-sponsor the bill. But environmentalists say that will change.

"It's not New York against everyone else anymore," said Representative John Sweeney, a Republican who represents part of the Adirondacks and is a sponsor, with Representative Sherwood Boehlert, a Republican from Utica, of the House version of Mr. Moynihan's bill.

Opponents of such legislation, including utility companies, contend that existing laws are having an effect and just need more time to work. Coal-burning power plants concentrated in the Ohio River Valley are a major source of nitrogen and sulfur pollution.

In 1990, Congress adopted amendments to the Clean Air Act that were intended to see that by the next decade, coal-fired power plants and other industries had cut their sulfur dioxide and nitrogen oxide emissions by half. Last year, the Federal Government also ordered 22 states in the East and Midwest to reduce emissions of nitrogen oxide, mainly during the summer.

"These policies are going to get you where Moynihan's bill will get you," said John Kinsman, manager for atmosphere science with the Edison Electric Institute, a trade association of shareholder-owned electricity utilities. The group has not taken a public position on Mr. Moynihan's bill.

Acid precipitation occurs when sulfur or nitrogen, which drift eastward on the prevailing winds, mix with moisture in the atmosphere to form sulfuric or nitric acid and fall as acid rain, snow or fog. Dry nitrogen and sulfur pollution also turn to acid when deposited in waterways or mixed with moisture in the soil.

The new Federal report was produced by the National Acidic Precipitation Assessment Program, a consortium of agencies that includes the Federal Environmental Protection Agency and the National Oceanic and Atmospheric Administration. Although the report has been available on the Internet, it has not been printed or widely distributed yet. Officials expect to release bound copies next month.

The new Federal report provides much good news about the 1990 amendments, saying that they have effectively and relatively inexpensively reduced sulfur emissions and acid precipitation in much of the country. For that reason, the report may also be used by opponents of Mr. Moynihan's bill.

But the report also issues numerous warnings about the observed and theoretical effects of continued acid rain. And though it does not break new scientific ground, it provides evidence from recent research that acid precipitation is both more complex and intractable than had been thought 10 years ago.

Among its findings:

¶High elevation forests in the Colorado Front Range, the Allegheny Mountains in West Virginia, the Great Smoky Mountains in Tennessee and the San Gabriel Mountains near Los Angeles are saturated or close to saturated with nitrogen. (Excess nitrogen can seep from saturated soils into nearby streams and lakes, causing them to become more acidic.)

¶The Chesapeake Bay is suffering

**Some say present
clean-air laws are
sufficient.**

from excess nitrogen, some of it from air pollution, which is causing algae blooms that suffocate other life forms.

¶High-elevation lakes and streams in the Sierra Nevada, the Cascade Range and the Rocky Mountains may be on the verge of suffering chronically high acidity.

¶Many waterways in the Adirondacks are becoming more acidic even as sulfur deposits decline. The environmental agency has projected that by 2040, about half the region's 2,800 lakes and ponds will be too acidic to sustain much life.

Although it offers no concrete solutions, the report concludes that further reductions in sulfur and nitrogen pollution may be necessary to protect those sensitive regions. "If the rates of deposition of both sulfur and nitrogen are not reduced further, they will continue to degrade forests, lakes and streams," a news release accompanying the report says.

Many scientists who study acid rain say the report offers strong arguments for Mr. Moynihan's bill.

"It's been the near consensus of scientists that the Clean Air Act amendments haven't gone far enough," said Jack Cosby, a professor in the University of Virginia's Department of Environmental Science.

Armed with draft copies of the Federal report and their own studies, New York environmental groups have joined forces with organizations like Trout Unlimited in Virginia, West Virginia, Tennessee and North Carolina to lobby Congress to pass Mr. Moynihan's bill.

"In a weird way, this has been good for New York," said John Sheehan, a spokesman for the Adirondack Council, an environmental group. "It bears out the warning that we issued more than 10 years ago: that the Adirondacks are the canary in the coal mines. We're dying first, but that doesn't mean everybody else is immune."

The New York Times

MONDAY, APRIL 5, 1999

Acid Rain's National Reach

When people think of the ravages of acid rain, they tend to think mainly of dead and dying watersheds in the Northeastern United States, particularly those in New York's Adirondack Mountains, where hundreds of highly acidified lakes and streams can no longer sustain aquatic life. But an exhaustive Federal study has now concluded that acid rain has spread its poisons far and wide, damaging sensitive watersheds in the Southeastern United States and in ecologically significant areas of the West like the Sierra Nevada, the Cascade Range and some parts of the Rocky Mountains.

These findings are disturbing. But they could also recruit new allies to the unfinished struggle against acid rain. They could broaden political support for legislation sponsored by New York's Senator Daniel Patrick Moynihan that would reduce the airborne pollutants — sulfur and nitrogen — that create acid rain. They could also provide further justification for the Administration's efforts to tighten pollution controls on power plants and other sources of nitrogen oxides.

The study was produced by a Federal panel, the National Acidic Precipitation Assessment Program, established 20 years ago at Mr. Moynihan's urging to study a problem about which little was known. In 1990 Congress confronted the problem for the first time, ordering coal-fired utilities and other industries to halve their emissions of sulfur dioxide, the main cause of acid rain, over the next decade. Nitrogen was also regulated by the 1990 law because it causes smog, a serious health hazard. But not until the mid-1990's was nitrogen recognized as a significant contributor to acid rain as well.

The report shows that emissions of sulfur dioxide have declined sharply and at relatively low cost, due mainly to the 1990 law and an innovative

financial system under which pollution credits are traded on the open market. The report also suggests that the law and subsequent regulations aimed at reducing nitrogen oxides from power plants should have a positive effect, though the evidence so far is sketchy.

But the problem is far from solved, and in some areas may be much worse than anyone thought. If present trends continue, the report warns, about half the Adirondacks' 2,800 lakes and streams will be too acidic to support life by the year 2040. The San Gabriel Mountains near Los Angeles are "saturated" with nitrogen, or close to it — meaning that excess nitrogen is seeping into nearby lakes and streams. Watersheds in other Western ecosystems are similarly afflicted.

The report thus provides a solid argument for Mr. Moynihan's bill, which has two New York Republican sponsors in the House, John Sweeney and Sherwood Boehlert, but few signatures in either the House or Senate. The bill would provide for a further 50 percent cut in sulfur emissions beyond those mandated by the 1990 amendments — resulting in a 75 percent cut from 1990 levels by 2005. It would also require cuts of 70 percent in nitrogen oxides from power plants by 2005, and establish an emissions trading system similar to the successful sulfur dioxide scheme.

The 1990 law focused mainly on Midwestern power plants, but the Moynihan bill would cover plants nationwide, and would therefore not put utilities in any single region at a competitive disadvantage. The national scope of the bill should also appeal to Congressmen who until now had believed that acid rain was a local problem, of interest only to Northeastern environmentalists. The new Federal report says it is nothing of the sort.

THE NEW YORK TIMES
SATURDAY, APRIL 10, 1999

Zhu cites progress in assuring rights

Seeks U.S. expertise to fix environment

By Gus Constantine
THE WASHINGTON TIMES

AI

Chinese Prime Minister Zhu Rongji yesterday repeated his promise to cooperate with the investigations of allegations of Chinese nuclear espionage and illegal campaign contributions but brushed off U.S. concerns as "no big deal."

In an interview with Jim Lehrer on the Public Television program "NewsHour," the Chinese leader also acknowledged that "China still has shortcomings in its handling of human rights," but argued that "there have been very significant improvements in human rights" and called the rights enjoyed by the Chinese people today "unprecedented."

Mr. Zhu gave his first lengthy interview of the visit to Mr. Lehrer, whose news program also interviewed the Chinese leader nine years ago when he was still mayor of Shanghai.

Last night, at a reception hosted by the National Committee on U.S.-China Relations and six other organizations, Mr. Zhu reviewed his round of talks and his interview with Mr. Lehrer.

"I know this program for a long time, but the day was terrible. I felt I was being cornered," Mr. Zhu said, then laughed, turning his re-

mark into a joke. The prime minister also stressed his interest in expanding China's cooperation with the United States on environmental matters.

Mr. Zhu faced a barrage of tough questions during the Lehrer television interview.

He was asked why China is so critical of NATO bombing of Yugoslavia when the issue for NATO is ethnic cleansing. He was pressed to defend statements a day earlier that China's entry into the World Trade Organization has more to do with the political atmosphere in Washington than with the negotiated terms of trade.

He was pushed to define what kind of relationship China wants with the United States.

"Do you want to — should we be friends? Should we be allies? Should we be competitors?" Mr. Lehrer asked.

Mr. Zhu responded with a single phrase. China wants "a constructive strategic partnership."

The Chinese leader's interview broke no new ground on Beijing's view of the world; its cautious, if not hostile, reaction to U.S. power projection; and its dependence on American technology for continued economic growth and prosperity.

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The Washington Times
SATURDAY, APRIL 10, 1999

From page A1

Earlier yesterday, Mr. Zhu and Vice President Al Gore joined a conference on the environment to emphasize the need of the United States and China to cooperate in environmental cleanup. The two nations are the biggest emitters of so-called greenhouse gases.

At a U.S.-Chinese conference on development and the environment, the Chinese leader said American technology exports could help China overcome its pollution — a move that would reduce China's trade surplus while clearing its air.

"If that happens, I will be very happy," he told the conference. China last year piled up a \$57 billion surplus in trade with the United States, according to U.S. estimates. Only Japan with a \$64 billion surplus benefited more.

The proposal paralleled Mr. Zhu's grand gesture Thursday in which he offered China's cooperation in the investigation of his country's suspected theft of nuclear secrets — if the United States furnished him with clues on what it was looking for.

In a flurry of last-minute bargaining Thursday, China had also made big concessions to lower trade barriers for American financial service firms, telecommunica-

tion companies and a wide array of other U.S. industries anxiously hoping to gain entry to China's vast market.

A deal still didn't come together, however, and the Associated Press said many trade experts think President Clinton may have let a golden opportunity slip away.

The administration, faced with congressional anger over allegations of Chinese nuclear espionage and human rights violations, insisted yesterday it had no choice but to demand even further Chinese concessions to have a hope of winning necessary congressional support.

In his speech last night, Mr. Zhu said: "We have truly made very, very major concessions. Despite all the concessions, the U.S. continues to press for further concessions."

Yesterday morning, Mr. Zhu met at Blair House with nearly a score of U.S. lawmakers, including Rep. Benjamin A. Gilman, New York Republican and chairman of the House International Relations Committee; Sen. Max Baucus, a Montana Democrat; Senate Finance Committee Chairman William V. Roth Jr., Delaware Republican; and Rep. David Wu, an Oregon Democrat.

Mr. Wu later issued a statement, saying he was "deeply concerned

that the recent suppression of political and religious freedom critically undermines China's credibility in the international arena."

He said Mr. Zhu "acknowledged that there were conflicting views on the issue and stopped there," citing time constraints. A spokesman for Mr. Wu said the congressman "found the reply completely unsatisfactory."

Mr. Roth, in a statement after discussions with the Chinese leader, warned that the "relationship has entered a critical phase, one beset with great challenges but also one holding great potential opportunity."

On China's entry into the World Trade Organization, the senator said "more work needs to be done."

The prime minister's encounter with the legislators appeared to be part of a grand strategy for the visit — to acknowledge controversy, say little about it and move on to the more congenial arena of bilateral cooperation.

Mr. Zhu's visit is being closely watched in Taiwan, where wire services said yesterday the government of President Lee Teng-hui was upset by Mr. Zhu's remarks Thursday in which he refused to rule out the use of force against what Beijing sees as a renegade Chinese province.

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pg 2 of 2

Russian Nuclear Power Company Looks to West for Bailout

By MATTHEW L. WALD

WASHINGTON — The company that operates 29 nuclear power plants in Russia, long unable to collect cash for its electricity sales, is looking for investments from Western governments or companies interested in sharing control of the reactors.

The director general of the Russian Electric Power Company, touring the United States with a group of Russian nuclear officials, said in a recent interview that the enterprise is expected to run a deficit of \$60 million this year, \$200 million next year and \$400 million the year after that.

The company lacks money to pay workers, perform maintenance and repairs, inspect crucial pipes and even buy fuel, said the official, Sergei N. Ivanov. At times the plants have only two or three days of fuel on hand, he said.

"To prevent possible catastrophes in the field of nuclear power, we need to organize some kind of new international body that will supervise the work of this network, not only from the point of view of technical support, which is usual, but financial investment support," Mr. Ivanov said. The international group, he said, would manage the investments in the plants directly, rather than sending the funds through "well-known Government thieves." Day-to-day operations would remain in Russian hands.

The prospects for such investments seem uncertain at best. The proposal is another sign of the tremendous change in Russia, and in the nuclear industry that, through most of the post-Soviet era, was tightly linked to weapons production. While cash shortages are endemic throughout Russian business and industry, nuclear power officials point to the obvious fact that reactor problems in Russia could affect other nations. They argue, therefore, that other nations, including the United States, should help find solutions.

One anticipated difficulty is that Mr. Ivanov would like to use some of the foreign investment money to complete three partly built reactors — one of which has the same design as the reactors at the Chernobyl nuclear plant in Ukraine, scene of the 1986 explosion and fire. Two others are similar to Westinghouse plants in

the United States.

"They're in a state of intense desperation," said Stephen Kotkin, director of Russian studies at Princeton University. He met with Mr. Ivanov and other Russians when the delegation visited a conference on the world economy last month at the Milken Institute, a research organization in Santa Monica, Calif.

"They have some knowledge of market economies and they have a fantasy that outsiders will invest," said Professor Kotkin. "Equity interest, bonds — they'll go for anything. Everything is negotiable."

"Without some help, though," Professor Kotkin said, "this is going to blow."

Clinton Administration officials said the effort seemed highly preliminary. One Administration expert said the Russians have little of the data they would need to interest Western investors — including estimates of their costs. They also lack clear prospects of selling power to customers who can pay cash that, in turn, could be used to repay loans or provide dividends on investments.

In addition, groups in the United States that usually oppose operation of nuclear reactors in this country have argued that giving aid to improve safety at Russian plants may only prolong the lives of those plants, when it would be even safer to let the plants be closed. The idea of spending Western money to build additional reactors in Russia, especially a graphite-moderated model like the one that exploded at Chernobyl, would be extremely unpopular with some groups.

The unfinished graphite reactor is at Kursk; there are unfinished water-moderated reactors, similar in outline to American models, at Kalinin and Rostov.

A Russian delegation — which includes the director of the company that owns the non-nuclear generating stations and the transmission network and the director of the agency that regulates nuclear safety — has been meeting with Government and private officials in Los Angeles and New York.

The Russian problem, say members of the delegation and Americans who have studied the Russian situation, is in part the structure of their electric industry, which has many inefficient plants. But, on top of that, only 30 percent to 40 percent of electric bills are paid in currency. The rest is paid in barter goods, priced by the producer, often at unrealistically high values.

The money goes to provincial utilities and to the Unified Energy System of Russia, which owns the non-nuclear generating stations and the transmission lines. Unified Energy spends much of the money on natural gas and coal to fuel its own plants, because miners and drillers can demand money or export their product to other countries that will pay in hard currency, American analysts say. But the nuclear power company has no such leverage.

The nuclear power company receives only about 10 percent of its payments in currency, said one American official. Another 60 percent or so is barter, and some of the bills simply go unpaid. Mr. Ivanov confirmed this. He said that industrial customers tend to offer whatever they produce as payment — steel, chemicals or manufactured goods — but that others, like hospitals and army bases, offer nothing at all.

One Clinton Administration official, speaking on the condition of anonymity, said many of the Russian plants are approaching the end of their 30-year design lives and show symptoms of age.

The Russian company would like to close nine of its older reactors, but it says it has no money for decommissioning them. It says its best prospect for earning that money is to build additional reactors and sell the power.

The New York Times
MONDAY, APRIL 12, 1999

DOUG BANDOW

April 12, 1999

Nurturer with a mailed fist

In between inventing the automobile, penicillin and electricity, growing up as a missionary on the Amazon and supporting his fatherless family of 13 as a boot-black, and inspiring hit musicals and epic poetry, Vice President Al Gore is acting as a commander in chief wannabe.

His role as propagandist on behalf of the administration's disastrous war of aggression in the Balkans is reason enough to reject him in the year 2000. But his record on domestic issues is even worse.

The vice president's campaign minions are saying that he is a tough leader who pushed for military action against Yugoslavia. Mr. Gore certainly is talking tough: "Milosevic has barely begun to incur the damage he will feel."

Of course, Mr. Gore probably couldn't do worse than Bill Clinton, who has bungled every step. Were the latter commander in chief during World War II, we would all be speaking German.

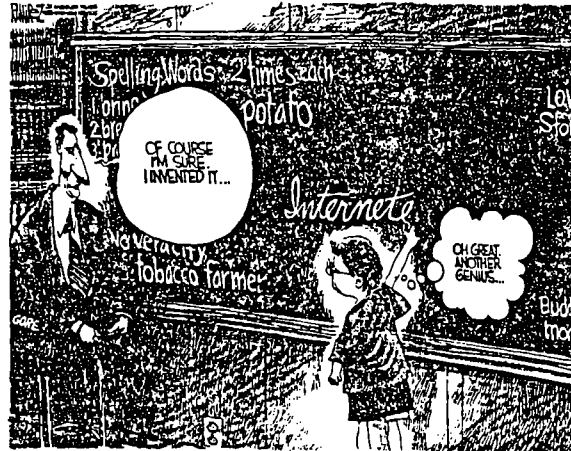
However, Mr. Gore is attempting to do more than score political points by warmongering for peace. Of late, he's been battling airlines over compensation for lost bags and pushing to create a special phone number to call about traffic jams. For this, newly independent American Colonies created a national government?

A Gore associate explained that such measures will "add up to something more thematic, something bigger." And they do. The vice president once said he believes government should be "like grandparents, in the sense that grandparents perform a nurturing role."

But Mr. Gore prefers to "nurture" with a mailed fist. As former ABC correspondent Bob Zelnick puts it in his devastating new book, "Gore: A Political Life" (Regnery): "Al Gore Jr. was a child of government and a student of government who grew up to be a man of government."

The vice president has been traversing the country telling audiences he embodies "practical idealism." However, he has been able to cultivate the image of a moderate primarily because he once took more conservative stands on security and social issues. But 28-year-old candidate Gore ran a populist economic campaign — higher taxes on the rich, support for public jobs creation — to win election in 1976 to Congress from Tennessee.

He generally fit well within the Democratic caucus. He was a reliable supporter of new spending programs, whether business subsidies or redistributive entitlements; higher taxes, especially on the upper-middle class; increased regulation, particularly for environ-



PATRICK MICHAELS

Chimera of global warming

Ten years ago the Alps endured a virtually snowless winter. Environmentalists blamed global warming. A Swiss lobbying group, Alp Action, wrote in 1991 that global warming would put an end to winter sports in the Alps by 2025.

This year the Alps have had their greatest snowfall in 40 years, according to very preliminary data. Greenpeace has blamed global warming.

How in the world can that be? Is it possible to blame global warming for every weather anomaly, even if two consecutive events are of opposite sign? Can such a claim have "scientific" justification?

If one regards the United Nations as an authority on such things, the answer, unfortunately, is yes. Global warmers, thanks to the good offices of the U.N. Intergovernmental Panel on Climate Change, can blame any weather event on pernicious economic prosperity and resultant greenhouse gas emissions.

The most recent IPCC summary on climate change was published three years ago. IPCC purports to be the "consensus of scientists" but in fact is a group of individuals

hand-picked by their respective governments. Does anyone really expect Al Gore to send me to represent the United States at one of those meetings? (Thank you, no, I have been to one and that was enough.)

Absent my sage advice, here's what the United Nations wrote in 1995: "Warmer temperatures will lead to . . . prospects for more severe droughts and/or floods in some places and less severe droughts and/or floods in others."

As a punishment for not cleaning out the cat box, you might ask your kid to diagram this sentence. Rather than strain the graphics of this word processor, we'll simply parse it. What the IPCC is saying is that global warming will cause in "some places" and/or "others":

- More intense wet periods.
- More intense dry periods.
- More intense wet and dry periods.
- Less intense wet periods.
- Less intense dry periods.
- And less intense wet and dry

periods.

So, according to the "consensus of scientists," it's OK to blame a flood, or, if you're in the mountains, a flood of snow, on global warming. It's also OK to blame a drought or a snowless Alp on global warming.

It's even OK to blame weather that is more normal than normal ("less intense wet and dry periods") on global warming.

The IPCC statement, which cannot be proved wrong, is a cynical attempt to allow anyone to blame anything on global warming. As Julius Wroblewski of Vancouver, Canada, wrote to me, this logic "represents a descent into the swamp of the non-falsifiable hypothesis. This is not a term of praise. Falsifiability is the internal logic in a theory that allows a logical test to see if it is right or wrong."

A non-falsifiable theory is one for which no test can be devised, and the U.N. statement fits the bill perfectly. There is simply no

observable weather or climate that does not meet its criteria, except one: absolutely no change in the climate, meaning no change in the average weather or the variability around that average.

Every climatologist on the planet knows that is impossible. Climate has to change because the sun is an inconstant star and the Earth is a nonuniform medium whose primary surface constituent, water, is very near its freezing point. Freezing (or unfreezing) water makes the planet whiter (or darker), which affects the degree to which it reflects the sun's warming rays. A flicker of the sun, therefore, ensures climate change.

A hot young climatologist named Robert Mann, writing in *Geophysical Research Letters*, recently provided a powerful demonstration of this phenomenon. Using long-term records from tree rings and ice cores, he concluded that the planet was on a 900-year cooling streak between 1000 and 1900.

Then we warmed up almost twice as much as we had cooled, but at least half of that warming was caused by our inconsistent sun. Two NASA scientists recently demonstrated that the sun has been warming throughout the last 400 years. As a result, if the last decade weren't among the warmest in the last millennium, something would have been wrong with the basic theory of climate: The sun warms the Earth.

That doesn't mean we haven't supplied a bit of greenhouse warming, too. But greenhouse warming behaves differently than pure solar warming: It occurs largely in the coldest air masses of winter.

That's a far cry from the United Nation's nonsense about "some places" and "others" experiencing more unusual, less unusual or unusually usual weather. And it has nothing to do with avalanches or snowless winters, either.

Patrick J. Michaels is a senior fellow in environmental studies at the Cato Institute and science adviser to the *Greening Earth Society* in Arlington.

Environmentalists Criticize Gore

Groups Cite Broken Promises on 'Global Warming Pollution'

By CHARLES BABINGTON
Washington Post Staff Writer

Major environmental groups sharply criticized Vice President Gore yesterday, accusing him and President Clinton of reneging on promises to reduce pollutants that cause global warming.

The unusually stern and public rebuke comes from a constituency that the vice president clearly is counting on for support in the 2000 presidential campaign. Gore, who wrote a book titled "Earth in the Balance," has portrayed himself as an environmental champion and leader in combating global warming.

In a four-page letter addressed to Gore, nine prominent environmental organizations expressed "deep disappointment with the lack of an administration proposal to require significant reductions in global warming pollution. We are particularly frustrated that the administration has not sought meaningful emission reductions from either power plants or passenger vehicles."

The letter was signed by the heads of the Sierra Club, Environmental Defense Fund, Izaak Walton League, National Environmental Trust, Natural Resources Defense Council, Physicians for Social Responsibility, Union of

Concerned Scientists, U.S. Public Interest Research Group and World Wildlife Fund. Officials said they decided to go public because earlier complaints to Gore and other officials had been ignored.

Todd Stern, White House climate change coordinator, said in

sions reductions while maintaining strong economic growth."

But Philip E. Clapp, president of the National Environmental Trust, said in an interview that "repeated promises have been broken." He said Clinton and Gore in their 1992 and 1996 campaigns vowed to take "concrete measures" to reduce greenhouse gases that damage the ozone layer and contribute to global warming. Many such gases come from automobiles and coal-burning electrical power plants.

Clapp and the others did not close the door on supporting Gore. "The American public expects strong environmental leadership from this administration, and particularly from the vice president, and he needs to demonstrate that over the next two years," Clapp said.

The letter said the Clinton administration has not taken steps to achieve the goals it embraced in the 1992 Rio Climate Treaty, which calls for reducing greenhouse gas emissions to their 1990 levels by 2000.

Gore spokesman Chris Lehane said, "Al Gore has shown for the last six-plus years that you can balance the economy and the environment. We now have both the strongest environment and the strongest economy in a generation."

"The American
public expects
strong
environmental
leadership from
this
administration."

—Philip E. Clapp, president,
National Environmental Trust

response to the letter: "Despite strong resistance in Congress, this administration is moving aggressively on both the domestic and international fronts to meet the challenge of global warming. We believe our common-sense strategy will achieve the necessary emis-

Tighter Rules Likely on Autos and Gas

Environmental Move Could Increase Cost of Sport Utility Vehicles

By KEITH BRADSHER

DETROIT, April 13 — The Clinton Administration is preparing to announce as early as next week that it will require cleaner gasoline and tougher pollution standards for autos, including forcing large sport utility vehicles and pickup trucks to meet the same emission standards as cars, people involved in the issue say.

While environmentalists are pleased, the oil and auto industries are worried because the move could bring price increases both for gasoline and sport utility vehicles.

The Environmental Protection Agency drafted a proposal two months ago for stricter rules on vehicles and gasoline and submitted it for an interagency review, which is now in its final stages.

Administration officials said today that some decisions had not yet been made on the new rules, which could bring cuts of up to 93 percent in pollution from large sport utility vehicles and pickup trucks. Last-minute lobbying could still lead to further changes. But environmentalists and industry lobbyists say they believe the final plan is likely to closely resemble the agency's proposal, which calls for a crackdown that the oil industry in particular has criticized as excessive.

Strict rules could provoke a fight between the Administration and Congress. Some Republican senators have already warned the Administration against what they perceive as regulatory excess.

Senator James M. Inhofe, the Oklahoma Republican who heads the clean air subcommittee of the Environment and Public Works Committee, has already begun drafting legislation to cancel the gasoline cleanliness rules. But any such legislation is likely to face a Presidential veto.

The Administration is still working on whether to allow a longer timetable for industries to meet the new rules, but it seems likely to set the eventual levels of allowable pollution at roughly what the E.P.A. proposed, said lobbyists on both sides of the issue who have been discussing the details with the Administration.

"It would be my expectation that they would keep it as they originally talked about it," said Josephine Cooper, president of the Alliance of Automobile Manufacturers, which is based in Washington.

William O'Keefe, executive vice president and chief operating officer of the American Petroleum Institute, the oil industry's lobbying arm, said the Administration was considering whether to add to the E.P.A. proposal a complex system of credits for oil

companies that make early changes in gasoline. But he dismissed this idea as inadequate, and said that, "So far, we don't know that we've gotten anything."

Daniel Becker, senior energy policy analyst at the Sierra Club, said that based on his understanding of the planned rules, he was satisfied and wanted the Administration to move as quickly as possible. Once the interagency process is completed, the rules must be issued for public comment and then issued in legal form. If that process lasts past the end of the year, the auto industry could seek an extension for some deadlines in the new rules.

"The Administration can't let that happen and let us lose a year," Mr. Becker said.

A crackdown that may provoke a fight between the White House and Congress.

Current Federal regulations allow cars to emit four-tenths of a gram of smog-causing nitrogen oxides for each mile traveled. Minivans and the smaller sport utility vehicles and pickup trucks are allowed to emit seven-tenths of a gram per mile, while the larger sport utility vehicles and pickup trucks are allowed 1.1 grams per mile.

The limits on all but the larger sport utility vehicles and pickup trucks are already scheduled to be tightened next year. The Clean Air Act of 1990 explicitly allows the issuance of new rules now for vehicle pollution and the cleanliness of fuel, and the E.P.A.'s proposal would require much deeper cuts for all family vehicles. Under a rule that would gradually take effect for vehicles built from 2004 to 2007, the limit would be seven-hundredths of a gram of nitrogen oxides per mile for cars, minivans and the smaller sport utility vehicles and pickup trucks.

Large sport utility vehicles and pickup trucks would also be required to meet this tough standard starting with the 2009 model year. This would mark the first time that these vehicles would be regulated like cars, something several administrations had been reluctant to do until recently because these large vehicles are mainly sold by domestic auto makers, for which they produce huge profits and tens of thousands of jobs.

But with big sport utility vehicles in particular being used now as oversized cars rather than work vehicles, and with sales soaring and environmentalists starting to complain, the E.P.A. changed its position.

The new rules would not affect large commercial trucks or vehicles already on the road. Officials of the environmental agency said that without new rules, air pollution would start worsening again about 2010, as Americans drive ever more miles in ever bigger vehicles.

The E.P.A. plan would also require a 91 percent cut, phased in from 2004 to 2006, in the level of sulfur in gasoline. Sulfur, a naturally occurring contaminant of crude oil, clogs catalytic converters and dramatically increases pollution.

The auto industry's criticism of the Administration plan has been muted by Detroit's delight at the prospect of deep cuts in the sulfur in gasoline. This will make it much easier for Detroit to meet future emissions standards, at least for a while.

But Ms. Cooper of the auto makers alliance said further cuts in sulfur would be needed after 2006 to make sure that all of the Administration's pollution targets could be met. Auto makers maintain that even with the cleaner gasoline, designing ever cleaner engines and better catalytic converters could add several hundred dollars to the cost of a car and more to the cost of a sport utility vehicle. It is unclear how much of this extra cost could be passed on to the public if competition remains fierce in the auto market.

Seeking a greener image, the Ford Motor Company has begun voluntarily building all of its sport utility vehicles to be as clean as current cars. But even Ford executives have expressed worries about the new standards in 2009 for large sport utility vehicles and pickup trucks. Ford and other auto makers want a mandatory review in 2004 of the new rules; no decision has been made.

Unlike the auto industry, the oil industry gains nothing from the new regulations, and so is very unhappy. Mr. O'Keefe of the petroleum institute said the rules could add 5 or 6 cents to the price of a gallon of gasoline. This, he contended, is an unnecessary expense for people living in states with few air quality problems.

The auto makers have suggested that the extra cost might be only 2 or 3 cents a gallon, but Mr. O'Keefe said this assumed that new refining techniques, so far only proven in the laboratory, could be introduced on a commercial scale.

More Alaskan trees protected

234,000-acre federal reserve stymies loggers, developers

ASSOCIATED PRESS

In a move to increase protection for ancient trees in the nation's largest forest, the Clinton administration is placing 234,000 Alaskan acres off-limits to logging and other development.

The changes in the 17 million-acre Tongass National Forest in Alaska are also aimed at helping protect such species as the Sitka black-tailed deer and Alexander Archipelago wolf and should lead to the development of fewer roads in pristine areas.

"What we're trying to do is strike a sustainable balance up there, both for the natural resources that are nationally significant as well as a sustainable source of timber for the forest products industry in southeast Alaska," Agriculture Undersecretary Jim Lyons said in a statement yesterday.

The changes will come in the form of an update to the 1997 management plan for the Tongass. The plan will be in effect at least until 2007, Mr. Lyons said, adding that the decision is intended to end the

33 separate appeals that have been filed against the 1997 plan.

The updated plan cuts the maximum allowable timber harvest in the Tongass by 30 percent a year; land open to logging will be reduced by 15 percent to about 576,000 acres.

Also under the new plan, nearly half of the land that may be used for logging can be harvested only once every 200 years, instead of once every 100 years.

Mr. Lyons said the changes also will help sustain the forest industries, as the allowable timber harvest remains well within the projected demand for timber from the region in coming years.

But a timber industry representative said that the new maximum allowable harvest is below real demand and that the changes could put at least one sawmill in the region out of business.

"It confirms our worst fears that this administration is determined to drive the last nail in the coffin of southeast Alaska's timber-based economy," said Jack Phelps, ex-

ecutive direct of the Alaska Forest Association, which represents 300 forest products companies.

Bart Koehler, executive director of the Southeast Alaska Conservation Council, one of the groups that filed a 150-page appeal to the 1997 plan, said he is pleased with the changes.

"We're relieved that we're finally getting a decision," he said. "We're also feeling very good about some very significant additional protections for some very important wild lands and watersheds in the Tongass."

The decision will increase protected forest land in the Tongass to nearly 13.7 million acres, up from more than 13.4 million acres currently.

Of the 234,000 additional acres being protected, 100,000 had been deemed as suitable for logging. The other 134,000 were not considered suitable for logging, and the decision ensures they won't be available for logging for the life of the management plan.

The changes take effect Oct. 1.

Proposal for Electricity Deregulation Would Give FERC Broad New Powers

By JEANNE CUMMINGS
And JOHN J. FIALKA

Staff Reporters of THE WALL STREET JOURNAL

WASHINGTON—The Federal Energy Regulatory Commission would gain sweeping new powers and closely held electric utilities would face even higher requirements for using solar, wind and other renewable energy sources under a new version of an electricity deregulation bill that the White House will unveil today.

The proposed industry restructuring also would allow the Tennessee Valley Authority and other federal utilities to compete with the private sector and calls for states to clear the way for consumers to be able to choose their electric companies by 2003.

"The administration's comprehensive electricity competition legislation will fundamentally change how we purchase electricity and how producers provide it, signaling a new era of consumer choice," said Energy Secretary Bill Richardson.

Aiding the Economy

Department of Energy officials predict that the legislation would help the economy by increasing competition, the environment by reducing conventional power usage, and consumers by saving about \$20 billion annually in electricity and the cost of products produced by electricity.

The measure represents the administration's second effort at deregulating the far-flung power industry. A proposal it offered last year never emerged from congressional committees. The revised version is also expected to face a difficult course, and electric-power industry officials already are taking aim at the mandate on use of renewable energy.

"We find this tremendously unrealistic, and think it would undermine the marketplace," said David K. Owens, executive vice president of the Edison Electric Insti-

tute, which represents closely held utilities.

Under the proposal, a utility would have to provide 7.5% of its power from renewable energy sources by 2010—two percentage points more than the standard in last year's bill that was decried by environmentalists as too small.

But environmentalists will likely press for an even higher mandate while the industry, which now produces just 1% of its power with renewable sources, will press for a reduction. Industry officials also are miffed that the proposed bill doesn't regard hydropower, or electricity created by dams, as a renewable energy source. Environmentalists oppose the inclusion of hydropower because they hope to get rid of dams, which they say will reduce flooding of scenic areas and help restore such badly depleted fish populations as salmon.

Another Industry Concern

The proposed expansion of FERC's powers is also sending tremors through the power industry. Among the commission's new authorities will be the power to order competitive access to transmission lines, create regional grid-management agencies and review the effects of utility mergers. The bill would also create a new board, the Electricity Outage Investigations Board, which would conduct investigations and make recommendations to prevent major outages.

The plan would establish a \$3 billion Public Benefits Fund to maintain energy-conservation programs and assistance to low-income households. Those programs are currently operated by utility companies, but DOE officials fear the industry's emphasis on efficiency and competition will bring an end to the programs.

States that have already revamped their utility regulations could receive exemptions from the federal bill.

S. FRED SINGER

Global warming whining

After a cold winter, it's easy to convince people that warming would be a good thing. What is new and surprising is that a warmer climate would, overall, be good for Americans, improve the economy, and put more money in the pockets of the average family. Good news for taxpayers the day after the filing deadline.

And how do we know this? Well, a team of 26 respected economists, led by Yale Professor Robert Mendelsohn, has taken a closer look at the evidence. They have re-evaluated the United Nations report that has been used to justify the drastic policies of energy rationing and taxes, demanded by the 1997 Kyoto Protocol (to the 1992 Global Climate Treaty). Where the U.N. report found only economic losses from warming, the new study, just published by the prestigious Cambridge University Press, finds mostly gains. (Ironically, the CUP also published the 1996 U.N. report.)

What a refreshing thought — after listening to the "Chicken-Littles" in academia and the media telling us about the horrors of greenhouse warming.

According to our vice president, it is the "greatest challenge facing the United States in the coming century." (Having invented the Internet and mastered spelling, he has also anointed himself as a leading expert on climate catastrophes.) Not nuclear war, not terrorist attacks with biological and chemical weapons, but an extra degree of temperature in the next 100 years — or perhaps 2 degrees (if you believe the theoretical calculations). Really? Who can take this perverted sense of priorities seriously?

Returning to the new economic study, what accounts for this remarkable turnaround? Mostly commonsense, but also a much better methodology for calculating the effects of climate change for dif-

ferent economic sectors: agriculture, forestry, water resources, energy, coastal structures, commercial fishing and recreation.

The common sense comes in considering that farmers are not dumb; they will adapt to changes — as they always do. They will plant the right crops, select the best seeds, and choose the appropriate varieties to take advantage of longer growing seasons, warmer nights, and of course the higher levels of carbon dioxide that make plants and trees grow faster.

One should not be too hard on the U.N. report. It didn't try to break any new ground. It merely collected five readily available studies, mostly from "climate worriers" (the upper-middle-class overanxious) who wanted to show how bad warming really is. The U.N. report reprinted their conclusions, without much analysis. Had the editors looked more closely, they would have noticed something quite interesting: While all five studies showed losses of around 1 percent of GNP (actually from 0.3 to 1.2 percent), the individual sector losses showed much larger disparities between the studies up to a factor of 50 for timber losses! Not exactly confidence-inspiring.

So now we are pretty sure that global warming will be beneficial rather than a threat something already anticipated by Hoover Institution economist Thomas Gale Moore in his new book "Climate of Fear: Why We Shouldn't Worry About Global Warming." What will this new knowledge do for the public, for economists, and for politicians?

Well, the public is not likely to hear much about this blockbuster. There has been no publicity, not even from the publishers. The dust jacket of the book doesn't hint at the startling conclusion. Are there conspirators out there trying to hide it? The book is mentioned in the journal *Science* but without much enthusiasm. There hasn't been a word about it from the White House; but we wouldn't expect it. If only they would attack it; that would create some publicity and get the media to read and report on it.

That leaves the ball in the court of the politicians. Will the 95 senators who voted against a Kyotolike policy please take note and use this result?

Perhaps the battle cry of the coming presidential campaign should be "Stop Global Whining."

S. Fred Singer is professor emeritus of environmental sciences at the University of Virginia and is president of the Science & Environmental Policy Project in Fairfax, Va.

In Letter to Environmental Groups, Clinton Firmly Defends Gore Record

By RICHARD L. BERKE

WASHINGTON, April 16 — President Clinton sent environmental groups a letter today that aggressively defends Vice President Al Gore's record on their issues — a highly unusual move that underscores the President's commitment to promoting Mr. Gore's Presidential prospects.

Mr. Clinton was responding to a letter to Mr. Gore earlier this week from several environmental groups who accused the President and Vice President of breaking their pledge to reduce pollutants that cause global warming. White House aides said they could not recall a similar instance in which Mr. Clinton felt so moved to publicly aid Mr. Gore.

"No one has done more over the past decade to mobilize action against climate change than Vice President Gore," Mr. Clinton wrote

in his three-page letter. "And no one can more effectively lead this effort in the decade ahead. We must not allow our frustration over the real obstacles we face to distract us from our common goals."

He continued, "We must pursue sound strategies, not proposals that risk eroding the support so vital to our success."

Mr. Clinton's effort demonstrates the degree to which he is determined to help his Vice President by trying to smooth relations with environmental groups on what could be an important issue in the Presidential campaign.

The timing of Mr. Clinton's letter is particularly helpful. Next Thursday is Earth Day, when the Administration is bound to draw significant attention to its environmental record.

The environmental groups' letter

to Mr. Gore, who has long cast himself as an environmental champion, was surprisingly combative. "We are writing," it complained, "to voice deep disappointment with the lack of an Administration proposal to require significant reductions in global warming pollution. We are particularly frustrated that the Administration has not sought meaningful emission reductions from either power plants or passenger vehicles."

In his reply, Mr. Clinton recited the Administration's environmental accomplishments in the face of "the most anti-environmental Congress ever." Throughout the letter, he lauded Mr. Gore's "vision and leadership." He said Mr. Gore had "led the charge" on a number of fronts. He also wrote, "The Vice President and I have sought at every opportunity to highlight the mounting scientific

evidence that global warming is a threat to this and future generations."

A treaty intended to reduce global emissions was negotiated in Kyoto, Japan, in 1997 and signed by the Administration last year. But it was not presented to the Senate for ratification because it faced strong opposition from industry groups.

Carl Pope, executive director of the Sierra Club, one of nine groups that signed the original letter, said of the response, "It is a valid defense of what the Administration has done to date. The letter is fundamentally silent on the question of when the Administration will take the next step: insisting that the auto industry and the public utilities start cleaning up their greenhouse emissions."

Paul Hansen, executive director of the Izaak Walton League of America, another signer of the environmental

groups' letter, said, "The President makes a good point — that we need to try to work together." Even so, he said, it does not take away from the deficiencies in the Administration's record.

Another signer of the letter, Philip E. Clapp, president of the National Environmental Trust, said Mr. Clinton "feels it necessary to cast his and the Vice President's inaction in the best political light." He added: "This is calculated to defend the Vice President from potential criticism between now and the election."

Mr. Hansen said he was disturbed that a colleague had given the environmental groups' letter to reporters. "I'm extremely unhappy about that," he said. "We thought this was an exchange of views — not a political stone-throwing contest." But Mr. Clapp insisted that "this letter was quite specifically a public letter."

E.P.A. to Give States Edict On Clean Air for U.S. Parks

But Deadline on Enforcing Rules Is in 2064

By MICHAEL JANOFFSKY

WASHINGTON, April 17 — On some days in Acadia National Park in Maine, the air pollution is so bad, visibility is half what it might be on a clear day.

The same is true in the Great Smoky Mountains National Park in Tennessee, the Shenandoah National Park in Virginia and so many other national parks and wilderness areas — where the pollution frequently matches the levels in major cities — that the Environmental Protection Agency is preparing to give states a new deadline to clean them up.

The deadline: 2064.

As part of regulations that could be announced by President Clinton as early as Thursday, which is Earth Day, states will be asked to assess their haze problems over the next few years and submit plans for cleanup strategies to the agency between 2003 and 2008.

Over the following six decades, they would set out to return air quality in scores of parks and wild areas, especially in the East, to what amounts to pre-industrial conditions. That is, pure.

It is an ambitious goal that, like many other environmental policies, has evoked criticism on both sides of the issue. This week, lobbyists for environmental and industry groups continued to meet with Administration officials. The officials emphasized that details were still being worked out, including the possibility that deadlines might vary in different parts of the country.

Some environmental groups say that 60 years is too long to wait to clean up areas that are used and revered by millions of Americans each year. They say technology now exists to clean up the leading sources of the pollution, power plants that burn coal and other fossil fuels, at a much faster pace.

"This is far too weak to accomplish where we need to go," said Armond Cohen, director of the Clean Air Task Force, a consortium of 80 environmental groups, based in Boston. "It is the first step, and it does set a marker, which is helpful and better than nothing. But it's not sufficient. The time frame is too slow."

L. Bruce Hill, senior staff scientist for the Appalachian Mountain Club in Gorham, N.H., a conservation group with 80,000 members, applauded the E.P.A. for shortening its original schedule, which would have required 200 years to meet the goals of the Clean Air Act.

He called the goal of restoring pure air to the wilds within a generation "a huge accomplishment."

But he said 60 years was too long to wait, calling the regulations "softer than they could be."

Power industry executives, as well as elected officials in the South and Midwest, who constantly argue with Northeastern states over the pollution that drifts across their borders, argue that the new regulations are too rigid, and in some cases, redundant. They say that cleanups could cost billions of dollars, a price that could be reflected in electricity bills.

"Most folks on the industry side of

the issue say the regulations are too inflexible," said Dave Flannery, legal counsel for the Midwest Ozone Group, which represents 25 power companies in nine states. "We feel their approach is taking on too much too fast. We need a much more flexible, more cautious program."

Paul Bailey, vice president for environment of the Edison Electric Institute, a trade association that represents most of the country's power plants, said states also needed wider latitude in eliminating haze because problems are more concentrated in some areas. Also, Mr. Bailey said, some states may need to work with neighboring states to develop a regional strategy, which could take longer to implement. The draft encourages states to work together, and some already are, like the Grand Canyon Visibility Transport Commission, which is studying air quality problems in nine Western states.

Murray Johnson, policy analyst for the Southern Governors Association, said that other programs aimed at improving air quality for health reasons already addressed the objectives of the E.P.A.'s new proposal. He said some of the governors were concerned that resources being used to make the air healthier would be

Debating how soon clean air should be restored to the wilds.

"misallocated" to improve visibility.

"We believe there are a lot of visibility benefits to what we're doing now," he said.

One apparent reason for regulators' allowing so many years for improvement is that the visibility problem is partly one of esthetics, not public health.

In a recent draft of the new regulations, E.P.A. officials determined that "visibility impairment caused by air pollution occurs virtually all the time" at most national parks.

Like many air quality regulations, the proposed haze protocols bring a new focus to an old problem — the older fossil-fuel power plants, which have been excluded from the strictest controls of the 1977 Clean Air Act.

Concentrated in the East, they produce as much as 75 percent of the sulphur dioxide emissions that are polluting parks and wilderness areas, some environmentalists say. Forcing them to meet modern emission standards or shutting them down, they say, would go a long way toward cleaning up the parks.

The proposed regulations are expected to require states to identify the main sources of pollution and either force companies to modernize their plants to reduce emissions or, in an approach that has been used to help control smog and acid rain, to buy and sell pollution credits in a trading arrangement that would reduce a region's overall pollution.

The New York Times

SUNDAY, APRIL 18, 1999

RICARDO FUNARI—IMAGENS DA TERRA IMPACT VISUALS



Fire is used to clear land in the Amazon.

The forest still burns

Amazon destruction greater than thought

BY JENNIFER COUZIN

Scientists have dutifully recorded destruction of the Amazon rain forest, but it now appears that those numbers were far too low. Logging and burning often punch holes in the forest that are too small to be captured by satellite photographs, the standard measure of rain-forest loss. Last week, a multinational team of researchers said that another 15,000 square miles are eradicated each year—double the previous estimates.

ENVIRONMENT

Tracking down the tiny pockets of destruction, some just half an acre, took three years. A dozen Brazilian and American researchers interviewed nearly 1,400 wood mill operators on logging practices, and 200 landowners revealed fire damage. While fire is used to clear land for cultivation, many fires were not set: Some resulted from El Niño-related drought.

Since 1972, more than 200,000 square miles of the Amazon have been cleared; the new numbers, published last week in *Nature*, only deepen Brazil's dilemma. Prohibiting further clearing would condemn many Brazilians to hunger, but deforestation increases carbon dioxide levels—and the risk of global warming—and destroys plant and animal habitat. In response to the higher estimate, the Brazilian government is promoting better-controlled burning methods, and in February it announced a three-month moratorium on logging.

Geneva Overholser

Environmental Justice for All

NEW ORLEANS—Bob Kuehn is leaving Louisiana—and leaving behind quite a legacy.

What you'd think of that legacy depends on how you feel about the environment and business, and whether you believe poor, minority people are unfairly burdened by pollution. How you feel, in other words, about a rather fuzzy notion called environmental justice.

In 1994 Bill Clinton—having inherited from George Bush an office of environmental equity—issued an executive order requiring that every department “make achieving environmental justice part of its mission” by “identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects . . . on minority populations and low-income populations.”

When that order came out, Bob Kuehn had been director of the Tulane Environmental Law Clinic for several years. The clinic gives students hands-on experience representing people too poor to pay legal fees. As it happens, a powerful hands-on experience was soon to arise in the form of a huge plastics plant proposal.

In 1996 Shintech, part of a Japanese conglomerate, proposed a \$700 million polyvinyl chloride plant to turn salt and petroleum into credit cards, construction materials and other plastic products. It selected a site on the Mississippi River in St. James Parish, a heavily industrialized area. The population around the site is more than 80 percent black.

Unemployment is very high, and some in the community supported the plant in anticipation of the jobs it would bring. Yet even state commerce officials acknowledged that few of its 165 new jobs would go to local people.

As opponents began to organize, they sought and won the support of Tulane's law clinic.

Meanwhile, Louisiana's governor, Mike Foster, was ardently courting the plant, with property tax relief and tax credits. And he despised the notion of Tulane students and

professors taking on this fight. He called them “vigilantes” and “fat professors” with “fat salaries,” and referred to the students as “bullies.”

As the case moved along, Kuehn began to see it as a perfect test for the murky concept of

Louisiana's governor,
Mike Foster, despised the
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and professors taking on
this fight.

environmental justice. So Shintech's opponents brought the Environmental Protection Agency into the matter.

Furious, the governor told a gathering of New Orleans business people he might end Tulane's tax breaks, urged them to withhold their contributions from the university and said they should “get a handle on that group over at Tulane.” (“If Tulane were a state university, I'd have been toast,” Kuehn said later in an interview.)

The businessmen asked the state Supreme Court to look into the clinic's activities. The court, which is elected, complied—and eventually it issued new rules substantially narrowing the eligibility of those the clinic may assist. “The court is finally tightening up on that bunch of outlaws trying to shut everything down,” said Foster. Law professors from throughout the nation rallied, calling the new rules “an assault on academic freedom and social justice.”

Meanwhile, Shintech—before the test case could be resolved—decided it had had enough.

It pulled out of the fracas last fall, moving to a different Louisiana site, proposing a much smaller plant and doing more community work upfront—including a promise that the plant would not increase emissions in the area.

If environmental justice remains untested in the courts, it also remains controversial. Christopher H. Foreman Jr. has written a book, “The Promise and Peril of Environmental Justice.” Listening to him at a Brookings Institution session, it's clear he thinks there's more peril than promise. “Environmental justice is not really an idea. It is a piece of aspirational rhetoric,” he said.

Foreman says careful studies cast doubt on the contention that minorities bear a disproportionate share of environmental problems. Even where unfairness does exist, it's unclear what the government's role ought to be in resolving it.

Environmental justice advocates tend toward absolutism, he says, and inadequate respect for the need for priorities and trade-offs. Worst of all, the movement takes attention away from greater health challenges to the minority poor, like tobacco use and low birthweights.

Kuehn says such criticism misses the point. “I think environmental justice is here to stay as a phenomenon, however the law will play out. It appeals to what we all know is right: People shouldn't be unfairly burdened when they don't benefit. They shouldn't be excluded from the decision-making.”

Now, however, Kuehn is headed for the University of Michigan. “I just want to be teaching students how to do cases,” he says. He has a 4-month-old son and says, “My wife is hoping I'll find more of a life.” But in advancing the notion of environmental justice, he is leaving a legacy in Louisiana that is still unfolding.

JOHN MCCLAUGHRY

Celebrating the resourceful Earth

Tomorrow, many Americans will celebrate the 30th anniversary of Earth Day. The event was created in 1970 to call attention to humankind's despoliation of our planet. It's a good time to see what 30 years of Earth Day enthusiasm has given us.

The environmental awareness stimulated by the first Earth Day has had many beneficial results. Thanks to citizen awareness and ensuing state and national legislation, today the air is much cleaner, the water far purer, and risk from toxic and hazardous wastes sharply reduced. Polluters have been made to pay for disposal costs previously imposed on the public. Private groups like the Nature Conservancy have purchased and conserved millions of acres of land and natural resources.

But — and it always seems there is a but — like every promising new movement, the people who became leaders of the environmental movement stimulated by Earth Day soon found they could increase their political power (and staff salaries) by constantly demanding more command and control regulation. That heavyhanded government response has increasingly surpassed the boundaries of science and reason and severely strained the good will of millions of Ameri-

Human ingenuity can and will rise to overcome every environmental challenge.

cans who had eagerly responded to the initial call to clean up and protect our planet.

Here are just some of the "achievements" of an environmental movement that has flourished by promoting fantastic enviro-scares, sending out millions of pieces of semihysterical direct mail fundraising letters, peddling junk science, and making ever-more-collusive legal deals.

- A failed Endangered Species Act which, by substituting "ecosystem" control for species protection incentives, has caused thousands of landowners to drive off or exterminate the very species that were supposed to be protected.

- A wetlands protection program that has gone from controlling real wetlands to regulating buffer zones around tiny "vernal pools" of spring snow melt, and even lands that have no water on them at all, but feature "hydric soils."

- An air quality program that denies permits to dry cleaning plants unless they can prove that their emissions will not cause 300,001 instead of the normal 300,000 cancer deaths among 1 million people who will live for 70 consecutive years next door to the plant.

- A "superfund" bill which has sucked billions of dollars out of taxpayers to pay lawyers to pursue "potentially responsible parties" instead of actually cleaning up toxic waste sites.

- An ozone depletion scare whose purported effect — increasing incidence of dangerous ultraviolet B at ground level — turned out to be unsupportable by evidence.

- A global warming hysteria,

based on speculative computer models instead of actual temperature data, to justify a treaty to impose federal and international taxes, rationing and prohibitions on all U.S. carbon-based energy sources.

- Ludicrous requirements imposed on the nuclear energy industry, such as requiring massive concrete vaults for the storage of old coveralls and air filters whose radioactivity level a few feet from the container is less than the background radiation produced by ordinary Vermont granite.

Enforcing many of these unsup-

portable policies is a federal and state bureaucracy eager to deny defendants any semblance of fair play, secure sweetheart consent agreements, and measure their success by fines and jail time imposed — for example, on the Pennsylvania landowner who removed car bodies and old tires from a seasonal stream bed on his land without a federal permit (fined \$300,000).

As Roger Marzulla, a former assistant U.S. attorney general for land and resources, recently put it, "Like the enchanted broomsticks in the story of 'The Sorcerer's Apprentice,' the environmental enforcement program has gotten completely out of control."

Fortunately, a common-sense, fair play, rights-respecting alternative environmental movement has begun to appear. On Earth Day 1999, its member groups — as many as a hundred state and national organizations — are celebrating "Resourceful Earth Day." Their alternative is based on a remark made by Henry David Thoreau, who said, "I know of no more encouraging fact than the unquestionable ability of man to elevate his life by conscious endeavor."

The astonishing growth of science and technology in the past 30 years has proven over and over again that human ingenuity can and will rise to overcome every environmental challenge. Today's energy sources are far cleaner and more efficient than those of 1970, and even more pollution-free new energy devices are emerging from laboratories. New cars today, fueled with improved gasoline, produce 2 percent of the pollution of 1970 cars. Cost-effective resource recovery of everything from aluminum to methane, has made giant strides. Microsensors, global positioning satellites, and tiny computers allow farmers to dispense just the right concentration of fertilizer on every square yard of a field.

The friends of the "Resourceful Earth" believe in progress, not just to make and consume more stuff, but to protect our Earth as well. The tide is with them, and as their creative optimism prevails the better off Mother Earth — and its people — will be.

John McClaughry is president of Vermont's Ethan Allen Institute, one of the many groups participating in the Resourceful Earth Coalition.

The Washington Times
WEDNESDAY, APRIL 21, 1999

Gore Sets Goal to Rid Parks of Air Pollution

Standards Call for Cleanup by 2064

By CRAIG TIMBERG
Washington Post Staff Writer

FRONT ROYAL, Va., April 22—Against the backdrop of a spectacular but hazy view of the Shenandoah Valley, Vice President Gore today announced a new federal goal of eliminating the man-made air pollution now clouding the vistas in dozens of national parks and forests.

The Blue Ridge Mountains here were named for their natural haze, but federal officials and environmentalists say industrial emissions—mostly from coal-burning power plants in Virginia and elsewhere—have dimmed the view by 77 percent. Decades ago, they say, the Washington Monument—about 60 miles east—could be seen clearly from vantage points in the park, but now views sometimes are limited to 11 miles.

Gore also used the occasion of Earth Day to shore up support from environmentalists, who this month criticized the Clinton administration for not doing enough to prevent global warming. His environmental views, though sometimes ridiculed by Republicans, have emerged as key themes in his quest for the presidency next year.

"Today, we're making a major step forward toward ensuring that all Americans can see their national parks in all their natural splendor," said Gore, dressed down in a forest-green polo shirt and jeans.

Cleaning up the air, though a federal initiative, will be the responsibility of the states, which must come up with a succession of 10-year plans to end man-made air pollution in the parks by 2064. But because state officials there is no new federal money proposed to assist states in reaching this goal.

Environmentalists applauded would have to bear the cost of this approach, saying it will bring any dramatic improvements to such national treasures as the Grand Canyon and the Great Smokey Mountains.

They also said the haze is just air pollution, particularly in the most visible of the ecological national forests clustered on the problems caused by air pollution, western edge of the state; drifts which they said damages streams, eastward from West Virginia, leaches nutrients from soil, and Ohio and Indiana. endangers wildlife.

Even though there are no penalties for states that fail to reach the goal, Virginia officials reacted coolly, saying the federal government already has rules to reduce several pollutants in the air.

"Let's implement them. Let's get them to work... and then let's see what additional steps we need to take to address this regional haze question," said Department of Environmental Quality spokesman Bill Hayden, adding that the state would comply with federal rules.

Virginia Power, which provides electricity to most customers in Northern Virginia, gets nearly half of its power from seven coal-burning plants, including Mount Storm just over the line in West Virginia. Environmentalists called that plant a main culprit in Shenandoah Valley air pollution.

The company plans to spend \$118 million putting new scrubbers on Mount Storm to cut sulphur dioxide emissions by 95 percent, said company spokesman Jim Norvelle. "Virginia Power is committed to providing the energy our customers need in an environmentally responsible manner," he said.

The Southern Environmental Law Center in Charlottesville predicts that a monthly rate increase of \$2 or less would give Virginia Power enough money to put scrubbers on all of its plants.

"If you want to clean the air in the mountains, you have to clean up these power plants," said Jeff Gleason, the group's deputy director. "The technology is there. It's cost-effective."

But because state officials have capped Virginia Power's electric rates until 2007, shareholders—and not customers—

Gore has come under steady attack from Republicans, who often quote from his book, "Earth in the Balance," in an attempt to portray him as radical on the issue.

In a speech Wednesday, Republican Dan Quayle, who's running for his party's presidential nomination, said: "Americans don't need to be lectured to by the self-anointed.... We don't need to be patronized; we don't need to sacrifice our hard-earned prosperity to fulfill the vision of environmental extremists."

The Washington Post

FRIDAY, APRIL 23, 1999

S. FRED SINGER

Chronicles of earthly hyperbole

The last Earth Day of the century was observed this week. Time to look back to 1970 when it all got started. What were the realities and fears then — and what are they today?

Thirty years ago, the environment was not in such good shape. Air and water pollution were widespread — but were gradually getting better even before EPA came on the scene in December 1970. Rivers and lakes were polluted with poorly treated sewage. Too much in the way of nutrients produced eutrophication: Algal blooms and massive fish kills; lack of oxygen and lots of stink; the Cuyahoga River caught fire; Lake Erie was dying or dead, according to some. Air pollution had actually killed people in Donora, Penna., and smog was making people sick. Acid rain wasn't yet recognized as a problem, but sulfur emissions were already beginning to decline in response to public pressure.

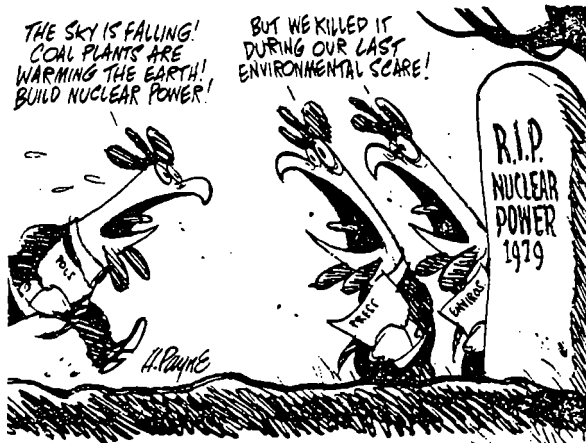
And what were some of the fears? DDT was supposed to kill off the plankton in the oceans, which was supposed to stop release of oxygen to the atmosphere, and we would all — gasp — die. Supersonic transport aircraft were supposed to chew up the stratospheric ozone layer and we would all die of skin cancer; so the program was canceled.

Nuclear safety was uppermost in people's mind, the fear of dying from nuclear explosions or at least from radiation-caused cancer. So reactor construction was fought and delayed with lawsuits, requiring costly retrofits and making atomic power very expensive. And let's not forget the 1971 National Academy report warning of a coming ice age and predicting an imminent glacial fate for the world.

There was indeed a rich menu of disasters to choose from. By 1972, the Club of Rome study added depletion of resources: The world would run out of oil, metals, land and food before the end of the century; it made big news. Professor Paul Ehrlich preached zero population growth and predicted mass starvation, a dying ocean, cancer epidemics, and massive die-offs in cities because of air pollution all within a decade.

Today, these old fears seem quaint how could anyone have believed them? But we now have new ones to take their place.

In 1970 also, Sen. Ed Muskie, Maine Democrat, was competing against Richard Nixon, to see who could be more environmentally correct. The National Environmental Policy Act begat impact statements and the EPA. Mr. Muskie's Clean Air legislation managed to cripple the American automobile industry by requiring too much too soon. (When oil prices tripled a couple of years later, Detroit nearly went out of business.) Finally, by 1974, the National Academy of Sciences produced a multivolume cost-benefit study that [surprise, sur-



prise!] backed up Mr. Muskie — who had authorized the report through EPA. The study accomplished that goal by omitting important costs items, like inspection and enforcement, and by computing the benefits in two different ways and then adding the two numbers.

After this double-counting exercise, the total benefits became "commensurate" with the costs.

We now have lots of environmental organizations, whose existence depends on creating new fears.

(Almost) everyone seemed pleased with the outcome and hardly anyone questioned Mr. Muskie's automobile emission limits.

Today, after the nation spent tens of billions or perhaps hundreds, the environment is in great shape. Rivers are flowing clean, with salmon returning to New England and to the Hudson. Smog is mostly gone except in a few cities like Los Angeles. We don't hear much about acid rain. Oil is plentiful and cheap too cheap, some would say. Nuclear plants are running well; the several accidents that were predicted to happen haven't happened. Disposal of spent nuclear fuel is a PR problem not a technical one. There is no world famine and population growth around the globe is slowing down.

But we now have lots of environmental organizations, whose existence depends on creating new fears. And EPA feels compelled to justify its ever-expanding budget. So here goes:

Pesticides and radiation fears are still going strong with EPA stirring the pot on radon, secondhand smoke, and chemicals. Since cancer

epidemics cannot be demonstrated, the catchword is "hormonal disrupters." No evidence for this, of course, except a research paper that was withdrawn after no one could reproduce its results. So it's back to global disasters, much more fashionable and exciting than worrying about real problems, like how to dispose of growing piles of garbage.

Ozone depletion no longer seems as threatening as it did seven years ago when CFC production was banned (in industrialized countries). I suppose that's because no one has ever observed the increase in solar ultraviolet radiation that was supposed to lead to epidemics of skin cancers.

So now we have the fear of climate change. Al Gore, known as the "ozone man" a decade ago, is now hyping global warming along with much of the media establishment and even some of the science crowd. The federal government is pumping \$2 billion a year into global change research, but the atmosphere is not playing along. No warming trend is seen by weather satellites. And to make matters worse, a respected team of economists has just demonstrated that global warming would actually be good for you. But we have known this from the history books.

The last word on this topic belongs to the late Professor Aaron Wildavsky, who correctly typed global warming as "the mother of all environmental scares."

Will it still be there 30 years from now or will we dream up new hobgoblins to frighten the populace in surrendering their money and freedom to government regulators and international inspectors?

S. Fred Singer is president of the Science & Environmental Policy Project in Fairfax, was first director of U.S. Weather Satellite Service, and is the author of "Hot Talk, Cold Science: Global Warming's Unfinished Debate."

The Washington Times
FRIDAY, APRIL 23, 1999

WASHINGTON

House OKs standards for beach water quality

The House passed legislation Thursday that would set national standards for beach water quality and require that the public be told when water is contaminated. The Senate is considering a similar bill.



Bilbray: Public has right to know

"The public has a right to know what they're swimming in," said Rep. Brian Bilbray, R-Calif., a sponsor of the bill, which Republican leaders brought to a voice vote on Earth Day. It passed without dissent.

The Environmental Protection Agency would set national standards for beach water. State and local agencies would be responsible for monitoring and public notification.

To help states, the bill authorizes \$30 million a year in grants for the next five years.

Proponents say that while some states have limited programs for monitoring beach water, others have none. Only eight have comprehensive programs for testing the water and alerting the public to dangers. They are Connecticut, Delaware, Illinois, Indiana, New Hampshire, New Jersey, North Carolina and Ohio.

Rep. Frank LoBiondo, R-N.J., another sponsor, said having national standards means states that now have less stringent criteria for beach closings no longer will benefit financially when a neighboring state with tougher standards closes its beaches. All will have the same criteria. "We are setting the standard for the nation," LoBiondo said.



By Steve Heller, AP

Taking in the view: Ecologist Tom Blount and Vice President Gore look over Shenandoah National Park.

CLEARING THE AIR: Vice President Gore, celebrating Earth Day, went to Shenandoah National Park in Virginia to announce final regulations intended to reduce smog and haze from wilderness skies. The rules set 2064 as the year when visibility in park areas should be fully restored to the natural conditions that existed before the industrial boom.

The regulations, which will likely be challenged in court, require states to submit plans to achieve the goals. Environmentalists say the main causes of such pollution are coal-fired power plants, factories and automobiles.

COAL RESOURCES

crat voted for it. House Republicans still plan to push the provision in that chamber, a spokesman for Budget Chairman John Kasich, R-Ohio, said.

■ NO SPARKS HERE

BY MARGARET KRIZ

When Energy Secretary Bill Richardson unveiled the Clinton Administration's blueprint for deregulating the \$212 billion-a-year electricity industry on April 15, he closed the press conference with a parade of more than a dozen representatives of various energy interests. Richardson said he called the lobbyists to the stage to demonstrate that electricity deregulation has broad national support. "They may not agree on a single approach," the Secretary conceded, "but they do agree that federal restructuring legislation is necessary. And so do we."

If everyone who joined Richardson onstage actually signed on to the Administration's bill, the electricity industry would immediately be deregulated nationwide. As it is, however, the proposal appears to have given nearly every major player in the electricity debate something to hate.

Like last year's White House energy bill, this year's model would give the states until 2003 to decide whether they want to introduce competition into their electricity industries, and would allow state lawmakers to opt out if they believe deregulation wouldn't help their consumers. This flexible approach is supported by state government groups but opposed by champions of quick deregulation, including House Commerce Committee Chairman Tom Bliley, R-Va., who wants a firm state deadline for introducing competition.

And although House Commerce Energy and Power Subcommittee Chairman Joe Barton, R-Texas, favors aggressive "incentives" to push the states to deregulate, the Administration bill contains only a reciprocity provision that would allow deregulated states to block electricity sales from companies located in states that haven't been deregulated.

In addition, the White House bill includes a grab bag of benefits—for rural electricity customers, Native Americans, and environmentalists—that deregulation supporters have criticized. "This is more of a political payoff than a substantive document," one energy lobbyist said.

In a nod to environmental advocates, the energy bill would require 7.5 percent of all electricity sold in the United States

to come from renewable energy sources by 2010. But congressional Republicans and the energy industry widely opposed the even-lower mandate of 5.5 percent that the Administration proposed last year.

This year's bill would also give the Environmental Protection Agency explicit authority to create an emissions-trading program requiring U.S. industry to reduce its emissions of nitrogen oxide pollution. Edison Electric Institute President Thomas R. Kuhn charged that those environmental provisions "cancel out the benefits promised by competition, namely, lower prices." Environmental lobbyists, for their part, complained that the bill didn't go far enough in requiring emissions reduction, and called for tougher pollution controls on coal-fired power plants.

Citizens' groups and energy industry officials who are worried about the reliable operation of the nation's electric grid favor provisions in the White House bill that would give the Federal Energy Regulatory Commission additional authority over federal electricity transmission. However, utility industry officials

complain that the new federal controls amount to reregulation.

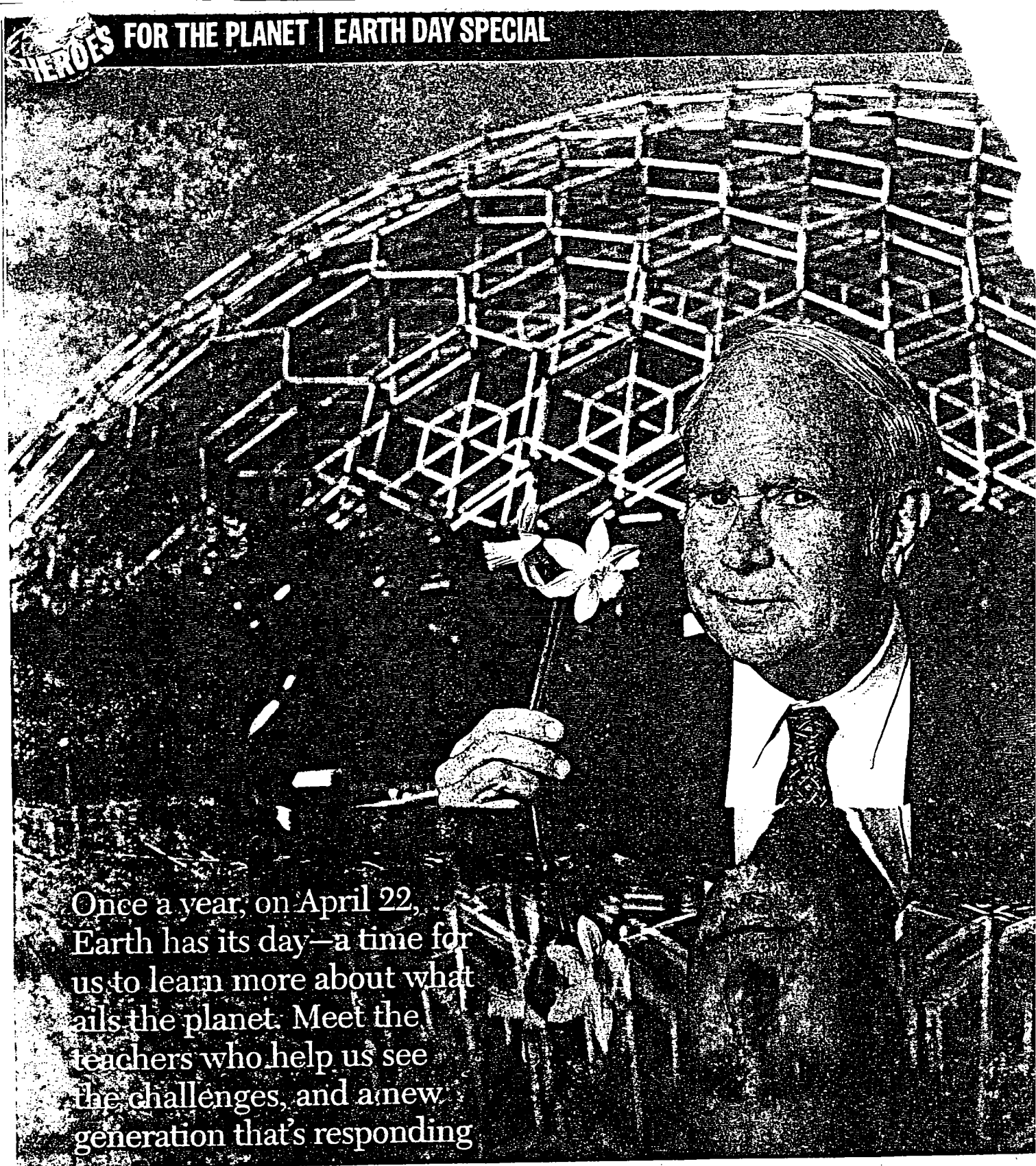
Some parties in the electricity debate had a few good words for the Administration's bill. Senate Energy and Natural Resources Committee Chairman Frank H. Murkowski, R-Alaska, praised the measure for beginning to bring the federally owned Tennessee Valley Authority and Power Marketing Administrations into the competitive marketplace.

Other groups complained that the Administration didn't go far enough in leveling the playing field. "Rather than addressing the real federal issues of ending tax breaks for municipally owned power and the privatization of federal power utilities... we see more anti-market mandates and the threat of a huge new federal bureaucracy," said Craig Shirley of Citizens for State Power, a group that opposes federal deregulation legislation.

At best, agreed energy analysts, the White House bill offered proof that Richardson enthusiastically supports deregulation and is ready to begin negotiations on Capitol Hill, where the real work will take place. ■



BILL RICHARDSON



Once a year, on April 22, Earth has its day—a time for us to learn more about what ails the planet. Meet the teachers who help us see the challenges, and a new generation that's responding

HEART AND F

PETER RAVEN

The World Is His Garden: Better Tread Carefully

By ROGER ROSENBLATT ST. LOUIS

It is interesting to contemplate a tangled bank, clothed with many plants of many kinds, with birds singing on the bushes, with various insects flitting about, and with worms crawling through the damp earth, and to reflect that these elaborately constructed forms, so different from each other, and dependent upon each other in so complex a manner, have all been produced by laws acting around us.

—Charles Darwin, *The Origin of Species*

THINK OF IT!" SAYS PETER RAVEN, THE DIRECTOR OF THE MISSOURI Botanical Garden, as he stands beside a table in the rare-book room of the garden's library and reads aloud from the final paragraph of Darwin's *Origin of Species*. "All that difference, elaborately constructed, produced by laws!"

Then he rereads the entire paragraph, which gives one chills, partly for Darwin's understatement. What the author deemed "interesting to contemplate" was nothing less than the world's biological structure, which he (and others) had discovered, and which now, at the end of his monumental study, he quietly celebrated in sublime summation. The "tangled bank" he had initially attributed to an unnamed power, but in the third and subsequent editions, he included God in the evolutionary process. The book now ends on this glorious sentence, over which Raven exults: "There is grandeur in this view of life, with its several powers, having been originally breathed by the Creator into a few forms or into one; and that, whilst this planet has gone cycling on according to the fixed law of gravity, from so simple a beginning endless forms most beautiful and most wonderful have been, and are being, evolved."

The passage is beloved by Raven because it is a celebration of biodiversity, the most elegant since *Genesis*, and it is the cause of biodiversity—of maintaining endangered plants and preserving the wilderness—that drives all he has done with the Missouri Garden for nearly 30 years. Rather than being merely a place where pretty flowers are on show (though it is that as well), the garden is a microcosm of the wide green world. It is not a zoo for plant life. The last thing Raven wants is to create a repository for the vegetation that has been destroyed outside the garden.

Thus he rails in speeches against the menace of a "sixth extinction," one unlike the prior five extinction spasms, the last of which came 66 million years ago. Those were brought about by natural phenomena. When it occurs, the sixth mass extinction of living organisms will be brought about by people, by a mushrooming population that has doubled in 40 years, to 6 billion, and by human carelessness and commerce. In the 21st century, which Raven would like to see called "the age of biology," he says we must learn to "master the diversity of living organisms and use the properties of those organisms as a kind of palette to build sustainability."

Instead of cultivating one garden, he looks to everyone's. He protects, collects, lobbies, studies, preserves and expands his territory. He networks like a press agent but believes it is up to individuals to keep what's living living. "When it ends up," he tells me, "the world is not going to be one homogenized place. It's going to have bright spots, richer places and more beautiful places. And the reason that will happen is that individuals took responsibility and did something." As it was in the beginning, the world is a garden.

EARTHLY DELIGHT:
Towering above the
director of the
Missouri Botanical
Garden is Raven's
Climatron, a whole
tropical rain forest
in a glass dome

TED THAI FOR TIME

OWERS



BENIGN DESTINY
The Blue Boulder
Cascades is part of
a dreamscape that
conspires to make
one forget time.

"We have relatively short lives, and yet by preserving the world in a condition that i

So Raven looks to the wide world to build other countries' capacities for sustainable development. Two areas that he regards as especially critical are Madagascar and the northern Andes. Madagascar has half as many plants as all tropical Africa (about 11,000), and the great majority are found nowhere else. The Missouri Garden has been active there since the early 1970s, helping train and support the country in evaluating and protecting threatened areas. In the northern Andes, Colombia, Ecuador and Peru are home to at least one-fifth of the world's biodiversity, including perhaps 60,000 species of plants, endangered by development and poorly studied. The garden has been cooperating with these nations to help them work out their own plans for the wise use of resources. Raven is volubly opposed to anything that smacks of American big-footedness in these endeavors.

His is one of those special minds that succeed with both the particular and the general, with individual and collaborative pursuits. His boyhood in San Francisco was spent roving vacant lots, searching for specimens. An only child, he began growing caterpillars into butterflies at the age of six. At eight he became a student member of the California Academy of Sciences. At 12 he joined the Sierra Club. At 15 he discovered a member of the heather family, a Presidio manzanita, which had not been seen for 50 years. This subspecies, *Ravenii*, was later

named for him. He did his undergraduate work at Berkeley, got his Ph.D. at UCLA and entered teaching, but not a cloister; he also developed a gift for bringing people together for worthwhile projects.

All this training has produced a 62-year-old man of appealing parts. He dresses like a banker and has the face of a kid who is ready to be pleasantly surprised. In conversation he remembers every ball he has tossed in the air, and just when you think that a long discourse is about to fall off the earth, he brings it tidily home. His voice lilts upward, giving everything he says, including instructions to his staff, confidence with gentleness. And he is funny—not so much on his own, but he likes to quote the witty things said by others, drawing on material from a range of sources that include Lincoln, Oscar Wilde and Joe Garagiola.

He leads me on a tour of his world, which like the greater world, having grown from a simple beginning, has evolved into some wonderful forms. The garden is both terrestrial and a dreamscape, a deliberate arrangement of living things that makes one forget about time and engages all the senses without demanding logic. It is the outer life meant to reverberate in the inner life, which is what it evidently does for Raven.

This oldest botanical garden west of the Mississippi opened to the public in 1859, the same year *Origin of Species* was published, and was the inspiration of an En-



EYE ON DIVERSITY The garden's Heidi Schmidt gives specimens the once-over

ian, Henry Shaw. In 1819, at
 now arrived in the river town
 St. Louis and took half a day's
 horseback ride westward until he
 me to a piece of ground that his
 agination claimed. When he be-
 ne rich 20 years later, he bought
 : property and turned it into a
 rticultural display that today,
 thanks largely to Raven's benign
 manifest destiny, covers 79 acres
 and extends its research work over
 much of the globe.

Raven has a very green thumb.
 Under him the garden has recently
 acquired a multimillion-dollar re-
 search center from Monsanto, and he
 is looking toward a \$146 million Don-
 ald Danforth Plant Center, named
 for the former president of Ralston
 Purina. The garden advertises almost
 as many names of donors as of
 plants. The library contains 122,000
 volumes. Tropicos, a botanical data-
 base, attracts thousands of hits a
 month. When Raven first came to the
 garden in 1971, he had 85 employees
 and a budget of \$650,000. Today
 there are 354 people on staff, and the
 budget is \$20 million.

Among the garden's compo-
 nents are an azalea-rhododendron



whose rose-colored leaves alternate
 with gold. The leaves are shaped
 like fragments of bells.

The admiration of the garden's
 appearance Raven leaves to me
 and other tourists; he acknowl-
 edges that the plants and flowers
 are lovely, but his attentions go
 elsewhere. Before he became an
 eco-administrator and a biopoliti-
 cian, Raven was a pure and first-
 rate scientist—still is—and he views
 science—process—as the garden's
 most important exhibit. Apart from
 his grander design of using the
 place as a reminder that the world
 calls out to be preserved, his mis-
 sion is to make the garden the
 largest plant-research center in the
 world. Current projects, which are
 huge, include volumes on the flora
 of North America and China.

He seems especially at home in
 the herbarium. With nearly 5 mil-
 lion specimens, it is sort of the gar-
 den morgue. Here are dried samples
 mounted on sheets of paper, each
 with a record of discovery—who
 found what when. Some specimens
 go back 300 years. The herbarium is
 a storehouse of diversity, organized
 in manageable units. I watch him

Worthy of us, we win a kind of immortality. We become stewards of what the world is."

garden that explodes with color—
 red, pink, yellow and white in April;
 Linnean House, one of the last build-
 ings constructed by Shaw, where
 camellias bloom in late winter; a
 bulb garden (tulips, hyacinths, nar-
 cissuses); a scented garden (gera-
 niums and lamb's ears); two rose
 gardens; a garden for irises and day
 lilies; a garden for aquatic plants; a
 Japanese garden; an English gar-
 den. The most visually impressive
 structure is the Climatron, a geodes-
 ic greenhouse dome à la R. Buck-
 minster Fuller that rises 70 ft. at
 the center and measures 175 ft. in di-
 ameter at the base. It covers half an acre
 but appears much larger—a whole
 tropical rain forest under glass.

Raven and I walk around it beneath a vast green umbrella that
 looks more lush than a real rain forest. There are a droning of bugs
 and a loud rush of falling water. We make our way among a densi-
 ty of exotic plants, an endangered Hawaiian plant called alula, a
 cacao tree, conifers and vines that trap insects. A banyan tree tow-
 ers on its stilts. A red-and-black bird flits in the branches.

"That's something I haven't seen before," says Raven, noting
 the pale lavender of a particular iris. He stares at the flower with
 innocent interest. "Stay here long enough," he says, "and you ap-
 preciate what Darwin meant when he wrote in praise of differ-
 ences." A sign at the exit exhorts visitors to save the rain forest
 "before it is too late." On the way out I am stopped by an orchid



FEEL THE COLOR From top, tulips, irises and orchids are
 the outer life meant to reverberate in the inner life

hold a page of bug-nibbled leaves
 and stare with the wonder one
 might reserve for orchids.

But Raven is equally himself
 with the bigger picture, which ac-
 counts for his affection for Darwin's
 last paragraph. In his office in the
 late afternoon, he returns to the
 world outside his garden. "Individ-
 uals express themselves through
 others," he says. "They influence
 other people, they share values, and
 that way an individual's life goes on,
 generation after generation.

"The earth is the only place we
 know in the universe with living or-
 ganisms; thus it is special. With 6
 billion people on the planet, it be-
 comes harder and harder to mea-

sure the effects of individuals, yet the outcome is formed precisely
 by the interaction of individuals. All that adds up to the ongoing
 stream of humanity and human accomplishment. We have rela-
 tively short lives, and yet by preserving the world in a condition
 that is worthy of us, we win a kind of immortality. We become
 stewards of what the world is."

"Gardeners?" I ask him.

"Gardeners," he says.

Visit time.com/heroes for more stories in our Heroes for the Planet
 series. Watch for TV profiles of our Heroes on NewsStand CNN &
 TIME, Sunday and Monday nights at 10 p.m. (E.T.) on CNN

W I L L V I N S O N

Litterbugs! This Kid Is Out to Clean Up the Town

LIKE MOST COLLEGE TOWNS, GAINESVILLE, FLA., HOME TO THE University of Florida, is an eco-conscious place. But even here, motivating youngsters to police the environment can be as hard as getting them to help out with the dishes after dinner. Sometimes it takes a kid to inspire other kids to care—a kid like Will Vinson, 12, whose aluminum-can-recycling crusade lit a fire under the city's next generation. Since he was a nine-year-old fourth-grader at Littlewood Elementary School, Will has united classmates, teachers, recycling firms and other local companies in a bid to rid Gainesville's school grounds of trash and develop youth recycling programs. Says Will: "I knew that if I did it, the other kids would stand up and do it too. We don't do it if adults just lecture to us."

It wasn't so easy. Will, now a sixth-grader at Gainesville's Westwood Middle School, repeatedly called a local recycling contractor, asking the firm to donate can crushers, and a supermarket, looking for carts for can collection. Even then, his dad Tim, a chemist at UF, and his mom Betsy, who teaches at the university's speech and hearing clinic, had to tell the companies Will was serious.

Next he needed to convince other kids. He wrote entertaining spots for Littlewood's closed-circuit TV program (his slogan: "We love the 3 Rs: reduce, recycle, reuse!"), but at first many students resisted—and threw banana peels and other unsuitable garbage into his recycling bins. "One kid even got sick in one of them," Will recalls. Soon his buddies started to get the message, and the school's Girl Scout, Cub Scout and Boy Scout troops joined in, helping him recycle hundreds of pounds of cans that netted more than \$100 for Littlewood's Head Start preschool program.

At Westwood, Will, a student senator, has turned much of his attention to Florida's successful youth antismoking campaign, but he's stayed close to the recycling operation he started. Whenever he travels to Atlanta to see his grandparents, who don't recycle, he bags up their cans and hauls them back to his bins and crushers in Gainesville, but not before he tries to see an Atlanta

Braves game. Will is a big baseball fan, and he would just

love to keep Gainesville's schoolyards as green and clean as the field his idols play on. —By Tim Padgett/Gainesville

BAG IT, BOYS
His classmates were resistant at first and dropped banana peels in his bins, but soon they learned to love the 3 Rs



GENE BEDNAREK—SILVER IMAGE FOR TIME

Time April 26, 1999

LOST IN CYBERSPACE

The World Wide Web offers an education, but watch where you're going

By JOHN SKOW

THIS ENVIRONMENT REPORTER'S IDEA OF INTERACTIVE TECHNOLOGY was to tap the computer case with a 12-in. adjustable wrench to correct vapor lock and improve e-mail reception. Mostly on instinct, he patrolled the environment outdoors and avoided the World Wide Web. The information superhighway vanished last year, he noticed, at least as an annoying metaphor, and maybe the World Wide Web would go away too.

But no. The Web is still here, and without it, journalistic obsolescence looms (yawns? festers? creeps in petty pace? click one). So this reporter sets out (urls forth?) onto the Internet. And what does he discover?

There appears to be more virtual environment on the Web than there remains real environment in the actual, tattered, non-virtual world itself. Or nearly. Yet doing research on the Internet is like taking a two-year-old for a walk. Pretty pebbles and deeply meaningful small sticks present themselves, but enlightenment seldom proceeds in a straight line. There is always some beguiling irrelevancy to be clicked, which is good. Often, however, the environmental pilgrim discovers to his surprise that there is not much depth of information. A surprising number of green websites are little more than 16-bit fund-raising brochures.

The Web is praised as a wondrous educational tool, and in some respects it is. Mostly, though, it appears to be a stunning advance in the shoring up of biases, both benign (one's own views) and noxious (other views). Whether anyone's opinion is changed by the Web is an open question, though of course the same could be said of Balkan politics and air strikes. A six-month debate on an Environmental News Network forum (www.enn.com/community/forum), about agribusiness, organic farming and Monsanto's genetic engineering of plants, began in September with sweet reason: "In the U.S. only 10.9% of the average American's income is spent on food. Compare this to Britain at 11.5%, Sweden 14.5%." Fairly quickly the discourse descended to a mudball fight. A farmer who thinks chemical fertilizers and pesticides are fine dismissed an organic farmer as a gardener and added, "Man, you drip of liberalism; it almost stinks." Another nonorganic disputant offered, "More than anything, I cannot STAND ignorant hysterics seeking to ban or destroy whatever technological innovation currently threatens their precarious emotional stability." From the other side came this: "You are a vile individual who licks the boots of the well-heeled, and you'll never see the light about the virtues of unspoiled nature and wildlife ... You are just full of technocrap!" The mudballs still fly, and all are welcome. Park your chewing gum and razors at the door.

Or punch in another Internet address, like www.sucenter.org, which brings up a useful activist group I know, Arizona's Southwest Center for Biological Diversity. As usual, the Southwest Center is tormenting the U.S. Fish and Wildlife Service to add deserving beasts and plants to the Endangered Species List (the beluga whale in Alaska's Cook Inlet is a candidate). There's good informa-

tion here, on a wide array of eco-skirmishing, but what I print out is something I've never laid hands on, a copy of the Endangered Species Act itself, the great Magna Charta of U.S. environmentalism. Yes, the Interior Department probably would have sent a copy of the ESA if I had phoned and asked. But the Web is right there: reach up and pick the overhanging mangos.

A friend recommends www.envirolink.org, a widely used green portal, and this leads across the Atlantic to the Danish Wind Turbine Manufacturers Association, which offers detailed text on wind power in Dansk, Deutsch or English. I am glad to see that the Danes, my forebears, are hoisting a wetted finger toward non-pollutive electricity, but the download time is more than an hour, and that is too windy. Click the "back" button.

Returned from Denmark, but still on Envirolink, I stumble on controversy. It seems that last spring, Lycos, a prominent Internet search engine, promised support to Envirolink, which was started in 1991 by Josh Knauer, then a freshman at Carnegie Mellon University, and is chronically underfunded. Envirolink was to get financing, and Lycos would be allowed to look green. (So says news analysis downloaded from the New Haven *Advocate* newspaper. Stealing good stuff is what the Web is for.) For three months, if you clicked on "Lycos saves the planet," you reached Envirolink. Then Lycos canceled the contract. Norm Lenhart, a senior editor at something called *Off-Road.com*, had complained that Envirolink offered entry to such activist groups as Earth First and the Animal Liberation Front. Norm who? At what? *Off-Road.com* is an Internet site for fans of off-road vehicles, with ties to the anti-environmental "wise-use" movement. The website is a click away from

Blue Ribbon magazine, another off-road lobbying outfit, sponsored by Honda, Yamaha, Ski-doo and Polaris, whose motto is "preserving our natural resources FOR the public instead of FROM the public."

Here is one of the back alleys in which the Web can be brilliantly educational. Will enough high school kids, rummaging for term-paper material, find this alley and see what it means? Which is, perhaps, that virtual power, not real size, is often what's important. Envirolink has few staff members and little money, but it has power, because it is an entry to 400 enviro and animal-rights websites. *Off-Road.com* is an

unknown, except to its communicants, who are mostly Western motorheads determined to keep Forest Service logging roads open at a time when rising environmental awareness makes it clear to the wider society that they should be closed. Lycos, briefly eager to save the planet with Envirolink, is a real business with real funding. Did Lycos, which now carries the Environmental News Service in place of Envirolink, cave in to an insignificant squawk from the far reaches of Webland? Lycos execs say no, and it is true that Envirolink shows up among the search engine's top-rated enviro websites. But the conservative American Land Rights Association seems to think yes, and offers a Web address (www.lycos.com) at which Lycos may be thanked for right thinking. What's a Web crawler to believe? Well, for one thing, that Japanese car, motorcycle and snowmobile

There appears to be more virtual environment on the Web than real environment in the tattered world

ufacturers—the power here is quite real, not virtual—are through *Blue Ribbon* magazine and its parent, Blue Ribbon tion, to defeat U.S. environmental policy.

An innocent enviro wandering the Web—or an innocent ck-hearted polluter—learns to click skeptically. Brave souls who ach www.radio4all.org/anarchy/fakes get a list of “anti-environmental” groups, most of them with wonderfully benign-sounding names: the Abundant Wildlife Society of North America, the California Desert Coalition, the Evergreen Foundation, the Environmental Conservation Organization, Mothers’ Watch. Maybe most of these really are benign. Dunno. I check out the National Wetlands Coalition, a big-biz coalition against wetlands, and the Global Climate Coalition. The cover of this last org has been blown for some time. It’s a consortium including oil and car companies that are mightily interested in stalling enactment of the Kyoto accords on carbon-dioxide emissions. Will a high school student patching together a paper on global warming buy the gcc’s line, which says go slow because scientists disagree? Or click further and discover that, no, scientists really don’t disagree; that 2,500 of them say Earth is in a period of potentially dangerous warm-

ing, to which human activities contribute to an alarming degree?

The wanderer learns a lot about prairie dogs, which are in sharp decline and should be listed as threatened, says the World Wildlife Fund (www.panda.org). And about the last Congress, which was insufficiently environmental, according to the League of Conservation Voters (www.lcv.org). I download a superb four-part, college-level course on the ozone hole from the University of Cambridge (www.atm.ch.cam.ac.uk/tour/index.html). And I am assured by www.ecofreedom.org/unibomb.htm that Bill Clinton and Al Gore are environmentalists (a deniable charge, surely) and in league with Earth First! and the Unabomber.

And... it’s 4 a.m.; do I know where my eyeballs are? So—oxymoron alert—a beginner’s conclusion. The Web’s strongest suit, at least as it deals with the environment, is serendipity, random walking. Search engines only pretend to sort out the jumbled and expanding Internet universe. Which, as has been widely noted, is unedited, unowned, unsanitized—though Congress continues to try—and, like the worldwide world itself, decidedly not guaranteed. Likewise for its environmental subset. Run barefoot through its meadows, but be careful where you put your feet. ■

CLICK HERE

The Web's Wild World

Major environmental organizations have well-organized, slickly produced websites that are worth a visit. Off the beaten cyberpath, however, are many colorful and sometimes quirky sites that show off the Web’s greatest asset: its diversity. Here’s the lowdown on some sites we liked.

WHERE TO BEGIN

A good entry point for Web newcomers with an interest in all things ecological is the appropriately named **EnviroLink**

(www.envirolink.org). It boasts one of the largest and best-arranged listings of environmental organizations on the Web. Another excellent launch pad is the **Amazing Environmental Organization Web Directory** (www.webdirectory.com).

THE RATS HERE ARE GREEN

Eco Mail (www.ecomail.com), like its real-world counterparts, is a great place to browse, be entertained or just hang out. And you’ll be linked to all sorts of useful environmental sites. For example, click on “Eco Investments” for mutual funds specializing in the stocks of companies judged to be environmentally responsible, or “Energy Efficient Homes” for a handy list of eco-conscious designers and architects.

GUILT-FREE SHOPPING

Wish you knew more about what goes into the products you buy? Now you can. **The Green Marketplace** (www.greenmarketplace.com) promises that its goods, which range from household soaps to gardening supplies, weren’t tested on animals and don’t contain toxic chemicals. You can order online.

YOU VOTED FOR WHAT?

Check out the **League of Conservation Voters** site, which lets you track how your U.S. Senators and Congressmen voted on anti-pollution laws or Endangered Species Act revisions. Don’t like what you’ve learned about your lawmakers on Capitol Hill? The LCV has listed their e-mail addresses so you can give them a piece of your mind. Go to www.lcv.org and click on “Congressional Lookup.”

WHO’S POISONING YOUR TURF?

You don’t want chemicals spewed into your backyard, do you? The **Scorecard** (www.scorecard.org) features interactive maps that enable you to home in on the companies you should be concerned about. Simply enter your ZIP code and go.

ONE-STOP NEWS SHOPS

For news junkies, the **Environmental News Network** (www.enn.com) provides a clearinghouse for relevant bulletins from the Associated Press, Reuters and other wire services. Full access costs \$12.95 a year; for those unwilling to pay, ENN writers churn out four free stories daily, plus an array of multimedia reports. Another good source for all the eco-news you can use is at www.ens.lycos.com.

BEAR ESSENTIALS

As Web design goes, the **Bear Den** (www.nature.net.com/bears) is a tad unsophisticated, but it’s a treasure trove of facts on grizzly, brown and black bears and pandas (which, biologists tell us, aren’t bears but big cousins of the raccoon). There’s plenty of information about easily bearable books, videos and other websites, plus a frighteningly good picture gallery.

I WANT MY MTV

Well, you can have it. The **World Wildlife Fund** has teamed up with MTV to provide 60-sec. videos aimed at inspiring viewers to environmental heroism. Also worth a look are the **video Earth Reports**, viewable with the **Vivo** or **VDO** plug-ins. Go to www.panda.org and click on “Video Library.”

PEDAL OFF THE METAL

Getting people out of their cars and onto bicycles is the mission of the **International Bicycle Fund** (www.ibike.org). But first, a little reading. The site has the scoop on air-pollution dangers, safe biking practices and even cross-country bike trips in Africa and Cuba.

WHERE THE HOGS ARE

Did you know that 10 million hogs poop nearly 19 million tons in North Carolina each year? It’s a mounting problem wherever pigs are raised. **Hog Watch** (www.hogwatch.org) includes an up-to-the-minute poop counter, interactive maps and audio clips of citizens telling you just how bad the stench has become.

NATURAL RIGHTS AND WRONGS

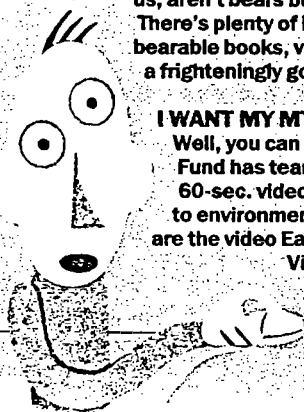
What is the life of a spotted owl worth? Maybe it’s a matter of your personal values. Click on the **Environmental Ethics** website at www.cep.unt.edu for background on this wonky field and information about related books, journals and academic programs.

YOU CAN HAVE A DREAM

A change of mind-set may be all that stands between humanity and a healthy environment, according to the **Dream Change Coalition** (www.dreamchange.org). The site invites visitors to join trips (real, not virtual) into the Amazon and the Himalayas to learn about eco-concepts known as dream changing and psychonavigation. “Earth-honoring changes in consciousness,” says the coalition, are what’s needed to put the planet on a path toward environmental and social balance. Far out!

GET A JOB

Hate your boss? Would you like to work for the environment instead? Look at **Earth Works** (ourworld.compuserve.com/homepages/eworks) for job listings by field. You can post your résumé on the site and sign up for e-mail alerts about new positions. —By Morris Barrett



DENIS HAYES

Mr. Earth Day Gets Ready to Rumble

WHERE DO YOU GO WHEN YOU NEED SOMEONE TO RALLY 200 million people? An ex-President, perhaps, or a former dictator? Whenever the environmental movement needs someone to gather the troops worldwide, it turns to a tall, understated activist who rides his bicycle to work, wears flannel shirts and has a unique ability to herd the masses toward a common goal. His name is Denis Hayes, but you can call him Mr. Earth Day. He launched the first one in April 1970, turned it into a global festival for Earth Day 1990 and is looking ahead to the biggest event he can imagine: Earth Day 2000.

Hayes, 54, didn't set out to be an environmentalist. He grew up in Camas, Wash., a small paper-mill town where the air stank from sulfur fumes. Like most other people there, he loved the outdoor life, but his concern over the damage the mills were doing to his beloved forest was tempered by the realization that the industry was also his dad's employer. Not until his undergraduate days at Stanford in the '60s did he become a rabble rouser, and then his target was not pollution but war: he helped lead more than 1,000 students in a campus takeover of a weapons-research lab.

The activist settled down and entered Harvard Law School with an eye to influencing public policy, but a fateful assignment his first semester changed his life. Required to be an intern in a government office, Hayes called Gaylord Nelson, then a liberal U.S. Senator from Wisconsin, and volunteered to organize a series of teach-ins across the country to call attention to the environment. Energized by the memories of the ravaged forests of his youth, he dropped out of Harvard and devoted his time to organizing rallies, street demonstrations and trash cleanups. It all culminated with the first Earth Day, when 20 million people put on the biggest show of flower power the country had seen.

FIRST RITES
The demonstrations in April 1970 were primitive by recent standards, but they spurred the passage of antipollution laws

Except for its radical fringes, environmentalism moved into the political mainstream, and so did Hayes. By the time he was 35, he was appointed by President Jimmy Carter to head the Solar Energy Research Institute in Colorado, and clean power became his passion. After finding the time to finish his law degree at Stanford in



NAREN MOSKOWITZ FOR TIME

1985, Hayes was drawn back onto the environmental front lines by groups looking forward to the 20th anniversary of the first Earth Day. The threat of global warming caused by the burning of fossil fuels had thrust the environment back into the headlines, and it was time to make Earth Day 1990 a global happening. Hayes didn't disappoint. Spurred on by his organizational efforts, nature lovers staged spectacular events around the world, from a 500-mile human chain across France to a gathering of 35,000 in Tokyo Bay. In all, 200 million people paid homage to the planet.

In 1993, Hayes began running the Bullitt Foundation, an endowment in Seattle that funds green projects in the Pacific Northwest. But the coming of the new millennium brought another test: take Earth Day to new heights in 2000. Besides the rallies, concerts, seminars and TV shows, Hayes plans to use a magic wand he didn't have in 1970 or 1990: the Internet. Through e-mail, websites and live Web events, Earth Day participants will be globally linked as never before. "Earth Day is for the environment what Martin Luther King Day is for civil rights," Hayes says. "We know what to do. But can we summon the political will and courage to make it happen?" —By David S. Jackson/Seattle

LOOKING TO 2000
The first ecofest of the 21st century will focus on one of Hayes' passions: the need for clean energy to ward off global warming



TED ROZUMAK/BLACK STAR

TALK TO THE HERO

THE EVENT
Online chat with Denis Hayes, one of Earth Day's founders and top planner for Earth Day 2000

THE TIME
April 22 at 5:30 p.m. (E.T.)

THE PLACE
America Online (Keyword: AOL Live)

Visit Hayes' website for Earth Day info at www.earthday.net, featuring a searchable database of events around the globe

E A D E R S H I P

Is Al Gore a Hero or a Traitor?

By JAY BRANEGAN WASHINGTON

AL GORE THE SENATOR WROTE *EARTH IN THE BALANCE*, A warning about global warming and other looming catastrophes of "the environmental crisis." At once passionate and wonky, the book reflected years of personal study and policymaking. Larded with stirring phrases—"We must make the rescue of the environment the central organizing principle for civilization"—and bold prescriptions, like eliminating the internal-combustion engine in 25 years, *Earth in the Balance* secured Gore's place in the environmentalists' pantheon as America's greenest national politician.

Al Gore the Vice President has been an influential adviser and workhorse for the Clinton Administration on many issues, including trade, with his high-profile trouncing of Ross Perot in a NAFTA debate; foreign policy, with his up-front role in the Kosovo crisis; and technology, where he has championed the multibillion-dollar effort to wire all schools to the Internet (even if he didn't create it).

But now that Gore is running for the White House and preparing to step out of Clinton's shadow, environmentalists and other voters want to know how green the Vice President really is. Does his record on the environment as Clinton's right-hand man match the exalted and ambitious rhetoric of his book, or has he, as he phrased it in *Earth in the Balance*, succumbed to the "tendency to put a finger to the political winds and proceed cautiously"? In other words, is Al Gore the candidate the guy who wrote the book?

His own answer is a quick and unequivocal yes, and there's plenty of evidence to back him up. Thanks to Gore, the Clinton Administration is the most pro-environment in a generation. Gore has placed staunch allies in top environmental positions, most notably his one-time Senate legislative director, Carol Browner, as boss of the Environmental Protection Agency, where she has been a tenacious pollution fighter. The next proof of that

will be tough new EPA proposals, expected by the end of the month, for regulations mandating cleaner gasoline and lower limits on auto pollution, particularly from sport utility vehicles. The Administration has pushed through Congress important legislation, such as the California Desert Protection Act, which covers more public land than any other conservation law affecting the Lower 48 states. Clinton and Gore largely beat back—with some exceptions—an assault on environmental laws and regulations by Republicans when they captured the House and Senate in

SHOWING THE BOSS Clinton gets environmental tips from his second in command, during an outing along the California shoreline of Lake Tahoe



1994, and have found ways around hostile legislators to implement policies favored by conservationists, like reining in the U.S. Forest Service's road-building program.

The green lobby has never had better White House access and is consulted early about legislation and regulations, following years of virtual exile under Reagan and Bush. "We're part of the process now," says Dan Weiss, the Sierra Club's political director.

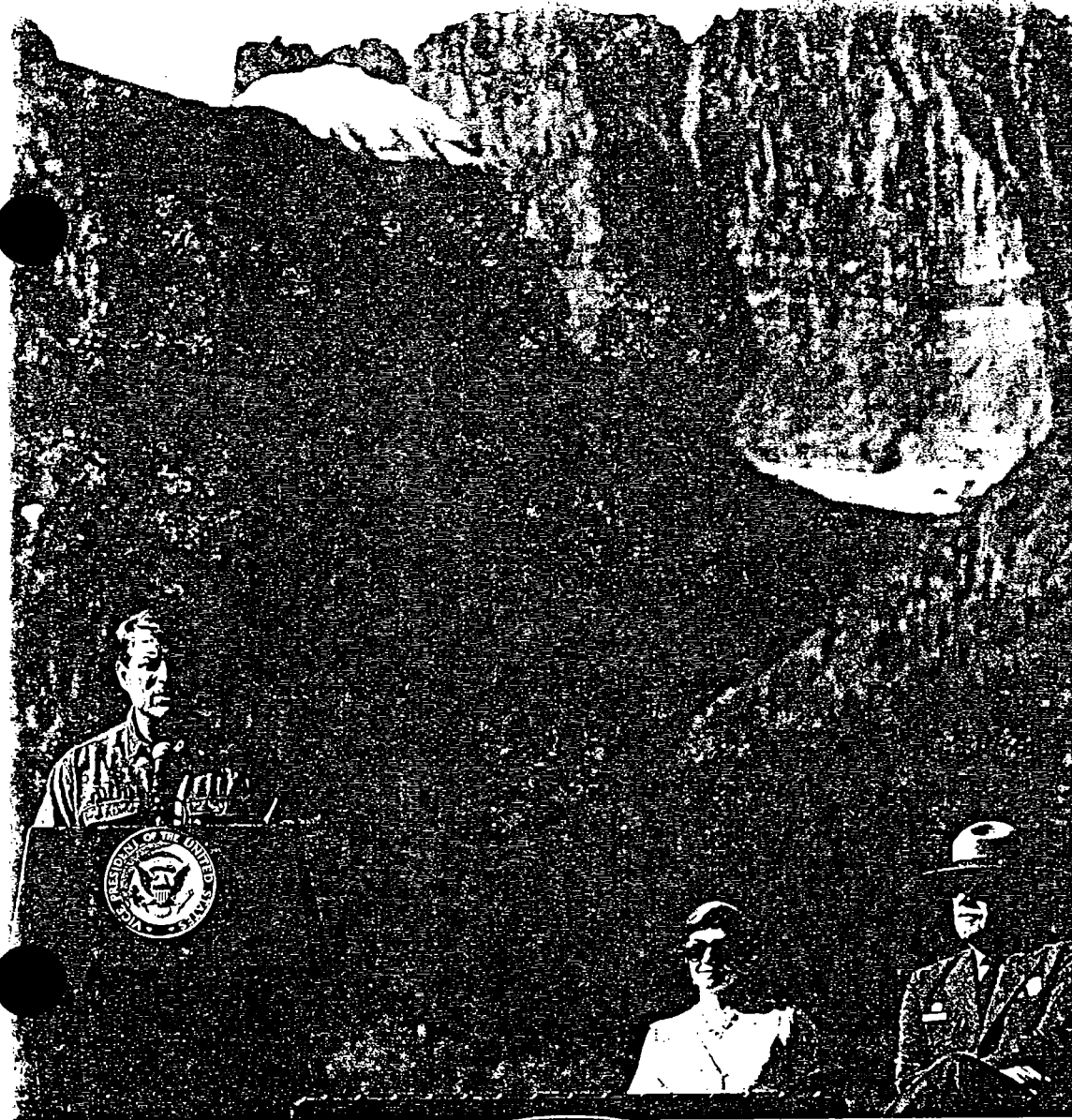
And so is Gore. For instance, he ignored the advice of his own experts and flew to the 1997 Kyoto climate-change treaty negotiations, which were about to collapse. He announced a shift in the American position and personally lobbied several foreign delegations. The result was a breakthrough, and a treaty that calls for developed countries to cut their emissions of harmful greenhouse gases, including the carbon dioxide that comes from burning coal and gasoline. "It was his presence that helped break the whole thing open," says the chief American negotiator, Stuart Eizenstat.

Perhaps most important, Gore doesn't distance himself from his book, which opponents have called "kooky," among kinder descriptions. Because it was published well before Clinton plucked him from the Senate, Gore could claim he was being deliberately outrageous to stir debate. But he does no such thing. "There's not a statement in that book that I don't endorse. Not one," he said last month during an interview in his West Wing office. "The evidence has firmed up the positions I sketched there."

So, case closed? Not so fast. While Gore has been enthusiastic in his commitment, he has been pragmatic in his tactics. Politics is the art of the possible, and even less is possible when you're only



DIANA WALKER FOR TIME



MESSAGE IN THE MOUNT
In Montana's Glacier National Park, where the ice has been receding, the Vice President warned about global warming

MICHAEL GALLAGHER/REUTERS/ANSA

current form—and abruptly ended the meeting. The green lobbyists concede that the public isn't yet ready to back painful measures to combat global warming, but contend that a political donnybrook led by the Vice President, even in a losing cause, would raise awareness. Not so, says Gore. "We lost the fight in 1993," he observes, referring to the far-reaching "BTU tax" on fuels that went down to defeat. "We're not yet winning the fight for the proposals we have now. Losing on impractical proposals that are completely out of tune with what is achievable does not necessarily advance your cause at all," and could set it back by convincing politicians that the issue is too risky to revisit.

Stronger policy proposals, Gore argues, have to go with public awareness and political support. "You cannot have one without the other," he says. A presidential campaign might be a good place to stir up a tempest about climate change, but so far, it appears unlikely that Gore will do so. His strategists figure,

the Vice President. Antipollution proposals have run afoul of other powerful government players, particularly Deputy Treasury Secretary Lawrence Summers, described by a former Administration official as a "Darth Vader on the environment."

To some of Gore's green allies, his willingness to compromise has been a source of quiet frustration. Last week leaders of nine top environmental groups wrote him to voice their "deep disappointment" that the Administration hasn't produced a credible program to meet the Kyoto targets. "It's very clear that Gore has the knowledge," says Howard Ris, executive director of the Union of Concerned Scientists and one of the letter signers, "but we haven't seen the full exercise of political will to move that forward." Says Gore's most vocal green critic, the National Environmental Trust's Phil Clapp: "I don't question the Vice President's commitment against global warming, but so far, it's all talk and no action."

The problem was clear last August at a meeting in the Roosevelt Room between Gore and the CEOs of the leading environmental groups, who presented him with a set of options to cut carbon-dioxide emissions from the two biggest sources, cars and coal-fired power plants. Curbing the pollution from coal would involve controversial moves against many electric utilities, but the U.S.—and Gore—had to show leadership by backing the idea, they insisted. The room grew suddenly frosty, and Gore, who in previous months had been speaking out on climate change and fighting internally for more antipollution funding, said, "Name a Senator who would support me." He then gave a lecture on global warming's vexing politics—the Senate would soundly reject the treaty in its

quite rightly, that he can't be elected President solely as Mr. Environment and Technology. So they plan to fill out the rest of Gore's portfolio. His still evolving stump speech emphasizes such proven vote getters as education and health care. The main environmental program he will push is "livability," a grab bag of measures to fight urban sprawl, preserve open space and battle traffic congestion that should appeal to important suburban swing voters.

If all this means that Gore will soft-pedal his signature cause, climate change, for the next 1½ years, that's bad for the earth and unworthy of a politician who has a record for being principled and decisive. With jobs plentiful and the economy strong, there never will be a better time to be aggressive. True, the environmental community must do more to build grass-roots support, but who is Al Gore if not the country's leading environmentalist? If the environment is ever to be civilization's "central organizing principle," surely it should be the central focus of Gore's campaign. That would force his Republican opponents and any Democratic rivals to respond, giving voters the opportunity to judge who can best protect the environment—and civilization—as we head into the 21st century.

—With reporting by
Dick Thompson/Washington

The room grew suddenly frosty, and Gore said, "Name a Senator who would support me"

Don't Like Green Eggs and Ham!

Industrial farming isn't just bad for hogs, chickens and the environment. It produces tasteless food.

By ROBERT F. KENNEDY JR.

THE EARTH PLEDGE FOUNDATION has asked Americans to consider, on Earth Day, the meaning of "sustainable cuisine." Arguably, the most sustainable food is the hot dog, since that's where all of the stuff that would otherwise go to waste ends up. It's like the Indians and the buffalo—they used everything. Buffalo hot dogs might be the best bet because, among all ungulates, buffalo use the prairies without destroying them. But most hot dogs are neither dogs nor buffalo but hogs, and, nowadays, that means industrial pork, which is one of the most unsustainable foods on earth.

North Carolina's hogs now outnumber its citizens and produce more fecal waste than all the people in California. Some industrial pork farms produce more sewage than America's largest cities. But while human waste must be treated, hog waste, similarly fetid and virulent, is simply dumped into the environment. Stadium-size warehouses shoehorn 100,000 sows into claustrophobic cages that hold them in one position for a lifetime over metal-grate floors. Below, aluminum culverts collect and channel their putrefying waste into 10-acre, open-air pits three stories deep from which miasmal vapors choke surrounding communities and tens of millions of gallons of hog feces ooze into North Carolina's rivers.

Such practices have created a nightmare that seems like something out of science fiction—but in this case, the effect is all too real. In North Carolina, the festering effluent that escapes from industrial swine pens has given birth to *Pfiesteria piscicida*, a toxic microbe that thrives in the fecal marinade of North Carolina rivers. This tiny predator, which can morph into 24 forms depending on its prey species, inflicts pustulating lesions on fish whose flesh it dissolves with excreted toxins. The "cell from hell" has

killed so many fish—a billion in one 1991 incident—that North Carolina used bulldozers to bury them beneath the rancid shores of the Neuse River and Pamlico Sound. Scientists strongly suspect that *Pfiesteria* causes brain damage and respiratory illness in humans who touch infected



Corporate meat production has created a nightmare that seems like something out of science fiction

fish or water. Two years ago *Pfiesteria* sickened dozens of people, including fishermen, swimmers and state workers.

Industrial farming is also for the birds. Some corporate poultry farms crowd a million beakless chickens in cramped dark cages, soaking up antibiotics and laying their guts out for the duration of their miserable lives.

Corporate farming isn't just bad for chickens and hogs—and the environment. It is destroying family farms. According to

Sierra magazine, billionaire chicken baron and billionaire hog tycoons have used their market power to drive a million family farmers out of business, including virtually every independent egg-and-broiler farmer in America. Each corporate farm puts 10 family farmers out of business. The same process of vertical integration has put the final nail in the coffin of Thomas Jefferson's vision of a democracy rooted in family-owned freeholds. Industrial meat moguls site their stinking farms in the poorest communities and pay slave wages to their minuscule work force for performing one of the most dangerous and unhealthy jobs in America.

Massive political contributions by billionaire agricultural barons allow them to evade laws that prohibit other Americans from polluting our waterways. Agricultural run-off now accounts for more than half of America's water pollution. Last year *Pfiesteria* outbreaks connected with wastes from industrial chicken factories forced the closure of two major tributaries of the

Chesapeake Bay and threatened Maryland's vital shellfish industry. Drugs and hormones needed to keep confined animals alive and growing are mainly excreted with the wastes and now saturate local waterways. Such discharges foster the growth of the drug-resistant superbugs and threaten the disruption of human and animal endocrines.

Moreover, our pork and poultry are unsavory. Factory-raised pork is soft and bland. Corporate chicken is spongy. Americans have forgotten they're not supposed to be able to cut chicken with a fork.

Americans can still find networks of family farms and farmers who raise their animals to range free on grass pastures. They feed them natural feeds without steroids, sub-therapeutic antibiotics or other artificial growth promotants and treat their animals with dignity and respect. These farmers bring tasty, premium-quality meat to customers while practicing the highest standards of husbandry and environmental stewardship.

Sustainable meats taste the best.

This is a case where doing right means eating well. Like other Americans, I've reconciled myself to the idea that an animal's life has been sacrificed to bring me a meal of pork or chicken. However, industrial meat production—which subjects animals to a life of torture—has escalated the karmic costs beyond reconciliation.

Kennedy is an attorney for the Natural Resources Defense Council and the Water Keeper Alliance.

December 20, 1999

Long Term Appears Turbulent for Oil

By KENNETH N. GILPIN



If all the pressures on the oil industry as the century turns, the one most likely to transform it over the next two decades, industry experts say, will be the fervent campaign to improve the environment.

"If we go 20 years forward, the oil industry at the turn of the 21st century will look like a very antiquated business because the types and use of petroleum products will change dramatically," said Philip K. Verleger Jr., a senior adviser to the Brattle Group, an economic consulting firm based in Cambridge, Mass.

THE ECONOMY AND INDUSTRY Outlook 2000 Home Page In This Section A Time of Energy and Enterprise and and Now E-Everything 'There Must Be a Better Way,' They Say As Labor Pool Shrinks, a New Supply Is Tapped Engineering the Nation's Longest Expansion As Nature of Money Changes, Will the Dollar Remain Supreme? In the Works: Drugs Tailored to Individual Patients Rocky Outlook for Genetically Engineered Crops Health Care Consumers Can Expect Change, and a Shock or Two Auto Dealers Streamline Operations to Meet the Challenge of the Internet The Airline Industry May Get a Little Smaller So It Can Get Bigger Long Term Appears Turbulent for Oil The A.T.M. Prophet Is a Late Convert to the Internet Goodbye Cold Calling; Hello Cross-Selling The Real Retail Revolution: It's Wal-Mart, Not the Net For Hotels, Quiet Bells and Whistles Poor Judgment, Bad Breaks, Big Blunders The Real Retail Revolution: It's Wal-Mart, Not the Net "There is going to be a lot of capital that is going to be made obsolete almost immediately," he said.

Much as it has for the last 100 years, however, oil will dominate the fuel industry as the 21st century begins. Even for the next decade or so the effects of recent underlying trends are likely to be incremental rather than seismic.

"There is nothing surprising out there over the medium term," said Lawrence Goldstein, president of the Petroleum Industry Research Foundation in New York. "The trends that have been driving and will continue to drive the industry are already in place: consolidation, cost consciousness and technology."

From a public policy perspective, however, "environmental issues will be paramount," he said.

And in the longer term, conforming with stricter environmental guidelines will transform the oil industry.

Structural changes are already occurring. Driven by the need to cut costs, 1999 brought the consolidation of four huge companies into two even bigger ones: Amoco's merger with British Petroleum and the combination of Exxon and Mobil. A consolidation wave in the oil services business has been less heralded, but in many respects has been even more sweeping. Among the combinations are Halliburton's takeover of Dresser Industries, Baker Hughes's purchase of Western Atlas, and EVI's purchase of Weatherford Enterra.

A glimpse of the future will be on view next year when Toyota and Honda roll out so-called hybrid automobiles -- cars that combine batteries and electric motors with gasoline or diesel engines. These clean, peppy models can go twice as far as a conventional car on a gallon of gasoline, although analysts say drivers may not rush to buy any new technology until they are sure it works well.

Also on the drawing boards are vehicles powered by a fuel cell and batteries instead of an engine and batteries. Fuel cells combine hydrogen and oxygen to form electric current and water, with high efficiency and no pollution. Even if oil prices do not rise, movement toward the fuel cell cars is virtually inevitable, the experts said, although this technology is still being developed and is not expected to take hold until sometime in the second decade.

"U.S. energy policy today is an environmental policy: cleaner fuels and substitution away from conventional oil moving slowly, inevitably toward alternative fuels," Mr. Goldstein said.

Even as they roll out more and more gas-guzzling, high-profit-margin sport utility vehicles, automobile manufacturers have apparently heard the message.

"I don't talk to anyone in the auto industry who doesn't think that fuel cells are the likely fuel-propulsion mechanism in the future," said Paul R. Portney, president of Resources of the Future in Washington. "Whether it is powered by methanol, hydrogen or something else is up in the air, but 20 years from now fuel cells will begin to propel more and more cars. In the interim, you will see hybrid cars."

For now, however, the internal combustion engine will continue to rule. And while it is possible that an oil shortage may develop this winter, experts said that oil would remain plentiful over the longer term.

The doubling in oil prices over the last year has been painful to the pocketbook, but experts point out that it was unrealistic to assume that oil, which cost \$13 a barrel or less in 1998, would stay at those lower levels for long.

"We are going to get large chunks of new supply over the next five years," Mr. Verleger said, "particularly if OPEC keeps prices up. It will primarily come out of the sea, like the Caspian oil

field."

OPEC, the cartel that controlled oil prices and had a profound influence on the world economy in the 1970's, lost most of its teeth in the 1980's and well into the 1990's. Alternative sources of supply and a global economy that is less dependent on petroleum have curbed its power.

But this year OPEC managed to regain some of its old dominance by adopting -- and adhering -- to a set of strict production quotas during a time of rising demand.

The cartel's re-emergence as a major force, however, is likely to be short-lived.

"Oil prices will remain volatile because no ruling group is in charge," said M. A. Adelman, professor emeritus of economics at the Massachusetts Institute of Technology.

"Conditions are a lot more competitive than they used to be, and the price is a lot lower. That will continue for some time."

Competition is coming largely from sources of new supply that have been made possible by technological improvements over the last decade.

Exploration in some previously unreachable places is now economically viable.

Over the last few years, three technological advances have been particularly important: 3-D seismic exploration techniques, which allow ships trawling over the ocean to locate reserves more precisely; the development of deep-water platforms that allow for exploration at much greater depths, and directional drilling, which slants drill bits out like legs on a mosquito as far as 5 or 10 miles, greatly expanding the territory that can be explored from a single ocean-based platform.

"These technologies, which are being fine-tuned to make them more versatile in various parts of the world, allow for much faster exploration and delivery," said James L. Smith, a professor of economics at the Cox School of Business of Southern Methodist University in Dallas.

As an example, Mr. Smith said that new wells in the North Sea could be in production within 18 months to two years from first discovery. Not so long ago, that same process would have taken as much as seven years, he said.

Although OPEC nations sit on vast proven reserves of oil, the rise in recoverable reserves elsewhere has all but silenced the voices that a quarter-century ago were saying that the world would soon run out of oil.

"There is no chance we will run out of oil in the next 20 years," Mr. Portney, from Resources of the Future, said. "We will stop using oil long before we run out of it. A century from now, when we don't use oil for very much, there will be a ton of it around."

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Monday, January 17, 2000; Page A22

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THE LATEST data on global warming should thin the ranks of those who deny the evidence for climate change. The data were produced by an independent panel organized by the National Academy of Sciences and thus have the advantage of not coming from government experts whom skeptics of global warming apparently distrust. Moreover, the report addresses directly a favorite contention of the skeptics: that the lack of atmospheric warming casts doubt on the seriousness of warming at the earth's surface.

The panel confirmed that the atmosphere shows little sign of getting hotter; but then it asked, so what? The atmospheric trends do not alter the evidence for surface warming, which the panel put at between 0.7 and 1.4 degrees Fahrenheit over the past century and a remarkable 0.5 of a degree since 1979. John Christy of the University of Alabama in Huntsville, a panel member who has disputed the evidence for global warming, concurred with these findings, although he added that we cannot know whether the recent warming trends will be sustained.

Until different scientific evidence emerges, that statement of the future's unpredictability is the only claim that skeptics should be allowed to get away with; denials that warming has happened are just plain wrong. And though the future is always uncertain, it seems absurd to base policy on a hope that current trends suddenly will reverse themselves. Some kind of action to reduce greenhouse gas emissions is urgent.

Last year the administration battled Congress into appropriating \$1.1 billion for research into clean technologies and tax breaks for clean products. This year the administration is planning to demand about 50 percent more. There will be worthwhile debates as to whether the administration's approach is the most cost-effective. But there should be no time wasted on claims that global warming is unreal.

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Sunday, January 16, 2000

Editorials & Opinions

The Detroit News

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Global Warming?

A new report by the National Research Council (NRC) has concluded that the Earth's surface has warmed up between 0.4 to 0.8 degrees Centigrade during the past century, with the last two decades showing a higher than average warming. Environmentalists are interpreting this as proof positive of their view that global warming is real and human beings are the cause of it. But as the study also makes clear, the current level of scientific knowledge justifies no conclusion about the causes of warming.

The study, coupled with the recent exit of Ford Motor Co. and DaimlerChrysler from the Global Climate Coalition, will no doubt hand environmentalists new ammunition to push for the implementation of the 1997 Kyoto treaty. The treaty, which would require the United States to reduce its carbon dioxide emissions to 1990 levels by the year 2010, would cost every American — man, woman and child — about \$2,000 in higher fuel and other costs, according to some studies.

But persisting scientific doubts about global warming make such radical measures premature at best.

The government requested a year ago that the NRC examine a seeming contradiction in the science of global warming: While surface temperatures taken during the course of a century showed a warming trend, upper-air temperatures, measured by satellites and balloon probes, showed a slight cooling in recent decades.

After sifting through the temperature data, the NRC concluded that the warming of the Earth's surface during the past two decades is real and not the product of measurement errors. But it also concluded that the satellite data is valid.

Thus it is far from clear that the much ballyhooed greenhouse effect is the cause of the observed warming. Surface warming, the study notes, is "not necessarily representative of how the atmosphere is responding to long-term, human-induced changes." One of the study's authors, John R. Christy, an atmospheric scientist at the University of Alabama, goes even further and explicitly notes that using the observed warming to "predict future climate trends remains fraught with peril."

If the NRC study shows anything, it's that scientists still have only a rudimentary understanding of climate interactions. Most computer models to date have predicted more warming than actually observed. Indeed, the last report of the United Nations Intergovernmental Panel on Climate Control predicted that the the Earth would warm by 0.6

degrees Centigrade this century — about 10 times less than the five degrees projected by previous models.

Given the current state of understanding, the best course for now may be to abandon the Kyoto treaty. Scientists should be allowed to sort out the existing discrepancies between theory and facts in a less politically charged atmosphere. And precious national resources should be used to tackle problems whose roots are far better understood.

Our view

The National Research Council study indicating the Earth's surface has warmed in the last two decades says nothing about the warming's cause and therefore does not justify implementing the Kyoto Treaty.

Opposing view

The new National Research Council study leaves little doubt that human-induced global warming exists and requires cutbacks in greenhouse gas emissions.

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We welcome your comments. E-mail us at letters@detnews.com

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BIT BY bit, industry is facing up to global warming. Last month Ford Motor Co. withdrew from the Global Climate Coalition, a lobbying group opposed to the Kyoto climate treaty. On Thursday DaimlerChrysler Corp. quit too; British Petroleum, Shell Oil and Dow Chemical left a while back. But as corporations move on, some politicians are lingering behind. On the campaign trail, Sen. Orrin Hatch routinely denounces the Kyoto accord, and Gov. George Bush has said that he opposes it. In Congress an ostrich caucus still insists that the scientific evidence for global warming is inconclusive.

For most of the world, 1997, 1998 and 1999 were the three warmest years on record. That is no mere blip: Since the mid 1970s, the world seems to have been warming at a rate of 3.5 degrees per century. Given that the world warmed by less than 10 degrees in the 20,000 previous years, the current rate is alarming. The unpleasant consequences may well include more extreme weather, a disruption to agriculture and rising sea levels that cause coastal flooding.

This warming is at least partly the consequence of human behavior: Cars, factories and coal fires produce carbon dioxide and other gases that accumulate in the atmosphere and alter climate patterns. A serious effort to reduce such emissions is therefore needed. Last year the administration promised to cut the federal government's fossil fuel emissions by 30 percent by 2010, and to triple national production of non-greenhouse "biomass" fuels derived from farm products.

But there is a limit to what the administration can do without the cooperation of Congress. For the past four years, Republican budget riders have prevented the administration from raising fuel-efficiency levels for vehicles. Congress has killed tax credits for fuel-efficient vehicles and air conditioners. The Senate has made it clear that it will not ratify the Kyoto climate accord. It will not even pass modest versions of the Kyoto idea, which would give industry an incentive to reduce greenhouse emissions.

The oil industry claims that compliance with the Kyoto accord would cost the average American family \$1,500 to \$3,000 a year. The Clinton administration declares that the extra cost of fuel-efficient machines is largely offset by the savings from reduced fuel purchases, rendering compliance all but free. The truth may lie somewhere in between. But reckless inaction in the face of global warming is the costliest of all options.

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Paul Bledsoe
01/14/2000 10:02:28 AM

Record Type: Record

To: See the distribution list at the bottom of this message
cc:
Subject: AP story on release of our bioenergy budget numbers

----- Forwarded by Paul Bledsoe/WHCCTF/EOP on 01/14/2000 09:58 AM -----

John D. Gibson



 01/14/2000 09:54:36 AM

Record Type: Record

To: Paul Bledsoe/WHCCTF/EOP@EOP
cc:
Subject: ap story

WIRE:01/14/2000 02:42:00 ET
Clinton to request funding
increase for 'bioenergy'
product research

WASHINGTON (AP) _ President Clinton wants a \$243 million increase in funding next year for developing technologies that turn trees, plants and animal waste into energy and environmentally friendly products.

The president's proposed 2001 budget will ask Congress for a total \$439 million to fund research and grants to aid the production of "bioenergy" and other products, such as plastics and chemicals, from agricultural waste.

The plan, outlined in a White House document obtained Thursday by The Associated Press, follows up on an August executive order creating an interagency council to promote bio-technologies and, hopefully, reduce U.S. oil demand and protect the environment.

It would go beyond the \$196 million program Congress approved this year for developing new biomass-based fuels by also focusing attention on other new bioproducts such as feedstocks and consumer goods.

Roger Ballantine, an adviser to the president on environmental issues, pointed to an announcement by Cargill Inc. and Dow Chemical Co. that they would begin producing plastics made from corn rather than petroleum as a harbinger of things to come.

"It's going to revolutionize both the farming industry, in that you're talking about another huge source of demand for farm products _ but even more specifically the impact it can have environmentally," Ballantine said.

A spokesman for GOP Sen. Dick Lugar of Indiana, chairman of the Senate Agriculture Committee, said new congressional authority may be needed for some of what Clinton wants to do. Still, he welcomed the president's commitment to the promotion of bioenergy.

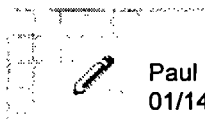
"There have been major breakthroughs in the technology," said Andy Fisher, Lugar's spokesman. "So this is sort of the right time to strike. The full eco-balance of the equation is far better than anything we've seen before."

Lugar has his own legislation promoting "biomass" development that would authorize \$300 million over six years for research. Approved in the Senate, it has received a cooler reception in the House.

Clinton's plan includes a request for \$49 million for the Energy Department's research into cellulase systems to break down woody and grassy crops into feedstocks and to underwrite development of new technologies to develop new consumer products.

It also includes \$194 million for Agriculture Department initiatives. A large chunk, about \$150 million, would be for incentive payments through the department's Commodity Credit Corporation to bioenergy producers that buy more farm commodities to expand their production.

Biomass energy, generated mostly from lumberyard waste, is currently about 3 percent of the total U.S. energy supply.



Paul Bledsoe
01/14/2000 12:04:23 PM

Record Type: Record

To: See the distribution list at the bottom of this message

cc:

Subject: Reuters Story on Bioenergy budget

WIRE:01/14/2000 00:33:00 ET
Clinton Wants to Boost
Spending on Biofuels

WASHINGTON (Reuters) - President Clinton on Thursday proposed more than doubling federal spending on development of new technologies that use crops, corn stalks and trees to make cleaner, renewable fuels for cars and buildings.

The White House said Clinton's Fiscal Year 2001 budget request to Congress would propose an increase of more than \$240 million over the 2000 budget for such efforts, with \$49 million earmarked for the Department of Energy (DOE) and \$194 million for the Agriculture Department.

"This initiative will increase the viability of alternative energy sources, help meet environmental challenges like global warming, support farm incomes, and diversify and strengthen the rural economy," the White House said in a memorandum.

Clinton in August stepped up a federal drive to use crops, grasses and trees to develop fuels such as ethanol, electricity and industrial products, aiming to triple their use by 2010. That would help meet Clinton's goal to have 7.5 percent of U.S. electricity to come from renewable energy sources by 2010.

Congress approved a budget of \$196 million for similar efforts in 2000.

Agriculture Secretary Dan Glickman welcomed the proposed funding increase, saying it marked a

"significant" advance over the initiative announced in August.

"During these difficult times in American agriculture, farmers need all the new market opportunities they can get," Glickman said in a statement. "This kind of diversification will not only help protect our environment, it will also strengthen the farm and rural economy."

The administration said its goal was "making biomass a viable competitor to fossil fuels as an energy source and chemical feedstock," building on fermentation and gasification and other biomass-related activities currently funded by DOE.

The White House last summer said adoption of the fledgling biomass industry could mean up to \$20 billion in new farm income, less reliance on oil imports and less risk of global warming.

At present, biomass accounts for three percent of U.S. energy use, mostly in the wood industry and in ethanol distilled from corn as a clean-fuel additive.

If the goal of tripling biomass use is met, it would equal 348 million barrels of oil a year, equal to 158 super tankers, the White House said in August. Emission of greenhouse gases would drop by 100 million tons, the amount emitted by 70 million cars.

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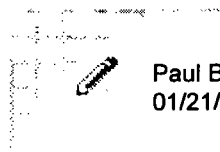
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Paul Bledsoe
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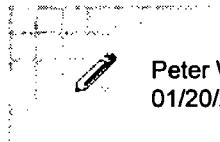
Record Type: Record

To: Angela C. Mizeur/WHO/EOP@EOP

cc:

Subject: Re: "Climate Shift" Stories Today and Confusion About Global Warming

----- Forwarded by Paul Bledsoe/WHCCTF/EOP on 01/21/2000 11:28 AM -----



Peter W. Backlund
01/20/2000 04:53:07 PM

Record Type: Record

To: Paul Bledsoe/WHCCTF/EOP@EOP

cc:

Subject: Re: "Climate Shift" Stories Today and Confusion About Global Warming 

Paul,

I had a bit of the same reaction to the Post story today. It was written in a confusing way. I will have some of my colleagues work up a good explanation in the form of a one-pager, but here are a few quick thoughts.

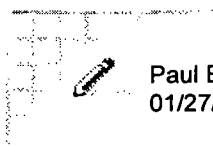
First of all, the PDO is not very well understood. Some scientists question whether it actually exists or not. There is not enough data to firmly establish that this is an ongoing natural cycle, but the preliminary work is quite intriguing. We understand much more about El Nino than we do about PDO.

El Nino, PDO (if it is for real), and what is sometimes termed the North Atlantic Oscillation, or the Arctic Oscillation are all "natural" patterns of climate variability. Some of the most interesting climate science of the last few decades has been the discovery of these large scale patterns, and discovery of the way they have large scale effects (i.e., El nino warming of the tropical pacific influences rain in Africa). Human induced climate change is superimposed on the "background" of these patterns of variability.

If the PDO is real, and if it is shifting phase, this might "mask" or "dampen" the global warming signal, but the underlying warming trend would still be happening, and when the PDO shifted back again, the warming could be quite dramatic. The La Nina during 1999 dampened global temperatures, and is probably a large part of why 1999 was not even warmer than 1998. This can also work in reverse, and the natural cycle can magnify the long-term warming. The El Nino conditions in 1998 were part of the reasons that it was so warm, because they were added on to the human induced warming that was already occurring. But neither case calls long-term warming into question. PDO is thought to have the same kind of effects but on a multi-decadal scale.

The bottom line is that the climate system is very complicated and variable. This is why long-term accurate observational records are so important. If PDO was shown to have a significant effect over the last couple of decades, and we only had a few decades of data, it would be possible to question the existence of long-term warming. If PDO was shown to have a significant effect over the last couple of decades, it might also call into question the significance of the accelerated warming we have seen. But we have more than a century of accurate data, and despite the effects of El Nino and the effects of PDO (if they are real), the long-term warming trend can be seen quite clearly.

The really important issue is how long-term change and short term variability interact. The prevailing point of view has been that it is not possible to show that long-term change is making El Nino's worse, but the El Nino "pattern" has gone kind of haywire during the last several decades of rapid warming. Most of the scientists I talk to believe that there is a link, and that long-term change will affect natural cycles, and I think there is new work that will be published over the next several years that will start to show how this happens (but this is just my speculation right now).



Paul Bledsoe
01/27/2000 09:23:24 AM

Record Type: Record

To: See the distribution list at the bottom of this message

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Subject: AP Story on Bioenergy Tax Incentives Attached

Wednesday January 26 8:40 PM ET

Clinton Wants Green Fuel Tax Credit

By ANNE GEARAN Associated Press Writer

WASHINGTON (AP) - President Clinton will propose a \$2.1 billion tax credit plan to encourage development and production of environmentally friendly fuels, White House officials said Wednesday.

The 10-year tax incentive package will be part of Clinton's budget proposal for 2001, which he will deliver to Congress next month. The tax credits are in addition to a proposed \$243 million budget increase for developing technologies that turn trees, plants and animal waste into energy and environmentally friendly products.

Clinton will ask Congress for a total of \$439 million to fund research and grants to aid the production of "bioenergy" and other products, such as plastics and chemicals, from agricultural waste.

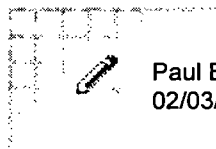
The tax credits would help businesses and entrepreneurs find ways to use existing technology to turn things like crushed sugar cane into usable fuel, said Roger Ballantine, who heads the White House office on global climate change.

"We are trying to move away from this notion that in order to deal with climate change we're going to have to make tough economic choices," Ballantine said. "The president rejects that," and believes that the world can turn toward cleaner fuel and not risk economic backsliding, Ballantine said.

The plan follows an August executive order creating an interagency council to promote bio-technologies and reduce U.S. oil demand and protect the environment.

It would go beyond the \$196 million program Congress approved this year for similar initiatives.

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Paul Bledsoe
02/03/2000 09:21:45 AM

Record Type: Record

To: See the distribution list at the bottom of this message

cc:

Subject: AP story on climate change budget

Thursday February 3 2:31 AM ET

Clinton Urges Global Warming Funds

By ANNE GEARAN Associated Press Writer

WASHINGTON (AP) - President Clinton hopes that American businesses eager to sell environmentally friendly technology and products overseas will help win approval in Congress for programs to combat global warming and pollution.

In his upcoming budget request, Clinton will ask Congress for \$2.4 billion for various initiatives designed to reduce the harmful effects of global climate changes, White House officials said Wednesday. The amount is 42 percent above what Congress approved last year.

Clinton will also propose new tax incentives to encourage investment in environmentally friendly technology, said Roger Ballantine, White House environmental adviser.

"I think when Congress sees what we're doing and business sees what we're doing, we're going to have a lot of support," Ballantine said.

Part of the new money would go toward a push to accelerate development and distribution of clean energy technologies worldwide.

Clinton is asking for \$200 million - twice the request of last year - to pair that U.S. business opportunity with an effort to persuade developing countries to choose environmentally benign energy sources such as wind power and alternative fuels.

"Everyone agrees that there is an enormous market out there as the developing world adds the enormous amount of new energy capacity that they're planning, and that U.S. business can and should get into that market," Ballantine said.

The president proposed a package of conservation incentives a year ago but Republicans in Congress, leery of the unratified international climate change agreement reached in Kyoto, Japan, in 1997, wouldn't go along.

Energy use in developing countries will overtake that of industrialized countries by 2020, representing a market for technology and energy products of between \$4 billion and \$5 billion, a White House primer on the initiative said.

The trend will continue, with developing countries accounting for 75 percent of the increase in

global energy use between now and 2050, the White House said.

The United States and other industrialized countries, which have already reaped both benefit and harm from the use of fuels such as coal, want to encourage developing countries to choose cleaner options. Vice President Al Gore (news - web sites) and others cite the dangers of global warming.

Some poorer countries have resisted this push as meddling from rich neighbors. The new money, spread among several U.S. government agencies, including the Export-Import Bank and the Energy Department, is intended to help decision-makers abroad get comfortable with new technology that may carry higher upfront costs but pay off in the long run, the White House said.

``The initiative will help lay the technical and policy foundation," for poorer countries ``to build a clean energy future, leapfrogging past the polluting energy technologies used by the industrial countries," the White House statement said.

Clinton will send Congress his spending proposals for fiscal year 2001 on Monday.

The president also outlined a plan to give \$4 billion in tax incentives over five years to help reduce greenhouse gas emissions by encouraging people to buy more energy-efficient cars, homes and other products.

That plan, which also requires congressional approval, would give a tax break to home buyers who choose a new, energy-efficient house. The tax credit would be \$1,000 or \$2,000, depending on the energy efficiency of the home.

The White House also wants a tax credit for energy-efficient water heaters and other equipment in homes and commercial buildings. The credit would be 20 percent of the cost of the equipment, up to a cap. Similar proposals died in Congress last year.

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Paul Bledsoe
02/03/2000 11:12:33 AM

Record Type: Record

To: See the distribution list at the bottom of this message

cc:

Subject: Wall Street Journal Story on Climate Change/Clean Energy Budget Attached

The Wall Street Journal Interactive Edition -- February 3, 2000
Economy

White House Plans to Stimulate Exports Of U.S. Energy-Conserving Equipment

By JOHN J. FIALKA
Staff Reporter of THE WALL STREET JOURNAL

WASHINGTON -- The White House will propose a \$2.4 billion package of programs to combat global warming, including \$200 million to promote sales of energy-efficient U.S. equipment abroad.

The package is intended to spur U.S. involvement in what some experts project will be a \$4 trillion to \$5 trillion market in new energy technology for developing countries during the next 20 years. The measure will add \$100 million in funding for the Department of Energy, the U.S. Agency for International Development and other agencies involved in widening the market niche for U.S. technology.

The package is intended to stimulate exports of equipment for more energy-efficient buildings and natural-gas transmission systems, and cleaner coal-fired power plants and combined heat-and-power systems that use heat from small electric-power generators to warm buildings.

The proposal also would extend a \$3.8 billion package of tax incentives earmarked for future years and expand it to include a tax credit for existing coal-fired power plants that burn agricultural and timber wastes along with coal to reduce CO2 emissions.

Parts of the proposal will find a cool response in Congress, where Republican leaders have vowed to stop any programs that they feel anticipate ratification of the Kyoto Protocol on climate change, which the Clinton administration has signed. So far the Senate hasn't shown a strong interest in ratification.

"There are enormous markets opening up in the developing world," asserted Roger S. Ballentine, deputy assistant to President Clinton for environmental matters. "The notion we shouldn't be doing everything we can to get American companies into these markets is crazy. This is something we should be doing."

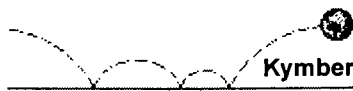
The new Clinton plan also would provide a tax credit for companies that generate power from methane created by decaying garbage in landfills.

The package is designed to implement recommendations made by President Clinton's Committee of Advisors on Science and Technology last summer to cope with global warming. Methane and CO2 are two members of a family of man-made "greenhouse gases" that many scientists believe are artificially warming the earth's atmosphere by trapping more solar heat in the atmosphere.

The latest proposal, a revision of earlier tax incentives, would provide tax credits of as much as \$2,000 for buyers of homes that are more energy efficient, \$3,000 for buyers of so-called hybrid vehicles (which use both gasoline and electric-powered engines to improve mileage), and \$4,000 for electric-powered cars or vehicles that derive electricity from fuel cells.

Two billion dollars earmarked for the auto credits, double last year's proposal, would start in late 2002 when large numbers of the cleaner cars enter showrooms.

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Kymberly M. Escobar

02/17/2000 10:34:45 AM

Record Type: Record

To: See the distribution list at the bottom of this message

cc:

Subject: Brokaw on warming

NBC NIGHTLY NEWS (6:30 PM ET)

February 16, 2000, Wednesday

20TH CENTURY HOTTER THAN PREVIOUS RECORDS

TOM BROKAW, anchor: The 20th century is a lot of things, of course, and scientists today add something else to the list: it was a hot century. In fact, the century just passed the warmest in 500 years, the earth's temperature up 1.8 degrees Fahrenheit from what it was back in the 1500s. The Northern Hemisphere heated up even more, a full 2 degrees.

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Unraveling Two Riddles Of Global Warming

By Curt Suplee

Washington Post Staff Writer

Monday, February 21, 2000; Page A13

Of all the troublesome questions in the study of global warming and potential climate change, none is more forbidding, or more profound, than these:

* Is the observed increase in the worldwide average temperature--around 1.1 degrees Fahrenheit over the past 100 years--genuinely abnormal, or is it well within the bounds of natural variability?

* And is the apparent super-warming of the past two decades--about 0.5 degree--actually a mistake, in view of the fact that upper-air temperature measurements over the same 20 years show no warming at all?

Both questions got closer to definitive answers last week.

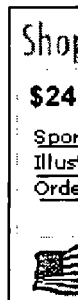
In the Feb. 17 issue of the journal *Nature*, Henry N. Pollack of the University of Michigan and others took on the issue of multicentury climate change, which has an aggravating built-in difficulty: Accurate measurements of surface temperatures have been taken only since the end of the 19th century.

So to discern how hot it was before 1850, scientists have to rely on what are called "proxy" indicators of temperature change: width of tree rings, chemical makeup of ice cores, type and amount of pollen in sediments, growth rates of coral and the like.

Pollack's group used a different and completely independent proxy indicator: temperature at various depths in 616 boreholes on six continents. These holes, typically 2 to 4 inches wide and a quarter of a mile deep, originally were drilled for geological research, oil exploration or other reasons. Now they provide a handy means of taking the Earth's past temperature.

Heat moves two ways through the ground. One is from the surface down, as thermal energy from the planet's sun- and air-warmed crust seeps downward through rock. The other is from the bottom up, as heat from the Earth's molten innards travels upward.

By lowering thermometers into these holes, and subtracting the bottom-up signal from the readings, scientists can find evidence of past


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temperature shifts as they propagate down through the rock. It's a slow process; in 1,000 years, heat pulses penetrate only about 1,600 feet.

"By looking at these temperature disturbances," Pollack said, "we can reconstruct surface conditions" from centuries past by combining results from many sites. In all, 479 of the 616 holes showed average warming of 1.8 degrees F since 1500 (a bit higher than what other proxy measures indicate), with 80 percent of that since 1800, and more than half since 1900.

Interestingly, the new five-century findings--which confirm a smaller study the group published in 1998--suggest that natural temperature variation may be larger than previously thought. Any warming detected during the 16th, 17th and 18th centuries was almost certainly not caused by human society. It is likely to be the product of natural processes--perhaps a recovery from the "Little Ice Age," a cold snap that gripped Europe from 1400 to 1850. Atmospheric carbon dioxide levels did not rise appreciably until the early 19th century.

As for the ultra-hot 1980s and '90s, surface measurements from thousands of land-based stations and ships show an increase of about half a degree. But two other, independent sources--weather balloon instruments and satellites that measure the temperature of the lower atmosphere--show no net warming during that period.

This contradiction suggests that either the surface measurements or the satellite/balloon figures are simply wrong.

Moreover, it casts doubt on the computerized global climate simulations, or "models," that are used to assess the threat of warming. In general, the models predict that enhanced greenhouse warming should heat the air in the lower troposphere--the layer of the atmosphere closest to the Earth, and the one sampled by balloons and satellite readings.

That disparity became so vexing that the National Research Council (NRC) appointed an expert panel to consider the issue. Its report, issued last month, indicates that maybe both trends are right: Something different is happening at the Earth's surface from what is going on only a few thousand feet above.

In the Feb. 18 issue of Science, several of the NRC panel members confirmed and expanded that idea.

Physicist Benjamin D. Santer of Lawrence Livermore National Laboratory and colleagues conducted a new analysis showing that "it really is plausible to have temperature trend differences between the surface and the troposphere in the '80s and '90s," as Santer noted.

His group compensated for the fact that the surface data are not globally complete, as are the satellite data. Then, they factored into the climate models certain events peculiar to that period--such as the effects of stratospheric ozone depletion and the umbrella-like aerosol clouds blown aloft by volcanoes El Chichon and Mount Pinatubo. With those adjustments, "the predicted change in the troposphere is very much in line with observations," Santer said. "The discrepancy is quite small."

In another paper in Science, research meteorologist Dian J. Gaffen of the National Oceanic and Atmospheric Administration and co-authors used a highly respected data set from weather balloons to show that "there has been a greater warming at the surface than aloft in the tropics" since 1979, when the first satellite measurements began.

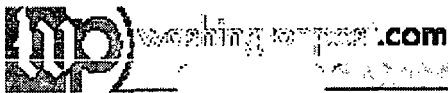
But when they extended their analysis to the 1960s and '70s, "we find that the discrepancy doesn't hold farther back in time," Gaffen said. The results indicate that either "we shouldn't make too much of differences over short periods" such as two decades, or "there may have been some different things going on in the atmosphere since 1979," such as volcano and ozone effects, Gaffen said.

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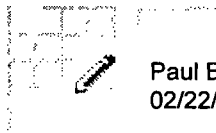
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Paul Bledsoe
02/22/2000 09:41:46 AM

Record Type: Record

To: See the distribution list at the bottom of this message

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Subject: Giving a good name to "pond scum"? See attached

Pond scum may give cheap,
limitless supply of hydrogen
fuel, experts say

By PAUL RECER
The Associated Press
2/22/00 2:27 AM

WASHINGTON (AP) -- Hydrogen may be an ideal fuel when the supply of oil and natural gas runs out, but the problem has been finding a way to produce it cheaply. Scientists now say the answer may be an ordinary pond scum.

Green algae, a simple plant that grows all over the world, has the unique ability to convert water and sunlight into hydrogen gas, researchers said Monday at the national meeting of the American Association for the Advancement of Science.

Now scientists have found a new way to force the algae to make hydrogen gas on demand, a process that could lead to an almost limitless supply of fuel that burns without pollution and produces only water as a waste product.

Tasios Melis of the University of California, Berkeley, said that the algae, one of the most ancient plants known, evolved the ability to live in two radically different environments.

When living in ordinary air and sunlight, it uses photosynthesis like other plants. This process converts sunlight, water and carbon dioxide into waste oxygen and the life-sustaining chemicals the plant needs.

But when the algae is deprived of a key nutrient, sulfur, and forced to live in an anaerobic, or oxygen-free, environment, the plant reverts to an alternate life style in order to survive. Under these conditions, the algae makes hydrogen, said Melis.

"It is sort of a metabolic switch," said Melis. "It is an alternative way of breathing" that the plant developed over millions of years to survive where there is no oxygen or sulfur. Those same conditions would kill other plants.

In experiments, Melis said his laboratory first grows algae cells in the ordinary way, giving the plant sunlight, nutrients and water. The plant happily reproduces, growing millions upon millions of new cells.

Then, the researchers cut off the supply of sulfur and oxygen to the algae, forcing it to click the metabolic switch to its hydrogen-producing life style.

"Within 20 hours, the algae turns on its switch, converting from oxygen production to hydrogen production," said Melis. "We have to seal the culture to prevent exposure to oxygen. Then we collect the hydrogen as it bubbles out of the culture."

The gas comes out as pure, pollution-free hydrogen, he said.

Melis said the hydrogen-making process has operated experimentally for up to four days, the time it takes for the algae to exhaust its internal resources. The researchers then converted back to normal photosynthesis and the plant revives itself, ready to start another cycle.

"This has the promise of generating fuel from some of nature's most plentiful resources -- sunlight and water," said Melis.

One liter of algae culture, a little over a quarter of a gallon, produces three milliliters of hydrogen, about a tenth of a fluid ounce, per hour, said Melis. Researchers believe this efficiency can be increased at least 100 fold, but that has yet to be demonstrated.

Algae growing in a small pond, he said, may eventually be enough to power 10 cars, although Melis admitted, "I'm not saying how big the pond would have to be."

The algae's alternate life style uses an enzyme, along with sunlight, to extract hydrogen from water. The enzyme, hydrogenase, is not found in higher plants. Some researchers are looking at ways to transfer the gene for this enzyme into other plants and, possibly, to force the enzyme to work in the presence of oxygen.

Hydrogen has long been promoted as a fuel to replace fossil energy sources. In the space program, hydrogen and oxygen are combined to make a rocket propellant, such as

in the main engines of the space shuttle.

Oxygen and hydrogen are an explosive mixture, but they can be combined in a fuel cell to produce electricity and water. Fuel cells electrify the space shuttle and were used successfully in the Apollo program.

Margaret K. Mann of the National Renewable Energy Laboratory, a federal facility in Golden, Colo., said that auto makers are already developing fuel cells to drive automobiles. Other researchers, she said, are studying ways of changing the nation's energy infrastructure -- pipelines, fuel transports and service stations -- to make use of hydrogen.

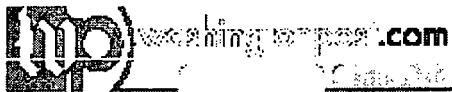
She said it will be at least 20 years before hydrogen becomes a major part of the energy picture, but the gas could eventually power the nation, providing a renewable fuel source for both transportation and electrical generation.

Right now, hydrogen is most commonly separated from natural gas. This makes hydrogen a negative in the energy equation, since natural gas is a cheaper, more efficient fuel.

Hydrogen may come into its own for environmental reasons, said Mann.

Carbon dioxide from the burning of fossil fuels is the primary cause of global warming, many believe. The only waste generated from hydrogen fuel is pure water, a resource that theoretically can be recycled to produce more hydrogen.

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More Rapid Warming May Follow Heat Of 1997-'98

By Curt Suplee

Washington Post Staff Writer

Wednesday, February 23, 2000; Page A14

A new analysis of global temperature records since 1880 indicates that the spectacular warming of 1997 and 1998 may mark a "change point" at which the planet's surface suddenly began to heat up faster than it had in previous decades, researchers reported yesterday.

The current pace of temperature rise is "consistent with a rate of 3 to 3.5 degrees Celsius per century," or 5.4 to 6.3 degrees Fahrenheit, said Thomas R. Karl, director of the National Oceanic and Atmospheric Administration's National Climatic Data Center (NCDC).

That increase corresponds to the highest rate projected to occur during the entire 21st century by the United Nations' Intergovernmental Panel on Climate Change (IPCC), Karl said. In contrast, the average rate of warming observed for the 20th century as a whole was 0.6 C, or about 1.1 degrees F, prior to the 1997-98 heat spike.

"We're not claiming at this time that we're sure the rate has definitely climbed to that upper end of the [IPCC] scale," said Karl, who with colleagues is publishing the analysis in the March 1 issue of the journal *Geophysical Research Letters*. But their statistical analysis indicates a good chance that it has.

The team ran the surface temperature record through computer programs to determine how probable it was that the unusually hot 16 months from May 1997 to August 1998--in which each month broke all previous records--could be the result of ordinary variation alone.

Because climate is subject to so many elusive and changing variables, even a period of overall warming is very unlikely to show a regular linear increase. It will instead be marked by cool spells and hot streaks of uneven duration.

"Things do happen by chance," Karl said. But after the research group ran the data through a statistical model thousands of times, the analysis showed that a hot snap of the 1997-98 magnitude would only happen about five times out of 100 as a result of normal variability, even if the actual rate of temperature increase since 1976 were a full 2 degrees C (3.6 degrees F) per century, as many experts believe.



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Opinion

Tuesday, March 28, 2000

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Global warming? Why not enjoy it

By Patrick J. Michaels
Scripps Howard News Service

Seven years ago, on March 13, 1993, the eastern third of the United States was pasted by a big low-pressure system that was (erroneously) called the "Storm of the Century." It dumped 2 inches of snow on the Gulf Coast beaches of Florida and 2 feet of snow in a wide swath from southwestern Virginia through New York and was followed by record cold.

The next day, Kevin Trenberth, a federal climatologist with the U.S. National Center for Atmospheric Research, went on "Meet the Press" to say that global warming, El Niño and the 1991 Mount Pinatubo volcano were all involved. Never mind that Pinatubo caused a well-known global cooling.

A look out the window on the same day this year revealed a remarkably different picture of blue skies, daffodils and softball practice.

Given the choice, which Ides of March would you prefer?

The fact is that we have just completed the warmest winter in the 105-year record for the continental United States, and few are complaining. But because it is good news, the same federal climatologists who glibly pulled the greenhouse effect trigger on the 1993 snowstorm can't bring themselves to tell why we are so happy: global warming. Instead, they subsequently trotted out a scare story about how the warm winter is causing a drought.

Even the most rudimentary statistical analysis of winter temperatures reveals that our coldness is determined by the number and severity of incursions of miserable, deadly, frigid air, minted in northwestern Canada, Alaska and Siberia and shipped south. Winters in which there is little of this activity, such as the totally delightful ones of 1931-32 (87 degrees F. in Roanoke, Va., on Feb. 11, 1932) or 1999-2000, tend to record above-average temperatures.

Federal climatologists could have looked it up in the Jan. 24 issue of *Climate Research*, which proved that the greenhouse warming in the last half of the 20th century is largely confined to those same cold air masses. That is predicted by greenhouse effect theory but rarely mentioned in the rush to gloom. In the Northern Hemisphere winter half-year, which itself contains over two-thirds of the surface temperature warming, these frigid-air killers of the homeless are warming at a rate 10 times greater than the average warming everywhere else. The paper proved the greenhouse effect was the finger on this trigger by showing that the more cold air there is, the more it warms up.

Further proof, ironically, is given by satellite and weather balloon data that show no warming (after allowing for the now-departed 1998 El Niño) since their records became concurrent in 1979. These instruments are best at measuring the atmospheric slice from roughly 5,000 to 30,000 feet, but the cold Siberian and North American air is usually more shallow than that.

Because people saving the planet do not brook embarrassment with decorum, please don't ask them whether this disparity between the surface and lower-atmospheric temperature was forecast by the climate models cited as evidence for a global-warming disaster.

Droughts are caused by deficits in water balance as evaporation exceeds precipitation. In the winter, over most of the nation, temperatures and the sun's angle are so low that there's very little evaporation, which is why, even in a dry January, most of the soils in the eastern half of the nation are saturated. The recent warm winter was only three degrees above the long-term average, or the average temperature difference between, say, March 5 and 15. Evaporation rates remained low because the mean temperature is still way below the summer peak. So warm winter or not, winter temperatures do not cause droughts.

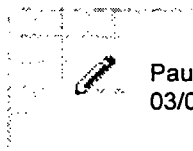
Federal behavior is not hallmarked with consistency. If global warming is caused by burning of fossil fuels (it probably is), and if it is a terrible problem (I'll bet not), then the only way it can be stopped is by raising energy prices through the roof.

How high?

Today's high prices for gasoline have not dented consumption enough to cool the mean temperature of the planet 1/1,000 of a degree, even if spread over a year. In other words, a two-term Gore administration at that price would produce a change in temperature of less than 1/100 of a degree. But with the softballs flying by my window on this fine March day, who on Earth would want to do such a thing anyway?

Patrick J. Michaels is senior fellow in environmental studies at the Cato Institute and author of "The Satanic Gases," scheduled for publication in May.

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Paul Bledsoe
03/07/2000 10:32:50 AM

Record Type: Record

To: See the distribution list at the bottom of this message

cc:

Subject: Energy Dept. Predicts Higher Gasoline Prices

This story ran on front page of the Post and NY Times Business sections, A01 of the Boston Globe and Wall Street Journal and elsewhere nationwide. All the networks ran items on it last night.

US says gasoline prices could hit \$1.80 a gallon

By Kenneth Bredemeier Washington Post, 3/7/2000

WASHINGTON - The government told motorists yesterday to get used to high gasoline prices through the summer and predicted that regular gasoline could reach \$1.80 a gallon.

The increase in prices - already inching toward a national average of \$1.50 a gallon - is likely to occur even if the Organization of Petroleum Exporting Countries agrees later this month, as the United States expects, to increase its production of crude oil, the Energy Department said in its latest monthly forecast.

But prices could climb even more, the department said, if OPEC declines to increase production. Currently, the worldwide consumption of oil is 2 million barrels a day greater than supply.

The oil producers cut production by 4 million barrels a day over the past year in a successful effort to boost oil prices. Oil prices have soared from \$11 a barrel in late 1998 to more than \$30 a barrel at the moment. A benchmark crude oil, light sweet crude for April delivery, closed at \$32.18 yesterday on the New York Mercantile Exchange - the highest closing price since November 1990.

Saudi Arabia, Venezuela, and Mexico, three major oil producers, have already said they favor some increase in production and Kuwait has said it would agree as well.

But yesterday, Iran's oil minister, Bijan Namdar Zanganeh, said the international market is not facing any oil shortage and said there is no need to increase production, a stance also taken by Libya and Algeria.

In its forecast, the Energy Department said that even if the oil producers boosted production by 2.5 million barrels a day, it would not halt the

expected price increases at pumps through the summer months. The extra oil would arrive too late to turn it into gasoline for the summer driving season, when millions of Americans take to the roads.

The reduced oil production over the past year has hit car-loving Americans in the wallet.

Even with Energy Department's prediction that gas prices will soon average more than \$1.50 a gallon, Philip K. Verleger Jr., a leading petroleum economist, called the report too conservative.

"They're very much on the low side," said Verleger, a former government economist.

He predicted that pump prices would hit \$2 a gallon "in much of the country" in August. Verleger said gas prices could top out at \$2.50 a gallon in parts of the country "where there are refinery distribution problems," such as in areas where refineries have to be shut down for mechanical problems, as has happened on the West Coast several times in the last three years.

Despite the dire forecasts for the next several months, Verleger said prices would drop by October when wintertime gas formulas are sold at the pump again, but that the dip is likely to be only to current levels.

"I wouldn't expect them to be lower than they are now," Verleger said.

As recently as February 1999, gasoline cost an average of 96 cents a gallon throughout the United States, according to the American Automobile Association. That now seems like ancient history.

Verleger said the price spikes in the last several months have occurred because there are no excess oil or gas inventories.

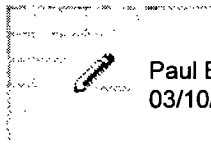
He said that if OPEC does agree at its March 27 meeting in Vienna to increase production by 1 million barrels a day, it would have little effect on the US market before May. Moreover, he said, further similar production increases would be needed in June and October just to restrain the surge in crude oil prices.

AAA spokesman Jerry Cheske said the national gas price averaged nearly \$1.37 per gallon on Feb. 15 and it might hit \$1.45 when the group finishes its latest survey next week.

He said AAA doesn't believe that a million-barrel-a-day increase in oil production "will have much of an impact at all."

Despite motorists' awareness that they're paying substantially more at the pump than they did just a few weeks ago, Cheske said "you don't see the anger in the market" that existed at gas stations across the country during the two Arab oil embargoes in the 1970s.

"That could change if gas prices approach \$2 a gallon," Cheske said. "Travel, the economy, the stock market could all be affected."



Paul Bledsoe
03/10/2000 09:25:42 AM

Record Type: Record

To: See the distribution list at the bottom of this message

cc:

Subject: USA Today Story on Record Winter Temperatures attached.

Page 4A

USA enjoys warmest winter on record
December-February period breaks previous
mark set in 1998-99

By Yasmin Anwar
USA TODAY

From the Sun Belt to the Frost Belt, this winter has been the nation's warmest on record. Officials at the National Oceanic and Atmospheric Administration (NOAA) say the winter of 1999-2000 -- December through February -- was the warmest since the government began keeping records 105 years ago.

This winter's average temperature of 38.4 degrees topped last year's record of 37.8 degrees.

"We're looking at a warmer world," said James Baker, NOAA administrator. "We can expect to see more extreme weather -- heat waves, floods and droughts."

Meteorologists suspect the warming trend is due to La Niña, the weather phenomena that cools the waters of the equatorial Pacific Ocean and alters the jet stream that guides weather systems.

They also blame global warming, which experts say is brought about by carbon dioxide buildup in the atmosphere and other human impacts on climate.

NOAA figures for the 48 contiguous states set the average temperature for the months of December, January and February at 38.4 degrees, 0.6 degrees higher than the previous winter's average temperature of 37.8 degrees. The winters of 1991-92 and 1997-98 tied as the third warmest winters on record with average temperatures of 37.5 degrees.

Oklahoma saw its warmest December, January and February on record in 1999-2000. Kansas, Nebraska and Montana enjoyed their second warmest

winters.

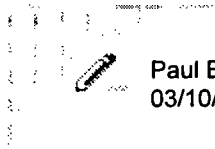
"We just seem to be breaking records one year after the other," said Jim Hurrell, a research scientist at the National Center for Atmospheric Research in Boulder, Colo.

While the warming trend has cut down on heating oil consumption, it has slowed or halted snowmobiling and skiing in the northern states.

Front page, News, Sports, Money, Life, Weather, Marketplace
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Paul Bledsoe
03/10/2000 09:33:44 AM

Record Type: Record

To: See the distribution list at the bottom of this message

cc:

Subject: Record Winter Temperatures Story Leads CBS Evening News Broadcast last night.

CBS News Correspondent Jim Axelrod reports
on where the weird weather's coming from

Global Warming = Early Spring?
Heat Wave Hits Eastern Cities
La Nina Blamed For Short-Term Swings
But Global Warming Eyed For Long-Term Trend

WASHINGTON

(CBS) In the nation's capital, people are contemplating 80 degree winter days. More than a dozen big cities in the east set record highs today. For the season, every state in the country is now warmer than normal. And that's not all.

The last three winters are the three warmest on record. The December, January, and February which just passed were the warmest ever in the United States.

CBS News Correspondent Jim Axelrod reports scientists are pointing fingers at the La Nina effect and an overall rise in global temperatures due to global warming.

Residents of some of the areas that baked Thursday have also seen their share of snow this winter

For that, scientists blame La Nina, the unpredictable pacific weather maker that creates ice breaking just north of New York City one week and ice skating in a T-shirt the next.

"A La Nina type will give you both extremes," said National Oceanic and Atmospheric Administration head James Baker. "Both the very cold times and the very warm but it will give you more warm than cold. And so when you average you get the warm."

But while the shorts-and-frisbee weather is a nice break from winter's

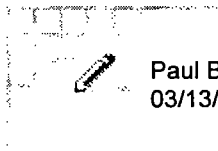
doldrums, the high temperatures may signal larger, more dangerous changes in the earth's climate

Alden Meyer of the Union of Concerned Scientists told CBS Newsit's more than just La Nina. In the climbing temperatures, he sees damage done by factory and automobile emissions.

"I think its one of the most fundamental challenges that faces us in the 21st century," said Meyer.

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Paul Bledsoe
03/13/2000 09:44:42 AM

Record Type: Record

To: See the distribution list at the bottom of this message

cc:

Subject: Washington Post, AP Stories on NOAA record warm winter data

NYTimes also ran a brief story Saturday that I don't have electronically..

Winter Warmth a Record

Nationally, It's the Balmiest on the Books, NOAA Says

By Michael E. Ruane
Washington Post Staff Writer
Saturday, March 11, 2000; Page A01

Out on the plains, the snows came late. In the New England forests, there were longer stretches between freezes. And up north, the dreaded Canadian air masses generally stayed in Canada.

As a result, the National Oceanic and Atmospheric Administration said yesterday, winter in the United States has been the warmest since the government began keeping records 105 years ago.

That has not been the case for the Washington area, though, despite the past week or so of balmy weather and record temperatures and the early appearance of garden shoots and leaf buds.

Locally, the winter has been milder than usual but far from a record-breaker, said meteorologist Steven Zubrick, the science officer at the National Weather Service's Washington-Baltimore station in Sterling.

This winter's average temperature has been 40.1 degrees Fahrenheit, he noted yesterday, well below the 44.6-degree record average in the winter of 1932. Plus, we've had a healthy 14.5 inches of snow this year, well above the 0.1 inch that fell in 1972-73 and 1996-97.

Nationally, however, the story is different. The average temperature across the country from December to February has been 38.4 degrees, 0.6 degrees higher than last year, when the previous record was set, NOAA said. And the warmest winter before that came in 1997-98--which tied with 1991-92 with an average temperature of 37.5 degrees.

The past three winters have thus been the warmest on record, continuing a warming trend that started in 1980. Since then, NOAA said, 67 percent of the nation's winters have been warmer than the long-term average.

Last month saw hundreds of daily and monthly high temperature records broken. And in many places, precipitation was scarce, too. Louisiana had its driest winter on record, and Alabama and Mississippi their third driest.

Much of the warm and dry weather can be laid to the La Nina weather phenomenon, which is characterized by unusually low temperatures in the equatorial Pacific.

The opposite of the warm equatorial Pacific waters of the El Nino phenomenon, La Nina often leads to lower rainfall in the United States and other parts of the world.

La Nina also can push the jet stream north, thereby raising temperatures across the country. The latest La Nina period began in mid-1998 and is expected to continue this year.

Whether the mild seasons are also the result of global warming is unknown. During the past century, average global temperatures have increased about 1.1 degrees (from an annual mean of about 57 degrees), but the pattern has been uneven, with some decades showing a cooling trend.

Climate varies on such unpredictable scales, and for such a variety of reasons, that it is almost impossible to determine whether the climate in any individual year is part of a trend.

But many experts note that the dozen hottest years in the 20th century have been since 1980. Most were in the 1990s, with last year the fifth hottest. May 1997 to August 1998 was the longest stretch in recent years in which each month broke all previous temperature records.

Some scientists--including Thomas R. Karl, director of NOAA's National Climatic Data Center, which released the new numbers--suspect that the pace of temperature increases may be accelerating. If the rate of increase seen since 1997 continues, he speculated last month, global average temperatures would increase by 5 or 6 degrees this century. March 11, 2000

Scientists: Winter Warmest on Record

A.P. INDEXES: TOP STORIES | NEWS | SPORTS | BUSINESS | TECHNOLOGY | ENTERTAINMENT

Filed at 4:32 p.m. EST

By The Associated Press

WASHINGTON (AP) -- This winter has been the warmest on record since the government began keeping weather statistics 105 years ago, according to scientists at the National Oceanic and Atmospheric Administration.

Analyzing data from NOAA's National Climatic Data Center in Asheville, N.C., researchers said that seasonal temperatures from

December to February averaged 38.4 degrees Fahrenheit, or 0.6 degrees warmer than the previous record, which was set just last year.

The scientists attributed the warm temperatures to La Nina, a weather phenomenon related to cooler than normal temperatures in the eastern and central Pacific Ocean. The researchers couldn't say Saturday whether the warm winter had any link to a "greenhouse effect" caused by pollution into the atmosphere.

In fact, the last three winters have been the warmest on record in the United States -- a pattern of warm winters established in 1980, said the scientists. Since then, 67 percent of the winter seasons have been warmer than the long-term average.

Many states from the northern Plains to New England set records for the latest date of their first seasonal snowfall, latest date without a temperature below freezing, longest snow-free period, or longest period between subzero temperatures.

However, NOAA spokesman Greg Hernandez said the specific state-by-state temperature data would not be available until Monday. Only the general trends for the country were immediately available, he said.

It has been an overall warm winter, despite a brief and sudden cold spell in the Northeast that in part caused severe shortages of heating oil and soaring prices in late January and early February in that region of the country.

Researchers said that while eastern states experienced heavy snowfall in the last two weeks of January, the cold air that came with it was short-lived. Hundreds of daily maximum temperature records were broken across the country in February. Many spots from the Northern Plains to New York set or tied their all-time maximum temperature records for the month.

Every state in the continental U.S. was warmer than its long-term average, with 21 states from California to the Midwest ranking well above normal. Oklahoma experienced its warmest winter on record, and Kansas, Nebraska, and Montana experienced their second warmest.

This winter also has been a dry one, the 16th driest on record. Louisiana reported its driest winter on record, and Alabama and Mississippi their third driest. New Mexico and Arizona also experienced much below normal rainfall for the season. The only regions experiencing a wet season were the northern and central Rockies and a zone from the central Plains eastward to the Ohio Valley.

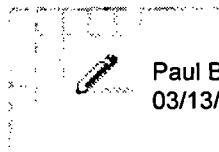
Worldwide, temperatures were the sixth warmest on record, following the two warmest winter seasons set in the past two years, the NOAA analysis said.

Globally, precipitation was above average through central and northern Europe, most of South America, southern Africa, Southeast Asia, the

Pacific Islands, and Australia. Heavy downpours resulted in catastrophic flooding in Mozambique and other countries in southeastern Africa.

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Paul Bledsoe
03/13/2000 12:29:09 PM

Record Type: Record

To: See the distribution list at the bottom of this message

cc:

Subject: Washington Post Editorial on Energy and Climate Change

Monday, March 13, 2000; Page A16

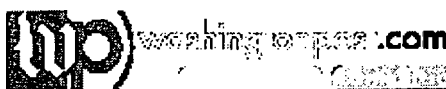
NOT FOR 20 years have U.S. politicians of either party been willing to have a serious discussion of energy policy. The closest they came may have been in 1993, when, as much for the revenue as for conservation reasons, the new Clinton administration naively proposed a national energy tax. It passed the House, but in the Senate, oil-state and other Democrats combined with Republicans to kill it. What emerged instead was a much weaker 4.3 cent per gallon increase in the federal gasoline tax.

Republicans have tried several times to convert that modest increase into a symbol of what they describe as a Democratic propensity to tax and spend. Bob Dole as Senate majority leader made an elaborate show of seeking its repeal in the maneuvering leading up to the 1996 presidential campaign. At the urging of congressional Republicans, George W. Bush now seems about to do the same, this time against a backdrop of, and as relief from, sharply rising oil and gasoline prices.

It is absolutely the wrong thing to do, a softening of already insufficient policy in abject and transparent pursuit of votes. By continuing to encourage consumption, including the purchase of low-mileage sport utility and similar vehicles, its effect would be to compound the problems it purports to solve, not least the problem of dependence on foreign oil. In real terms, the prices of oil and gasoline remain well below the peaks of the early 1980s. The level from which they have lately risen was quite low--so low, in fact, that the industry was struggling, and some of its friends in Congress were urging tax relief and other forms of federal aid. And now that the price is rising? They continue to urge aid, just of another kind. The Alaska senators, and some others, say that the rising world price proves the need to stimulate domestic production, and have revived the idea of opening the Arctic National Wildlife Refuge to oil exploration.

The question is whether the Democrats will resist the demagoguery or yield for fear resistance will cost them at the polls. Al Gore, to his credit, issued a statement opposing repeal of the tax as "a half-baked non-solution" that would have scant effect on prices and could harm the federal highway program that the tax supports. The White House has been a bit more equivocal on the issue, which perhaps ought not surprise. This president likes to take credit for the discipline of his first budget but not the blame.

Discipline is what the country lacks in energy use, but for all the lofty speeches in recent years about global warming, energy independence and the like, this crop of politicians seems unlikely to supply it. It is too much to expect that they would strengthen current policy in an election year. But at least they ought not weaken it. That's what even a token gasoline tax cut would do. The president ought to say as much.



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LETTER TO THE EDITOR

Still Paddling Upstream

Saturday, May 13, 2000; Page A19

Jonathan Rauch [Outlook, April 30] may have a point about the public's failure to focus on global warming and urban sprawl, but the solution is not, as he suggests, to declare victory in the battle against traditional air and water pollution problems.

[E-Mail This Article](#)
 [Printer-Friendly Version](#)

While many cities have seen big air-quality improvements, especially since the 1990 Clean Air Act amendments, the unfortunate reality is that today more than 100 million Americans live in areas where (the Environmental Protection Agency tells us) pollution levels are bad for our health. Every year, smog sends 159,000 Americans to emergency rooms with respiratory problems and triggers more than 6 million asthma attacks. That's not victory by any measure.

On water pollution, Rauch's conclusions are even more mystifying. While it is true that many rivers, lakes and streams are cleaner than they used to be, a roaring 40 percent still are not safe for swimming and fishing, and a huge and growing dead zone is now afflicting the Gulf of Mexico. Serious new problems (e.g., Pfiesteria in the Chesapeake Bay and some Eastern Shore rivers) are the result of factory farms, whose huge volumes of manure from concentrated livestock operations pose threats to waters across the nation.

While Rauch is correct that the Potomac River is cleaner than it was years ago, it is still closed for swimming under the D.C. Environmental Health Department's guidelines, mostly because of raw sewage overflows in rainy conditions. Meanwhile, the Anacostia, identified several years ago as one of America's "most endangered" rivers, is permanently closed to swimming and fishing because of toxins and bacteria. Fecal coliform and enterococcus bacteria pollution from sewage are routinely measured at hundreds, even thousands, of times safe levels in the Anacostia's waters. It's hard to focus on success when more than a billion gallons of raw sewage are dumped in our area waters each year from combined sewer overflows.

Rauch does touch on a crucial problem, the failure to galvanize public attention to global warming. Too bad he didn't talk about likely reasons or possible solutions. The buildup of heat-trapping gases in our planet's atmosphere is the most serious and difficult environmental issue we face. But the problem is scientifically complex and is caused by a range of sources (most notably cars and power plants) whose effects are delayed by decades. And the media's unfortunate tendency to give the handful of industry-financed skeptics equal play with hundreds of legitimate scientists makes matters worse, obscuring the overwhelming

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international scientific consensus regarding the severity and immediacy of the problem.

Environmentalists, reporters, political leaders and others should help promote broader public understanding and concern about our changing climate. But they must not ignore continuing air and water pollution problems across the nation. In fact, the effort to promote cleaner energy and transportation--the national theme for the recent Earth Day--can both reduce traditional air pollution and help slow global warming. Now that is something to celebrate.

--Gregory Wetstone

The writer is director of advocacy programs at the Natural Resources Defense Council.

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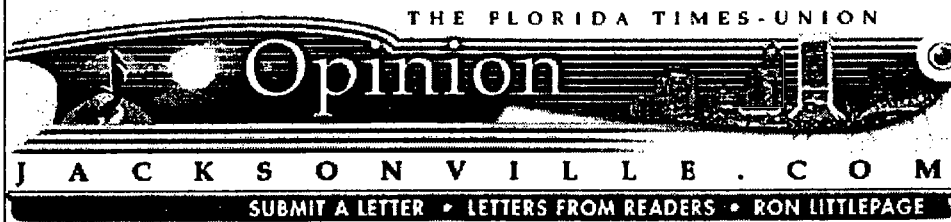
For official Ford News on the Firestone recall, click here.

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Monday, June 12, 2000

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Story last updated at 12:25 a.m. on Monday, June 12, 2000

CLIMATE: Things change

Not getting enough water lately? If the global warming alarmists are right, there will be all you want if you can wait 100 years.

Predicting a century ahead, the Pew Center on Global Climate Change says:

"Climate change is likely to accelerate the historical rise in sea level through warming of oceans and melting of ice, which in turn will affect coastal development, wetland resources, and recreation along the U.S. coast.

"... The areas in the United States most vulnerable to sea-level rise are in the mid-Atlantic and south-Atlantic states (because of their low-lying topography, high economic value, and relatively high storm frequency) and along the Gulf Coast."

That includes the First Coast.

It goes on to say:

"National assessments suggest that a one-meter rise in global sea levels could have significant impacts, including the inundation of about 13,000 square miles of land, divided about equally between wetlands and upland."

Scary stuff. If the sea did rise one meter (39 inches) in a century, it could be catastrophic.

Fortunately, the report also notes that the Intergovernmental Panel on Climate Change concludes that increases in global temperatures over the next century could accelerate the historical rate of global mean sea-level rise from 1 to 2.5 millimeters per year to about 5 mm/year, with an uncertainty range of 2 to 9 mm/year.

In other words, the sea might rise 5 millimeters a year. The catastrophic inundation scenario is based on the worst case, but the rise -- if any -- could be as little as 2 millimeters, about the same it has been.

In any case, the prospect of Jacksonville being submerged in water is scarcely less daunting than what Newsweek said the world faced 25 years ago. In April 1975, the magazine reported the possibility of an impending new ice age.

"There are ominous signs that the Earth's weather patterns have begun to change dramatically and that these changes may portend a drastic decline in food production -- with serious political implications for just about every nation on Earth."

Predicting widespread famine in 10 years, it continued:

"The evidence in support of these predictions has now begun to accumulate so massively that meteorologists are hard-pressed to keep up with it."

Citing weather events such as twisters in the United States, (now being linked to global warming), the magazine said, "To scientists, these seemingly disparate incidents represent the advance signs of fundamental changes in the world's weather. The central fact is that after three-quarters of a century of extraordinarily mild conditions, the Earth's climate seems to be cooling down.

"Meteorologists disagree about the cause and extent of the cooling trend, as well as over its specific impact on local weather conditions. But they are almost unanimous in the view that the trend will reduce agricultural productivity for the rest of the century ... the resulting famines could be catastrophic."

Further evidence cited was National Oceanic and Atmosphere Administration data showing a drop of half a degree in average ground temperatures in the Northern Hemisphere between 1945 and 1968 and satellite photos that indicated a sudden, large increase in Northern Hemisphere snow cover in the winter of 1971-72. Another study showed the amount of sunshine reaching the ground in the continental U.S. diminished by 1.3 percent between 1964 and 1972, the story said.

Just 25 years after this prediction of an upcoming ice age, we are now said to be facing biblical floods and a scorching hell on Earth from global warming.

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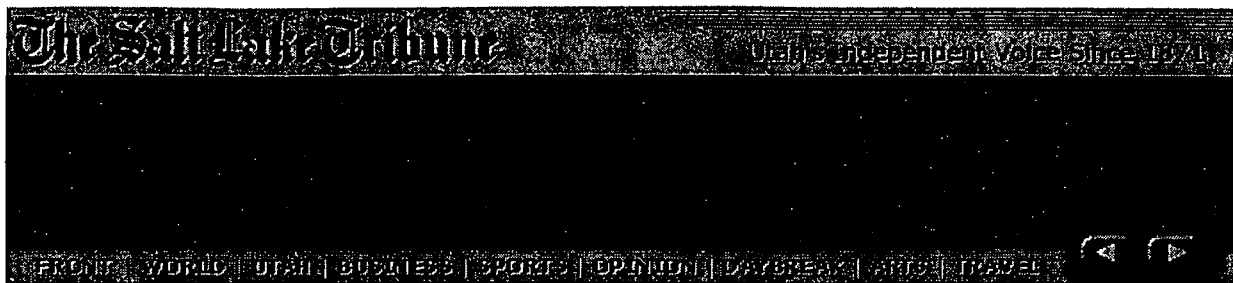
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The Global Warming Debate: Spinning a Breeze Into a Typhoon

Sunday, July 30, 2000

BY H. STERLING BURNETT



DALLAS -- The Clinton administration's recent global-warming report predicts climate disaster of almost biblical proportions -- floods, droughts, pestilence and plague.

However, stories concerning the national assessment of climate change faded from the headlines when reporters found the researchers involved would not support the alarmist spin the administration put on the report.

Congress requested the report in 1990 to assess the potential effects of climate change. The final report falls short of congressional expectations. Unfortunately, political calculations, not objective scientific analysis, shaped the tone and substance of the assessment.

Politics shaped the report in a number of ways. The report ignored the inability of computer models to accurately portray regional climate; it downplayed the differences between predictions made by the computer models used for the analysis; it made alarmist claims.

The National Academy of Sciences, the United Nations Intergovernmental Panel on Climate Change and the Pew Center have all stated that climate models cannot produce meaningful regional predictions.

The U.S. Environmental Protection Agency concurs. "Virtually all published estimates of how the climate could change in the U.S. are the results of computer models."

The agency also points out "several models often yield contradictory results" and that "for specific locations, it is currently impossible to confidently project even the direction, let alone the magnitude or timing, of the seasonal or even annual changes."

The national assessment relies on two models -- the Canadian Centre and the United Kingdom's Hadley Centre -- which disagree concerning the effects of climate change.

For instance, for the Southeast United States, the Canadian model forecasts less precipitation than present and decreased soil moisture, while the Hadley model predicts more precipitation and increased soil moisture.

For the Midwest, the Canadian model predicts an increase in the frequency and severity of droughts, while the Hadley model forecasts a decrease in the frequency and severity of droughts.

The Canadian model predicts water levels in the Great Lakes will fall by as much as five feet, while Hadley predicts increased Great Lakes levels of about a foot. In the West, the Canadian model forecasts an increased risk of spring flooding, but Hadley projects

drier conditions leading to fewer floods and mudslides.

Kevin Trenberth of the National Center for Atmospheric Research, a reviewer of the assessment, stated, "The two models used are quite different and give different results, so how can they both verify against the observed record?" Trenberth noted it was "a classic example of the misuse and abuse" of climate models.

Ultimately, the contradictions in the models make it unlikely that the national assessment can reliably predict future climate change impacts.

The most troubling portion of national assessment is its overview. Rather than summarizing research findings, the overview makes claims that are not supported by the underlying research. The lead authors of the health section of the national assessment stated that that section of the overview "is not consistent with the findings, conclusions, and text of the Health Sector Working Group." Going further, they said, "Many statements in the Overview Document have a rather extreme-alarmist tone and do not appear to fairly reflect the scientific literature, the historical record, or the output of the extant models."

The overview played fast and loose with the link between global warming and hurricane activity. The scientist involved with that portion said, "I am concerned that sections where hurricanes are discussed are too often giving the impression . . . that hurricanes will be an ever growing menace in a generally warmer, wetter climate. . . . For the present, the science does not support this view."

Summing up much of the scientific community's reaction, John Christy of the University of Alabama at Huntsville said of the assessment: "I saw no attempt at scientific objectivity. This document is an evangelistic statement about a coming apocalypse, not a scientific statement about the evolution of a complicated system with significant uncertainties."

At any other time we might expect environmental policy to be guided by environmental science not political science. But not now, not with Vice President Al Gore -- the man who argued for international laws making environmental protection the central organizing principle of civilization -- running for president.

For Gore, the truth apparently can't be allowed to get in the way his pursuit of a green new world order.

H. Sterling Burnett is senior policy analyst with the National Center for Policy Analysis, a non-partisan, non-profit research institute based in Dallas.

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July 17, 2000

IN AMERICA / By BOB HERBERT

Global Cooling

So what can we do about global warming?

First, keep in mind the goal, which is to bring the potentially catastrophic warming under control by curtailing the release of carbon dioxide and other heat-trapping gases into the atmosphere.

Ordinary people can help immediately by becoming more energy efficient. Stop using the familiar incandescent light bulbs and replace them with compact fluorescent bulbs, which last much longer and use only a quarter of the energy consumed by conventional bulbs.

Compact fluorescent bulbs are significantly more expensive, but because they last so long (up to 10 times the life of a standard bulb) and use so little electricity, they are substantially cheaper in the long run.

Next, when shopping for an appliance -- a refrigerator, a dishwasher, an air-conditioner -- select the one with the highest energy efficiency rating. There will be a sticker on the appliance, telling you how much energy it uses. Pay attention. There can be a difference of 30 percent to 40 percent or more in the amount of energy consumed by appliances with comparable features.

Even more important is the choice you make in the car or truck you buy. Motor vehicles are responsible for about a third of the carbon dioxide emissions in the United States. The vehicles that are the most fuel efficient emit the least carbon dioxide. (Fuel economy and carbon dioxide emissions are inversely proportional. If you double fuel economy, you cut carbon dioxide emissions in half.)

According to the research and advocacy group Environmental Defense, if you buy a new car that gets 10 more miles per gallon than your old car, the amount of carbon dioxide reduction realized in one year will be about 2,500 pounds.

So buying a car or truck that suits your needs *and* is fuel efficient is a big help.

Honda and Toyota are bringing so-called hybrid vehicles onto the

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market in the U.S. Hybrids are cars that combine an internal combustion engine and a battery-powered electric motor. They are mid-sized cars that are achieving twice the fuel economy of conventional cars.

Dr. Paul Epstein, associate director of the Center for Health and the Global Environment at Harvard Medical School, summed the matter up as follows: "The issue is not so much what we are doing, but how we power what we are doing. That's the first step."

Over the long term, the requirements are far more ambitious. Ideally, over the course of the next 100 or so years, a transformation will take place and most energy will end up coming not from fossil fuels like coal and oil, but from clean energy sources -- the sun, the wind, hydrogen and non-polluting fuel cells.

"To get there at a cost that's affordable will require substantial technological development," said Dr. Michael Oppenheimer, the chief scientist of Environmental Defense.

To move from our pollution-choked present to a future in which climate change is not a mortal threat will take more than that all-important first step of an enlightened citizenry buying cleaner cars and more efficient appliances. Tough action by Congress and the president is needed, and soon. And international cooperation, with enforceable agreements covering both industrialized and, ultimately, developing nations, will be crucial.

Among other things, the federal government can offer subsidies and other incentives to reduce the cost and foster the use of existing clean-energy technology, and to encourage the development of ever more efficient new technologies. And the government can -- and should -- develop more sophisticated strategies like emissions trading and more stringent requirements for reducing carbon dioxide emissions everywhere.

Global warming is the most serious problem we face in the 21st century. Last week an intensive analysis by a respected geologist at Texas A&M University, suggested -- as most scientists have been saying for some time now -- that human activity, not natural factors, is the primary cause of the warming.

We caused the problem and we have within our grasp a variety of potential solutions. To ignore those solutions, to be aware of them but not make use of them, is not just profoundly destructive, it's suicidal.

Op-Ed**The New York Times**
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July 10, 2000

IN AMERICA / By BOB HERBERT

Cold Facts of Global Warming

Those inclined to tout the potential benefits of global warming would do well to take a look at the news items about the frightening weather in southern Europe last week.

All week there were stories about the extreme heat and the raging wildfires it triggered. Temperatures reached as high as 120 degrees and dozens of people died. In some places the problems were worsened by drought. According to The Associated Press, "The sizzling weather accompanied the worst drought to strike the Balkans in 50 years, which has already caused record crop losses since it began in late May."

Ambulances patrolled streets in southern Romania to pick up some of the many individuals who fainted in temperatures that were well over 100 degrees. Soldiers were deployed in western Bulgaria to fight a major forest fire. At least 10 people were reported dead from the heat in Turkey. Intense fires raged on a number of islands in the Aegean. And wildfires in Italy consumed hundreds of acres of forest in the southern Gargano region.

No single weather event can be attributed to global warming. But this is the kind of terrible weather that scientists have long predicted would accompany the warming of the planet. That warming is not only well under way, it is accelerating.

There will be some benefits for some people from global warming. A study commissioned by the federal government said, for example, that the U.S. could see increased crop yields in some parts of the country and that they could lead to falling food prices. But that modest benefit would almost certainly be overwhelmed by the potentially devastating aspects of the warming that will occur here and around the world if nothing substantial is done about the buildup in the earth's atmosphere of heat-trapping gases like carbon dioxide.

That same federal study, released just last month, warned of destructive storm surges, chronic erosion of the U.S. coastline, extreme water shortages in some places, and frequent and severe flooding in others. The authors of the study said it is very probable

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that continued thawing of the permafrost and melting sea ice in Alaska would cause continued severe damage to its forests, buildings, roads and coastlines.

A word of caution is in order for anyone who thinks global warming is a good thing: be careful what you wish for.

"People who argue that global warming will be beneficial are missing two central points," said Dr. Michael Oppenheimer, chief scientist of Environmental Defense, a national research and advocacy organization. "First, until the greenhouse gases are brought under control, the climate is going to continue to warm, so you're never going to be at your optimum climate for very long. If the balance of milder winters versus hotter summers is struck in a direction that's favorable to somebody at some particular time -- well, just wait. The benefits will be ephemeral because it's going to get warmer. In that situation, today's winners are very likely to be tomorrow's losers, which means nobody wins over the long term."

The second point, said Dr. Oppenheimer, is the more important one. "Global warming is a problem that cannot be looked at from the point of view of a few individuals in a few isolated places. We are now one globalized world. If the climate in general is hurting large swatches of humanity, there is no way any particular group that thinks it's benefiting can escape from what is happening in the world as a whole. We are too interconnected for that.

"For example, it's been projected that declines in agriculture, particularly in low-latitude areas, could create large masses of environmental refugees. The rest of the world will be affected by those movements of human populations.

"The same thing can happen as a result of sea-level rise. Bangladesh is having terrible problems in this area. It has a population of about 120 million in an area the size of Wisconsin, and there is already border tension between Bangladesh and India. A significant chunk of Bangladesh is projected to go underwater in the next 100 years. Where are those people going to go? There's no room left."

It is possible -- not easy, but possible -- to mount an international effort to cut the emissions of greenhouse gases to an extent that would ward off a global catastrophe. It's possible. But there is not a lot of time left.

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Sunday, July 2, 2000

Sun Editorial: Global warming, local spin

Get used to Newnans Lake looking like a puddle, even if good rains replenish it for a few years.

If the predictions of the first thorough federal study of the effects of global warming are correct, lakes as small as Newnans and as big as the Great Lakes will become dirtier and shallower in the 21st century from dramatic increases in hot weather, evaporation, sudden downpours and fouled floodwaters.

And those are the milder effects.

Floods and erosion of low-lying and coastal regions will redraw maps. (Candidate No. 1: Florida.) Storm surges will become the routine menace of coastal communities. Barrier islands, fisheries and wetlands will be damaged or destroyed. Saltwater, already the uninvited guest in many stressed watersheds, will intrude on surface and groundwater supplies and on plant habitats.

Preview? Landowners and public land managers have observed massive die-offs of sabal palms along 40 miles of coastline between Cedar Key and Homosassa Springs. The die-off is attributed to saltwater. Similar saltwater intrusions are devastating coastal forests all over the Gulf Coast.

Rising sea level has been a problem for decades, eliminating about 1 million acres of Louisiana wetlands since 1900. If it isn't already, warmer weather will be the pattern nationwide, frying forests and Alpine meadows and keeping snowbirds put as southerly climes migrate to them. New York City summers will feel like Atlanta's, Atlanta's will feel like Houston's, Lakeland's will feel like Havana's.

Congress ordered the study in 1990 to help the nation prepare for the effects of global warming, which have as much to do with rebuilding locks and dams and bridges to deal with rising sea and falling lake levels as with figuring out agriculture's future if the Mississippi Delta gets more

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out agriculture's future if the Mississippi Delta gets more rain, the South gets less and California dries up. This month, the Clinton administration released a draft of the study. ("Climate Change and America" is accessible on the Internet at www.nacc.usgcrp.gov.)

But since last month, like the anxious barks of dogs auguring a bad storm, spinmeisters who think global warming is a nonissue have been doing everything they can to make black look white -- to make coming storms seem benign, even beneficial.

Since the Kyoto world conference on global warming in December 1997, their tune has been, first, to blame the rest of the world for global warming (the United States is by far the leading producer of carbon gases, followed by Russia and China), and second, to play up the benefits.

The Midwest will see bumper crops, they say. Cleveland's and Chicago's and Milwaukee's bitter winters will be brief, reducing the cost of snow removal and ill health related to cold. Alaska's sea lanes will be open longer, making it easier for oil tankers to navigate. Business as usual will never been better.

"Climate Change in America," its detractors say, concentrates on the negatives at the expense of many "positives." Global warming, in other words, is good for you.

It's an astonishing twist of bad faith that manages at once to make global warming seem natural rather than a simmering, man-made catastrophe. And it ignores the impending disasters all over the world, where poorer economies are more apt to be submerged than to adapt to the changes.

The more practical consequence of the business-as-usual approach is that it could cripple private and government efforts to slow carbon emissions in industrial nations, which would be like turning up the planet's furnace instead of turning it down.

The planet is a resilient place. In its 4.5 billion-year history, its climate has known cataclysmic shifts. Alligators once made the Arctic look like Newnams Lake, and ice once covered the planet almost as glumly as it does Europa, Jupiter's skating-rink of a moon.

But Earth's climate has been remarkably stable since the last ice age some 20,000 years ago. That's ending, and not, most scientists agree, for natural reasons.

Human industry is to blame. At the present rate, temperatures in the United States would rise 5 to 10 degrees over the next 100 years, according to the study. Bearable? Think of it this way: the world today is only 5 to 9 degrees warmer than it was during that last ice age.

Icarus-like, we're heading for Mercury.

We're not bound to burn our wings and crash. Lung-like, Earth breathes. And like a pair of lungs coughing through two packs of cigarettes a day, it can heal if the cigarettes are cut out, or even reduced.

But to criticize the federal study for seeming too dire is a preface to shrugging off responsibility for doing something about global warming. The calculated denial of global warming's spinmeisters may enrich a few sectors of the American economy. It is also a good example of parochial contempt for global consequences.

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In denial about global warming

In the sweltering heat of this summer, conversations turn to global warming. Comments are usually followed by laughter, denying that possibility.

Denial is the common denominator of all society. It is the armor we wear to protect our consciences from our actions. There are those who deny the Holocaust, for example. To admit it is to admit the bestiality that lies like a dark shadow on our souls.

But to excise that bestiality, we must admit its existence. In an Alcoholics Anonymous meeting, for example, each speaker introduces himself as an alcoholic. To admit addiction is the first step in the long process toward healing. The process cannot begin without that first step.

Consider that in light of the debate about global warming. Consider that in the light of these facts collected by the Environmental Protection Agency:

"Since the beginning of the industrial revolution, atmospheric concentrations of carbon dioxide have increased nearly 30 percent, methane concentrations have more than doubled, and nitrous oxide concentrations have risen by about 15 percent. These increases have enhanced the heat-trapping capability of the earth's atmosphere."

"By 2100, in the absence of emissions control policies, carbon dioxide concentrations are projected to be 30-150 percent higher than today's levels."

"Energy burned to run cars and trucks, heat homes and businesses, and power factories is responsible for about 80 percent of society's carbon dioxide emissions, about 25 percent of U.S. methane emissions, and about 20 percent of global nitrous oxide emissions."

"In 1994, the United States emitted about

one-fifth of total global greenhouse gases.”

“The 20th century’s 10 warmest years all occurred within the last 15 years. The snow cover in the Northern Hemisphere and floating ice in the Arctic Ocean have decreased. Globally, sea level has risen 4-10 inches over the past century.”

We don’t need to look at those statistics to know about global warming. We can see it in the high reaches of this state. We can see it in disappearing glaciers.

Vice President Al Gore said after hiking up to Grinnel Glacier in Glacier Park: “If this (global warming) continues, in 30 years there won’t be any glaciers at all left in Glacier National Park.” Global warming is no longer a theory. It is a reality. And it is time to act.”

A park climatologist echoes Gore’s warning. Dan Fagre says Grinnell Glacier has lost 80 percent of its mass since its discovery.

“Basically we have pathetic remnants of glaciers here, and they’re dying fast,” Fagre said.

Tell the next person you meet that this summer is simply another symptom of global warming and watch him laugh. That’s denial.

Updated: Sunday, July 30, 2000
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The 20th century was the warmest century of the millennium -

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a fact that remains true even if this summer has been cool. Climate trends aren't determined by one year or a couple of seasons, but by long-term data. And while the science behind global warming isn't yet 100 percent ironclad, most experts agree there's been a "discernible human influence" on global climate.

Other evidence includes rising ocean levels, dying coral reefs, melting glaciers and the thinning of the sea ice pack at the South Pole.

The presidential candidates promise to address global warming, though Al Gore is far more emphatic. He'd ratify the Kyoto protocol, a 1997 worldwide accord to cut greenhouse-gas production. Mr. Bush rejects it.

Critics have denounced the agreement as one-sided and economically disastrous to a nation as wedded to high-energy use as the United States. But maybe the environment and sales can get along: Just weeks ago, General Motors and Ford said they would voluntarily increase the mileage of their sport-utility vehicles and pickups, thereby reducing the production of carbon dioxide, a major greenhouse gas.

Both candidates should pledge to increase federal fuel-mileage standards for all car makers. Now is the time for the United States to show leadership on global warming - before Santa drowns.

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Global warming debate losing some heat?

Artificially high temperatures in cities may make it seem like the whole planet is getting hotter

August 14, 2000

New York City, media center and financial capital, magnet to tourists the world over, may have a lot going for it, but evapotranspiration is not one of them.

We residents of the Big Apple aren't the only ones affected by this shortfall; in fact, nothing less than the international debate over global warming may be significantly impacted by this and other cities' inadequacy when it comes to water vapor.

We'll explain.

When the sun beats down on a field of corn or a stand of trees somewhere in western New Jersey on a hot summer day, those plants make use of that solar energy, and as a tradeoff lose some of their water to evaporation in the heat.

A portion of that solar energy is used by the plants for their various metabolic processes, while some of it is needed to change the water within their leaves from a liquid to a vapor. In any event, it leaves less heat to sit around and make the country folk sweat.

Here in the city, however, fields and trees are replaced by manmade substances like buildings and roads, often dark in color, which absorb the same amount of solar energy but do nothing with it but hold it until the sun goes down, when our streets let out a hot and steamy sigh.

These late-night sighs keep temperatures in the city from dropping much during the wee hours; it's not unusual to see overnight low temperatures in Central Park a good 10 degrees warmer than those in Morristown, N.J., or Newburgh, N.Y., as a result.

We call this the urban heat island effect. It's hardly anything new. Residents of London first noticed the phenomenon in the early 1800s.

To a certain extent, we city residents benefit from the urban heat island. The first frost of the fall here generally

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doesn't occur until sometime in November, a full month later than locales to our north and west. And on the coldest mornings of the winter, our country neighbors shiver a lot louder than we do.

But they're also breathing healthier air on average, and spending less money to cool it in the summertime.

Thanks to the urban heat island effect, air conditioners in New York City work overtime when the weather turns hot, and the so-called waste heat generated by air conditioners and the millions of cars and trucks clogging highways in urban areas like New York heighten levels of ground-level ozone, a pollutant and health irritant.

There are ways of lessening the temperature differential between city and country (and no, we don't mean suburban sprawl). For one, there's nothing that says rooftops in the city have to be coated with black tar.

Light-colored surfaces, from rooftops to roadways, have a much higher albedo, defined as the fraction of solar radiation striking a surface that is reflected back to space by that surface. Whereas something black absorbs heat, something white tends to reflect it, which is also why we're encouraged to wear light-colored clothing during a heat wave.

And never underestimate the power of trees. Not only do they make use of solar radiation, but their shade can work wonders with your cooling bill. Large trees around your house can save you up to 25 percent a year in energy costs, while shading your air conditioner increases its efficiency.

The value of trees certainly isn't lost on the Clinton-Gore administration, which earlier this summer announced that it will try to argue that their presence in our country (along with dirt and agricultural crops) has served to already meet half of this nation's obligation under the Kyoto Protocol, the 1997 global warming treaty -- never ratified -- that would obligate us to a significant reduction in carbon dioxide emissions.

Forgive us our cynicism, but that's probably not what the treaty drafters had in mind.

Perhaps the most momentous aspect of the urban heat island effect is what it means for global warming.

Most temperature readings in this and other countries have for the past 100 years or so been taken in urban areas, areas in which the scope and density of urbanization has consistently grown.

Do the higher temperatures of today reflect a warming globe, or simply this increased urbanization? Well, temperatures have been rising away from cities as well, but various computer simulations that purport to show how the globe should be warming if we are indeed causing it to do so make this a very interesting question.

The computer models insist that temperatures should be climbing not just at the surface, but five miles above the surface as well, and that hasn't been happening. In fact, satellites measuring temperatures in the lower troposphere -- above oceans, forests, plains and deserts as well as cities -- recently found temperatures there to be falling, not climbing.

This doesn't compute.

Adjustments have since been made for anomalous climatic patterns like El Nino and La Nina, not to mention volcanic eruptions, and the satellites have been moved, but they still show only a very slight warming in the lower troposphere, not the exaggerated warmth that the global warming simulations insist we should be seeing.

Just in case the satellite data were spurious, scientists have sent weather balloons aloft to take temperature readings of their own, and came up with the same result.

Is the global warming phenomenon then little more than the urban heat island effect on an international scale, a misrepresentation brought about by an uneven dissemination of weather stations on the ground clustered in unnaturally warm metropolitan areas?

There are many other reasons to take global warming seriously -- melting glaciers in Greenland and thawing ice caps in Antarctica are two of the most convincing -- but clearly our world's climate is more complex than we know.

Zealots of various stripes may have latched onto the global warming debate for their own political purposes, but it's science that will resolve this question, and the jury is still out.

Todd Hill can be reached at the Advance, 950 Fingerboard Rd., Staten Island, N.Y. 10305, or by e-mail at hill@siadvance.com. His column appears Mondays in the Advance.

[Monitor Site Map](#)[Go](#)**THURSDAY, SEPTEMBER 14, 2000**Headlines [e-mail](#) this story to a friend**OPINION****Clarity on global warming****Kilaparti Ramakrishna and George M. Woodwell****WOODS HOLE, MASS.**

Human understanding of climate change is subject to profound uncertainties about causes, effects, and rates of change.

The international community formed a groundbreaking framework for dealing with global warming in the 1992 Climate Change Convention, ratified by 184 countries, and the 1997 Kyoto Protocol, signed by 84 countries.

The Kyoto Protocol requires industrialized countries to cut six greenhouse gases, including carbon dioxide, to roughly 5 percent below 1990 levels.

The signatories have been negotiating for three years on how to implement the protocol, and are ending a two-week session this week in Lyon, France, in the lead-up to a meeting of world leaders in The Hague in November.

At issue is whether or not there should be sanctions against countries that fail to meet their commitments, and what kinds of flexibility there will be for countries who need it.

Curiously, recent statements from two leaders in the effort to combat global warming have confused the discussion and could work against the effort.

Eileen Claussen, head of the Pew Center on Global Climate Change and a former State Department official, has long championed countries adopting protocol measures before the Kyoto agreement enters into force.

In widely publicized comments, most recently in the British journal *Nature*, Ms. Claussen suggested that an honest and realistic foundation is required for any international protocol. True enough. But she went on to say that lack of progress toward the targets suggests we should relax those targets -instead of stepping up our efforts.

Currently, the UK is the only industrialized country that is likely to meet the Kyoto targets. The US, on the other hand, has increased emissions by about 11 percent from 1990 levels. Most other countries are between these two extremes.

This is not as hopeless as it sounds. If compliance with the protocol required only domestic action, the industrialized countries would never have agreed even to its modest goal. That's where "flexibility mechanisms" come in -means for industrialized nations to obtain "credits" from nations that are well within their targets and from developing countries.

Ignoring the "flexibility" built into the Kyoto agreement and renegotiating the emission-reduction commitments would be twice flawed.

It plays into the hands of entities - such as the Global Climate Coalition (GCC), an umbrella group representing heavy industry - that waged a \$30 million campaign to discredit the science behind the Kyoto agreement, and questioned the wisdom of the protocol because of alleged economic losses to the private sector.

The GCC heartily endorsed Claussen's comments, of course. Renegotiating the targets would slow the pace of ratification and implementation. If the protocol never enters into force, there is no way to amend its language.

The suggestion that nations completely ignore the progress made so far, drop any further consideration of the Kyoto Protocol, and form a new agreement from scratch, is not truthful to the science of climate change, to the integrity of past agreements hard won among the nations, nor to the political realities of the world community.

James Hansen, who directs NASA's Goddard Institute for Space Studies in New York, has long been an effective spokesman on global warming. It was Hansen who told a congressional committee in 1988 "it is time to stop waffling ... the greenhouse effect is here."

In a paper published by the National Academy of Sciences in August, Dr. Hansen and colleagues observe that global warming has been driven strongly by gases other than carbon dioxide, such as methane, ozone, and chlorofluorocarbons, and has been influenced by aerosol pollution.

Efforts might be better focused, they say, on controlling these gases instead of carbon dioxide, thereby avoiding "economically wrenching actions."

Several studies have been carried out, primarily in the industrialized countries, giving varying estimates on the cost of reducing fossil-fuel use. A selection of these studies was used by GCC to discredit any action.

Recent studies of New England have shown that large financial savings and net gains in employment can be made through conserving energy and shifts to alternative sources. These gains become more attractive daily as the prices of fossil fuels continue to rise.

Further, Hansen and his colleagues are saying nothing new. Carbon dioxide contributes about half of the warming potential, while other heat-trapping gases contribute the remainder.

Aerosols in the atmosphere appear to have masked the effect, delaying the warming. Relying on atmospheric pollution with aerosols to stabilize global climate is little short of foolish.

Stabilizing the atmosphere will require every effort to control all the heat-trapping gases, and there is no margin for further delay.

Even Hansen and colleagues assert in their controversial paper that carbon-dioxide concentrations will have to be controlled in the end.

They are assuming, with no information and no experience, that the ecological effects of the warming so far are minor and acceptable; that further delay in stabilizing the atmospheric burden of heat-trapping gases is not a serious risk; and that action to check carbon-dioxide emissions is expensive and undesirable.

Placing an emphasis on gases other than carbon dioxide will be seen by the developing nations as an attempt to shift the burden onto developing countries, who believe they are seen as major sources of methane through rice culture and cattle.

Hansen's paper further arms groups like GCC to argue that the burden should be shifted to developing countries.

Aspirations under the Kyoto Protocol are modest. The challenge before the world community is by contrast immense - to ensure that the protocol is enacted (which means agreeing on rules governing flexibility mechanisms), while we develop a framework that assures far more rapid reductions in the future.

The need of the hour is incremental progress on this important global issue. It is unfortunate that well-intentioned and highly respected leaders should suddenly open the possibility of further costly political confusion, delay, and the hazards and soaring expenses associated with such delay.

Kilaparti Ramakrishna is the deputy director of the Woods Hole Research Center in Woods Hole, Mass., and was a special adviser to the UN in drafting the Framework Convention on Climate Change. George M. Woodwell is the center's director.

■ For further information:

- [Don't let global warming talks unravel, warns UN official](#)
- [The Convention and the Kyoto Protocol](#),
- [United Nations Convention on Climate Change](#)
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OPINION

WEDNESDAY • September 13, 2000

Constitution: For humans' sake, address climate change

Molly Ivins - Special
Wednesday, September 13, 2000

Let's all take a long step back and then look at this again: Is the human race just another species in the long history of Earth that's too dumb to adapt and survive?

We clever upright primates have so far outstripped everyone save the cockroaches, but we seem to be forgetting what knocked off so many of the other major species: climate change. And if we're not smart enough to learn from that, it's our turn to go extinct.

Nothing like a couple of days of 110-degree heat to remind us that global warming has nothing to do with the end of the Cold War. According to the fossilologists, the Big Ones, like the Ice Age, may have had a proximate cause --- meteor hit, giant volcano eruption blotted out sun . . . something happened. But in your relatively short tens of thousands of years, all you get is a more or less cyclical back-and-forth. Now coral reefs in the Pacific that are a thousand years old are dying. This is not cyclical.

But aren't there some scientists who deny that any of this is happening, or at least that it means global warming is taking place? Yes, about seven of them, and in a remarkable act of journalistic irresponsibility, it took the media years to report that most of them are directly or indirectly in the pay of the oil companies. You can put the combined weight of climatologists around the globe against that.

But don't some scientists say this will be a good thing? That Minnesota will grow palm trees, Canada will become tropical, and they won't have to eat oatmeal up there anymore?

A certain amount of don't-worry-be-happy is advisable in life, but we are in such full-throttle denial about global warming that you can barely get anyone to pay attention. It's all very well to swan through life on the cheerful assumption that it's all part of God's Plan, but God gave us brains so we could use them. And global warming is not God's Deal --- it is mankind's.

We are the berserk beavers of the world, changing our own environment, often for the worse even for us. Eventually everyone who listens finally gets it, and the next reaction is often a whiny, "Well, what do you expect me to do about it?"

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The First Rule of Holes is: When you are in one, stop digging.

The still-unratified Kyoto treaty would require the United States to cut its greenhouse gas emissions, primarily carbon dioxide and methane, to 7 percent below 1990 levels. That is not a solution, but it is a step.

Speaking of small steps, the Texas Natural Resource Conservation Commission — a pathetic thing, but the only EPA we've got here — has just opened its marble heart and agreed to study the situation. This is another happy side effect of having Gov. George W. Bush run for president — it would look so dumb if his three environmental commissioners were still denying the existence of global warming.

Since Texas emits more greenhouse gases than any other state, doing something about it here would be a real contribution. Not that the TNRCC is actually doing anything, but it has ordered up a big study, for which we are all devoutly grateful.

One always appreciates those editorial voices of sweet reason saying, "Now, let's not get hysterical here --- we're not doomed." No, we're not. This is very likely fixable. The only reason to panic is the projection studies on what will happen if we do nothing or let this get worse.

Major climate shifts can come quickly, within a few decades. The effects of global warming are becoming so apparent that one can foresee the congressional hearing in a few years --- like the recent Firestone tire comedy --- with elected officials indignantly demanding: "Who knew about this? Why didn't they tell us? Off with their heads!"

There may actually be more good news than bad news on global warming lately, despite the ominous stats. James Hansen, the NASA climatologist who has been helpful on global warming before, has a new study suggesting a cheaper way out. Rather than concentrating on carbon dioxide, which comes from burning fossil fuels, if we concentrate on getting rid of the five other greenhouse gases (especially methane) it could do as much good overall as cutting carbon dioxide from fossil fuels.

Molly Ivins' column appears on Wednesdays.

Columnist for The Fort Worth Star-Telegram

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Pumps and Pocketbooks

By Pietro Nivola

Monday, April 24, 2000; Page A25

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One good way to reduce this country's emissions of carbon dioxide as well as our dependence on foreign oil, suggests an April 17 editorial ["Saving Gas, and the Planet"] is to set tougher standards for the fuel efficiency of motor vehicles.

Sorry, but Congress has entertained this notion for almost a quarter-century with disappointing results. Since 1978 the United States has been attempting to do what no other industrial country has tried: reduce the consumption of oil just by imposing regulations--fuel-economy requirements--on new fleets of automobiles. At least two difficulties bedevil this command-and-control approach to energy conservation.

For one, the policy reaches only new vehicles. This means that it takes decades, not just a year or two, to raise the efficiency of the on-road fleet. If, tomorrow morning, federal regulators were to ratchet up the standards for SUVs, minivans and light trucks, most of the existing ones would remain in use, guzzling fuel and spewing greenhouse gases for years to come.

Worse, though the vehicular fleet gradually can be forced to record better gas mileage, doing so scarcely dissuades motorists from driving the "improved" vehicles more than ever. The unrelenting increase in vehicle miles traveled vitiates the fuel savings from improvements in mileage per gallon. Indeed, during periods of stable or declining gasoline prices, greater fuel economy of vehicles lowers the marginal cost of driving, actually encouraging motorists to log more miles.

The recent surge in nominal gasoline prices has slowed this boomerang, though not for long. Prices will begin to sag in the months ahead. Moreover, adjusting for inflation, even the current price of self-service regular is barely above where it stood in 1996 and well below its peak 18 years ago.

By 1997 Americans were motoring some 2.6 trillion miles a year--the equivalent of 10,715,511 trips to the moon. The federal government's fuel-efficiency rules did nothing to moderate this astronomical amount of motion, at least some of which is extravagant and wasteful.

Naturally, this failure has implications for the nation's thirst for oil and its environmental side effects. Transportation in the United States burns most of the petroleum we buy. It accounts for most of our rising volume of imported oil (which is now up to half our consumption), and for more than half of the damaging chemicals we emit into the atmosphere. While the use of oil dropped in virtually every other sector of the economy

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the use of oil dropped in virtually every other sector of the economy between 1973 and 1998, transportation's was up 36 percent. If the aim of government policy is to reverse this trend, reduce the level of oil imports and improve air quality, something other than automotive fuel-economy mandates is necessary.

Like it or not, that something is a higher price at the pump. In an election year, politicians wince at the thought, but if the current spike were permanent, it would likely conserve energy more efficiently over the long haul than does the flawed fuel-economy law. A few years ago, a joint study by the Century Foundation and the Brookings Institution estimated that a 25-cent increase in the federal gasoline tax would have saved more oil than the fuel-economy scheme did from its inception. The reason: economics. Steeper fuel costs affect driving habits, not just the vehicle design, and have an effect on the use of all vehicles, not just new models.

Rather than waste time tweaking the anachronistic 1978 regulatory regime, policymakers might consider these facts: Each year Americans chalk up approximately twice as many vehicle miles per capita as Germans and more than three times as many as the Japanese. This is not because Japanese and Germany consumers cannot afford cars. Nor is it because Germany and Japan regulate their automobile industries more stringently. Instead, much of the explanation for why people in those countries drive less, ride public transit, walk more and consume far less oil per person is simply that gasoline costs a lot more than it does here.

The writer is a senior fellow at the Brookings Institution.

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