ASPEN ENVIRONMENTAL GROUP
235 MONTGOMERY ST. STE. 935
SAN FRANCISCO, CA 94104
FAX 1-949-203-6410
E-MAIL sanonofre@aspeneg.com

RE: SAN ONOFRE NUCLEAR GENERATING STATION

YES, THE C.P.U.C. **must give** SOUTHERN CALIFORNIA EDISON PERMISSION TO REPLACE THE 4 STEAM GENERATORS AT SAN ONOFRE. TO MEET **FUTURE** ENERGY DEMANDS IN CALIFORNIA, IN THE WHOLE U.S.A., AND INDEED AROUND THE WORLD (SUCH AS IN CHINA) .... THERE IS "NO ALTERNATIVE BUT NUCLEAR POWER" (SEN. TOM McCLINTOCK) MAY 9, 2001

THE USE OF FOSSIL FUELS (COAL, OIL, GAS) CONTINUES TO POLLUTE THE ENVIRONMENT.... WORLD WIDE !!

CALIFORNIA **MUST** BUILD MORE NUCLEAR POWER PLANTS TO STOP BEING BLACKMAILED BY OUT-OF-STATE SUPPLIERS OF COAL, OIL AND GAS-POWERED ELECTRICITY SOURCES.

visit website nei.org

MEADE B. NORMAN
5021 BELLA COLLINA ST.
OCEANSIDE, CA 92056-1924
(760) 630-6384

There is No alternative but nuclear power !

TOM McCLINTOCK

COMMUNITY FORUM

The newspaper's front page contained one of those jigsaws of incongruity we come to expect in California. One article reported that the Independent System Operator had just declared a Stage Two electricity shortage, while another reported on workers dismantling the Rancho Seco nuclear electricity generating plant near Sacramento.

These two stories form the bookends of the state's energy crisis. We need 15,000 megawatts of additional generating capacity to meet immediate demand, produce a surplus to force prices down and accommodate breakdowns of the state's aging fleet of generators. And we can't get there without nuclear energy.

California has only two nuclear power plants left from the era when our leaders were committed to cheap, clean and abundant electricity. Those two plants produce 16 percent of the state's electricity at a cost of roughly 3 cents per kilowatt hour — a fraction of the 16 cents it costs to produce electricity with a natural gas-fired plant.

Vermont gets 70 percent of its electricity from nuclear power. France gets 76 percent. Yet under law, a nuclear power plant application cannot even be considered in California.

How are we to meet the demands for cheap, clean electricity without it? Natural gas prices have skyrocketed and regulators require large plants to pay as much as $4.8 million per day for air pollution permits. Yet gas-fired plants are the only applications being considered.

Solar power is touted as the energy supply of the future, but it is neither cheap nor abundant. To replace the daily output of the Diablo Canyon nuclear power plant with photovoltaic cells, for example, would cost $66 billion (the price of 22 similar-size nuclear plants today) and require 36 square miles of solid solar panels.

Coal is cheap — about the same generating cost as nuclear power — but is the dirtiest form of energy available.

If clean, cheap and abundant power is the question, the only readily available answers are hydroelectric and nuclear.

Four thousand megawatts of hydroelectric power could be made available in the next five years by completing Auburn Dam, increasing the capacity of Shasta Dam and upgrading other facilities. But hydroelectricity becomes unreliable in droughts, and still doesn't bring us close to the 15,000 megawatts California needs.

Which brings us back to Rancho Seco, and to the ideological opposition that has blocked nuclear power development in California for 25 years. During that period, nuclear technology has taken quantum leaps that have decreased costs and increased safety and reliability.

Today, nuclear power has the safest operating record of any power source in history. Modern nuclear plants operate for less than 2 cents per kilowatt hour, 3 cents including construction and decommissioning costs. At that rate, the average home electricity bill would be $18 per month.

Nuclear power eliminates the air pollution associated with electricity generation. In 1999, California's two nuclear plants prevented the release of 181,000 tons of sulfur dioxide and 7.7 million metric tons of carbon particulates that would have been produced by fossil fuel plants. And with production reactors in use around the world, the fuel is inexhaustible.

Nuclear plants create a fraction of the waste of conventional power plants. An ideal waste depository exists at Yucca Mountain, Nev., and recycling of nuclear waste would reduce that.

California's public officials hear none of this. Sky-high prices for electricity, ubiquitous power blackouts, dirty air and yet another exodus of business away from California are a small price for them to pay to avoid the wrath of California's anti-nuclear zealots. But is it a price the rest of us should pay?

Tom McClintock represents the 19th state Senate District in the Legislature.

Groups spread lies on nuclear power danger

THURSDAY, MAY 10, 2001

"The worst nuclear power plant disaster in history occurred when the Chernobyl reactor in the Ukraine experienced a heat (and gas) — not nuclear — explosion.

Western power plant nuclear reactors are designed, under operating conditions, to have negative power coefficients of reactivity and solid structure of steel-reinforced concrete that make such runaway accidents impossible."

These words were written by Douglas S. McGregor, who has a Ph.D. in nuclear engineering from the University of Michigan, has co-authored 36 research publications, and has a B.S. and M.S. in electrical engineering from Texas A&M University. Why, though, in the face of such evidence have lobbyists, the EPA and the media disseminated lies since 1945 that nuclear power plants are dangerous to the environment and people?

The answer: Billions would be at stake for the Hammer (OPEC), Rockefeller and Gore families if consumers were educated about gargantuan savings, blackout prevention and health benefits (deaths prevention) surrounding nuclear power and thus pressure their congressmen into ignoring lobbyists and withdrawing funds for the EPA.

To find your congressman's address, etc., or order his voting record (TRIM bulletin), call (800) 775-TRIM, or log on at www.trimonline.org. For more information, call me at (760) 591-4381.

AMMON HAMM
San Marcos

C.C. ASPEN ENVIRONMENTAL GROUP (RE: SAN ONOFRE)

C.C. RAY GOLDEN

GOV. ARNOLD SCHWARZENEGGER
★ AND ALL OF CALIFORNIA LEGISLATORS !!

ENERGY-WISE CALIFORNIA MUST, ABSOLUTELY **MUST**, BECOME ENERGY SELF-SUFFICIENT !!

BUILD MORE NUCLEAR POWER PLANTS ... EVEN PRES. BUSH SAYS "IT IS ESSENTIAL TO U.S. ENERGY INDEPENDENCE" nei.org AND THEY ARE ALSO ESSENTIAL FOR CALIFORNIA SO WE CAN'T BE BLACKMAILED BY OUT-OF-STATE ENERGY SUPPLIERS !! FOR **THIS REASON** CALIFORNIA MUST **NOT** SUPPORT **1300** MILES OF POWER LINES FROM WYOMING ....

COAL IS THE DIRTIEST, FILTHIEST AIR POLLUTING FUEL THAT WE COULD POSSIBLY USE !! SO, FORGET IT, ARNOLD !! Hg, Th, and U Kills 60 people every year!

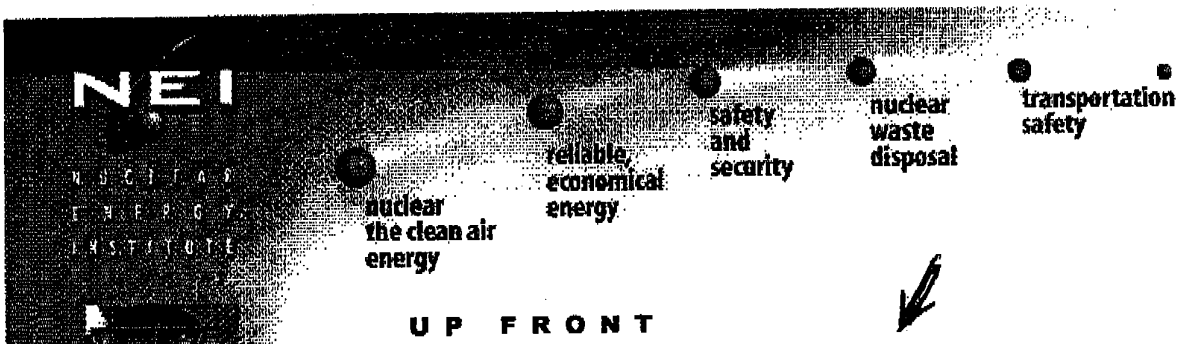
- The $2 BILLION POWER LINES IT WOULD COST, WOULD PAY FOR A NEW NUCLEAR POWER PLANT **IN** CALIFORNIA! WAKE UP!!

ADD 2 MORE NUCLEAR REACTORS AT DIABLO CANYON.

THE TECHNOLOGY ALREADY EXISTS FOR THE PERMANENT DISPOSAL OF SPENT FUEL FROM THESE REACTORS.

PLEASE REPLY!! URGENT → VISIT WEBSITE → www.nei.org

(760) 630-6384
MEADE NORMAN, 5021 BELLA COLLINA ST, OCEANSIDE, CA 92056



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UP FRONT

President Bush Sees New Nuclear Plants Essential to U.S. Energy Independence

"The first essential step toward greater energy independence is to apply technology to increase domestic production from existing energy resources. And one of the most promising sources of energy is nuclear power. Today's technology has made nuclear power safer, cleaner, and more efficient than ever before. Nuclear power is now providing about 20 percent of America's electricity, with no air pollution or greenhouse gas emissions. Nuclear power is one of the safest, cleanest sources of power in the world, and we need more of it here in America." Full story

U.S. News & World Report Endorses Building New Nuclear Power Plants in the United States

"On the production side, we are going to have to start building nuclear power plants, particularly since new nuclear technologies are safer and cleaner than ever." Full story

U.S. House of Representatives Passes Comprehensive Energy Legislation

The Energy Policy Act of 2005 (H.R. 6) passed by a vote of 249-183. "Passage of this new legislation sets the stage for new nuclear plants to be part of this country's diverse energy mix and recognizes the invaluable and necessary contribution of nuclear energy in achieving long-term energy security. Energy security and national security are inextricably linked."—Skip Bowman, President and CEO, Nuclear Energy Institute Full story

U.S. Secretary of Energy Advisory Board Recommends Financial Incentives for New Nuclear Plant Construction to Ensure Energy Security and Environmental Benefits

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PLEASE VISIT THIS WEBSITE!

THURSDAY, APRIL 28, 2005

State considers smog rule

DAVE DOWNEY
STAFF WRITER

A state board is poised today to adopt the nation's strictest smog standard — one even tougher than the new federal air-pollution rule that Riverside and San Diego counties are using as a yardstick.

The state rule, if adopted, would not be enforceable because the California Air Resources Board lacks the power to penalize metropolitan areas by stripping them of billions of dollars in highway funds, as the U.S. Environmental Protection Agency can when areas fail to comply with federal clean-air rules. And unlike the federal rule, which must be met by 2021, the state standard would carry no deadline.

State officials, however, say their proposal would redefine clean air in California by setting pollution limits based on the lowest levels that trigger health problems.

Pat Kudell, executive director for the American Lung Association of the Inland Counties, welcomed the aggressive plan.

"It is a clear signal that the California Air Resources Board is serious about reducing the level of harmful pollutants we breathe in California," Kudell said. "Newer studies have shown that ozone, in fact, has more long-term effects on lung health than previously had been thought."

Ozone is a key ingredient of smog.

The new rule would paint an unflattering picture of how Southern California is doing in efforts to deliver clean air to 20 million people.

The counties of Riverside, San Bernardino, Orange and Los Angeles — which comprise the South Coast Air Basin — violated the federal standard 90 days last summer.

Under the proposed limit, the region would have logged 148 violations, said Tina Cherry, spokeswoman for the South Coast Air Quality Management District in Diamond Bar.

The rule would muddy San Diego County's pollution-fighting efforts as well. The area exceeded the federal standard a half-dozen days in summer 2003, said Rob Reider, planning manager for the San Diego County Air Pollution Control District, while violations would have ballooned to 56 under the proposed state yardstick.

The state rule likely would have little effect on regional air districts, which regulate smog belched by stationary sources such as factories, power plants and refineries.

"They've moved the goal posts, but our game plan is much the same," Reider said. "We are already implementing every feasible control measure that is available."

However, Reider said the state rule could serve to put more pressure on federal regulators to crack down on smog-forming emissions coughed up by ships, trains and airplanes.

According to an air-board staff report, the standard — if achieved — would annually save 600 lives, prevent 4,000 people from going to the hospital and reduce school absences by 3 million.

Eliminate C.A.R.B. and CALIF. E.P.A.!

NO! CARB. ISN'T SERIOUS AT ALL!

already 60 people a year die from the mercury + other pollutants emitted from coal-burning power plants!

the mercury fallout is polluting the ocean, lakes, streams, rivers and deforming birds, fish and other animals!!

WEDNESDAY, APRIL 27, 2005

TODAY'S

Bush to outline energy proposals

WASHINGTON (AP) — President Bush is offering to make closed military bases available for new oil refineries and will ask Congress to provide a "risk insurance" to the nuclear industry against regulatory delays to spur construction of new nuclear power plants, senior administration officials said Tuesday.

The officials, who spoke on condition of anonymity, said the president will outline his proposals in a speech today in which he intends to emphasize how new technologies can be used to ease the energy supply crunch.

The White House acknowledged that none of the initiatives was expected to provide any short-term relief from soaring gasoline and oil prices.

NUCLEAR POWER PLANTS NEEDED NOW!!

TUESDAY, APRIL 5, 2005

Governors support plan to improve power grid

STUPID

SALT LAKE CITY — The governors of four Western states announced their support Monday for the building of 1,300 miles of power lines that would carry electricity from the coal fields of Wyoming to energy-starved Southern California.

In a memorandum of agreement, California Gov. Arnold Schwarzenegger, Nevada Gov. Kenny Guinn, Utah Gov. Jon Huntsman Jr. and Wyoming Gov. Dave Freudenthal established a compact that will try to speed government and regulatory approvals for the power lines and the plants that would generate the electricity.

"There's a growing recognition in the West that what was once viewed exclusively as a California need is a western problem," said Sen. Larry Craig, R-Idaho, a key player in the effort. "California is probably within a few years of being up against the wall on energy demand that will siphon capacity from West."

The Frontier Line project would begin delivering electricity to booming Southern California, Nevada and possibly Utah as early as 2011. The transmission lines are expected to cost about $2 billion.

The governors are hoping that the transmission-line project will encourage energy companies to build power plants in Wyoming and elsewhere in the West. The new power plants would be able to produce as much as 12,000 megawatts of electricity, which could power up to 10 million homes. They are expected to use a combination of coal and renewable fuels.

—The Associated Press

ARE YOU GUYS CRAZY?!!

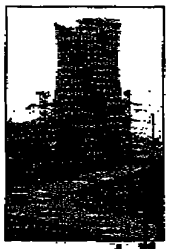
Someday, for sure, CALIFORNIA will be blackmailed AGAIN by out-of-state energy suppliers!!!

Please Reply!

(760)630-6384
MEADE NORMAN. 5021 BELLA COLLINA ST. OCEANSIDE. CA. 92056.

Reducing pollution

EPA orders reduction in smog and soot pollution for 28 states. The goal of the ruling is to make the air cleaner for people living downwind of coal-burning power plants.



BUILD MORE NUCLEAR POWER PLANTS !!
THEY DO NOT POLLUTE THE AIR !!

FRIDAY, MARCH 11, 2005

EPA orders smog, soot reductions - NOT GOOD ENOUGH !!

JOHN HEILPRIN
ASSOCIATED PRESS

WASHINGTON — The Bush administration on Thursday ordered reductions in smog and soot pollution across 28 states in the East, South and Midwest with the goal of making the air cleaner to breathe for people downwind of coal-burning power plants.

Consumers who get electricity from the companies' plants can expect their monthly power bills to increase eventually by up to $1 to pay for the changes.

The Environmental Protection Agency's new regulations set pollution quotas for 28 states and the District of Columbia on smog-forming nitrogen oxides and soot-producing sulfur dioxide. Most of the states are east of the Mississippi River.

The agency envisions that the clean air rule will prevent 17,000 premature deaths and 700,000 cases annually of bronchitis, asthma and other respiratory ailments, while also improving the air in parks and forests.

The rule "will result in the largest pollution reductions and health benefits of any air rule in more than a decade," said Stephen Johnson, the EPA's acting administrator and President Bush's nominee to be the agency's full-time chief.

EPA officials estimate that achieving the pollution cuts will end up costing about $4 billion a year, but that the benefits will be much greater; for example, $85 billion annually from improved health among people downwind. The benefits to outdoor visibility were put at $2 billion a year.

By 2015, nitrogen oxide pollution will have to be reduced by 1.9 million tons annually, or 61 percent below 2003 levels. Sulfur dioxide pollution must drop by 5.4 million tons, a 57 percent reduction.

Fred Krupp, president of Environmental Defense, an advocacy and research group that has championed the new regulations, said the EPA was taking "the biggest step in a decade" to cut smog and soot from power plant smokestacks and help millions of people breathe easier.

Other environmental groups and some state attorneys general were less enthusiastic.

"We need the reductions sooner to achieve clean air for our citizens as is required by the Clean Air Act," said Peter Lehner, environmental protection chief in the New York attorney general's office.

John Walke, a lawyer for the Natural Resources Defense Council, said the EPA is at least recognizing that power plant pollution is a threat to public health and that utilities and plant owners have the money to clean it up.

"Unfortunately, under today's rule, more than 31 million Americans still will be breathing unsafe levels of deadly soot and asthma-inducing smog a decade from now," he said.

ASSOCIATED PRESS FILE PHOTO

The J.M. Stuart Generating Station is shown last year near Aberdeen, Ohio. The Environmental Protection Agency issued new regulations Thursday on smog-forming nitrogen oxides and soot-producing sulfur dioxide. The EPA expects the new rules to prevent 17,000 premature deaths and 700,000 cases of respiratory ailments annually.

FOR THIS PRICE WE COULD BUILD AT LEAST 2 MORE NON-POLLUTING NUCLEAR POWER PLANTS A YEAR !!

SATURDAY, APRIL 10, 2004

32 large 1000-MEGAWATT

WHY NOT IN U.S.A.?!

Cheney to promote U.S.-made nuclear reactors to China

WASHINGTON (AP) — On a trip to China next week to talk about high-stakes issues such as terrorism and North Korea, Vice President Dick Cheney will have another task — making a pitch for Westinghouse's U.S. nuclear power technology.

At stake could be billions of dollars in business in coming years and thousands of American jobs. The initial installment of four reactors, costing $1.5 billion apiece, would also help narrow the huge U.S. trade deficit with China.

China's latest economic plan anticipates more than doubling its electricity output by 2020 and the Chinese government, facing enormous air pollution problems, is looking to shift some of that away from coal-burning plants. Its plan calls for building as many as 32 large 1,000-megawatt reactors in the next 16 years.

No one has ordered a new nuclear power reactor in the United States in three decades and the next one, if it comes, is still years away. So, China is being viewed by the U.S. industry as a potential bonanza.

Cheney's three-day visit to Beijing and Shanghai next week is part of a weeklong trip to Asia. He departed Washington on Friday.

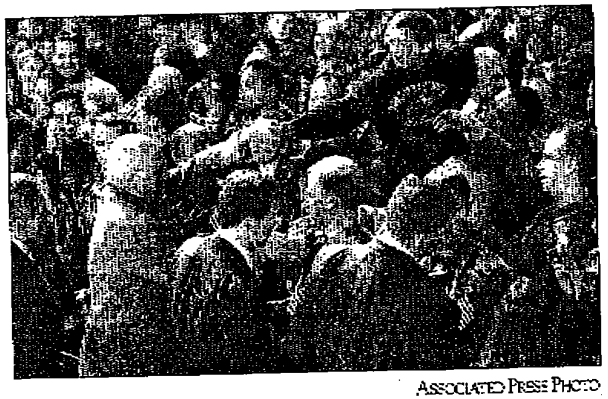
A senior administration official, briefing reporters about the trip, said Cheney will not "pitch individual commercial transactions."

But he intends to make clear "we support the efforts of our American companies."

Some critics are concerned about such technology transfers.

"This pitch could not be more poorly timed," Henry Sokolski, executive director of the Nonproliferation Policy Education Center, told a hearing of the House International Relations Committee recently.

Citing recent Chinese plans to help Pakistan build two large reactors, he said it is not the time for China to be rewarded with new reactor technology.



ASSOCIATED PRESS PHOTO

Vice President Dick Cheney, left, greets military personnel and family members of the Alaska Command on Friday at Elmendorf Air Force Base. Cheney made a brief stop in Alaska on his way to China. One of the issues slated for discussion is U.S.-made nuclear reactors.

NORTH COUNTY TIMES A-13

WEDNESDAY, APRIL 21, 2004

Governor promises 'Hydrogen Highway' by 2010

ASSOCIATED PRESS

SACRAMENTO — After tooling across a university campus in a Toyota Highlander propelled by a clean-burning hydrogen engine, Gov. Arnold Schwarzenegger declared Tuesday that California will have a network of stations offering the pollution-free fuel up and down the state within six years.

The pledge, which has been made by the governor before, was formalized in an executive order he signed at a morning news conference at the UC Davis — site of one of the country's most advanced centers for the study of alternative transportation systems.

Although many industry experts say the governor's plans are ambitious — estimated to cost $100 million — Schwarzenegger said he believes the technology is available but government needs to play a catalyst role in making the new fuel system a reality.

"Your government will lead by example," he said. "As I have said many times, the choice is not between economic progress and environmental protection. Here in California, growth and protecting our nature beauty go hand in hand."

Schwarzenegger's order calls on state agencies to work with private companies and existing research coalitions to build the hydrogen network. He has asked California Environmental Protection Secretary Terry Tamminen to come up with a plan by Jan. 1, 2005, for how the system might be put together.

He said he will support legislation that would create tax incentives or public financing proposals that might be needed.

Still, much work remains to be done.

"There are a lot of companies interested," said Daniel Sperling, director of the UC Davis Institute of Transportation Studies. "The challenge here is how to coordinate a lot of these investments."

Sperling said the governor's order calls together key players in the industry along with state officials to put together the plan for establishing the network.

Like the Toyota that Schwarzenegger tested on the Davis campus, a number of auto manufacturers have built special fuel cell vehicles for test purposes.

Instead of using gasoline for power, fuel cell cars are powered by electric engines that rely on a chemical reaction caused when hydrogen and oxygen are mixed. The chemical reaction produces electricity which powers the vehicle.

NOT WITHOUT NUCLEAR POWER!

★ BY DARRELL ISSA

For electricity, We need NUCLEAR POWER NOW!

We'll need NUCLEAR POWER TO economically produce the hydrogen!

HYDRO + NUCLEAR. POWER are also the cleanest energy sources

SUNDAY, OCTOBER 6, 2002

GOP supports increased energy independence

I agree with Bob Dudley (Letters, Sept. 18) that the United States needs to move forward with efforts to increase energy independence. Developing a national energy strategy has, in fact, been a top priority for President Bush and Republicans in Congress.

I have worked with my colleagues to formulate legislation designed to reward drivers of fuel-efficient hybrid vehicles with access to HOV lanes, promote energy self-sufficiency through the use of distributed generation and have supported the development of the Lake Elsinore Advanced Pumping Station to provide clean hydro power to our community.

President Bush has also received my adamant support for his energy bill that promotes energy conservation, technological development and the utilization of domestic oil reserves, like ANWR, through environmentally friendly means.

Shoring up America's energy supply will strengthen our economy and the security of our nation. President Bush and congressional Republicans recognize the serious nature of this need and will continue our work.

REP. DARRELL ISSA
Vista

HYDRO + NUCLEAR. POWER are also the cleanest energy sources

★ We need NUCLEAR POWER to economically operate desalination plants. The proposed plant in Carlsbad should be operated with nuclear-energy-produced electricity from the San Onofre plant.

A nuclear plant can be built in ~14 to 18 months, (for ~$1 billion) and will produce ~1000 to 1400 megawatts at a cost of only ~$.028/Kwh. It would pay for itself in about 5 years. We also need 8 breeder reactors to process the spent fuel rods... an absolute necessity!!!

Alternative energy is no alternative yet

ONLY A DROP IN THE BUCKET!

A-14 FRIDAY, SEPTEMBER 6, 2002

ROWLAND NETHAWAY

Despite the usual howls of outrage from environmentalists and undeveloped nations, the United States must not accept a deadline to convert to alternative fuels.

The blame-America-first crowd attending the United Nations' World Summit on Sustainable Development in Johannesburg assailed the United States for its refusal to accept 2010 as the deadline to convert 15 percent of energy production to wind, solar or other forms of renewable energy.

Lost amid all the charges of callous corporate greed leveled at the United States was the fact that Canada, Japan, Australia, Saudi Arabia and other developed nations also opposed the deadline for conversion to renewable fuels.

For America's critics, the refusal to accept an artificial deadline to convert a significant percentage of energy production to renewable sources demonstrates how the rich are willing to sacrifice the planet and the poor for oil profits.

Instead, the decision illustrates the difference between those who understand the problem and those who do not. Either that, or it shows how some people will use any excuse to bash the United States.

Windmills, solar panels, electric cars, hydrogen fuel cells and other popular sources of renewable energy do not stand on their own feet in the real world.

No matter how desirable it is to convert the world's energy production from oil and gas to nonpolluting alternative fuels, the fact remains that wind, solar and the other sources cannot compete unless they are propped up with subsidies.

This hard fact doesn't mean that converting energy production away from oil and gas to renewable sources isn't an excellent idea.

Not only are fossil fuels responsible for much of the world's energy production, they also are a significant source of the planet's pollution and geopolitical unrest.

Developed nations rely on oil and gas to fuel their economies. For developed nations, national security goes hand in glove with economic stability — jobs, jobs, jobs.

For developing nations to join the ranks of developed nations, which means jobs and higher standards of living, they must become larger consumers of energy.

As China moves from being a large underdeveloped nation to a developed nation, it has moved from being an oil exporter to an oil importer. Quite simply, developed nations are heavy energy consumers.

According to The New York Times, China now is attempting to find energy supplies outside the Middle East, where a U.S. war with Iraq threatens to disrupt vital oil flow to China and other developed nations.

Had it not been for oil, the first President Bush could not have raised an international coalition to drive Saddam Hussain's army from Kuwait.

The elder Bush not only got 19 nations to join in the Persian Gulf War, he also got them to pay for it — lock, stock and oil barrels.

With no allies supporting him, the current President Bush must be planning to drain off about $100 billion worth of Iraqi oil after Saddam is toppled from power.

Energy drives the economic development required to fight poverty and improve the quality of life for people around the globe.

But that energy does not have to be oil. It's just that no one has come up with a cost-effective substitute for oil. Nuclear energy offers some hope if it can overcome technical and political hurdles.

President Bush should lead a coalition of developed nations in an all-out research and development effort to find reliable, cost-effective forms of renewable energy.

The World Summit goal of converting from oil and gas to renewable energy is praiseworthy, but not the unrealistic deadline.

— Cox Newspapers

'No matter how desirable it is to convert the world's energy production from oil and gas to nonpolluting alternative fuels, the fact remains that wind, solar and the other sources cannot compete unless they are propped up with subsidies.'

★ (Windmills, solar panels, electric cars, hydrogen fuel cells and other popular sources of renewable energy do not stand on their own feet in the real world.)

(Energy drives the economic development required to fight poverty and improve the quality of life for people around the globe.)

not just "some" hope --- NUCLEAR POWER will become absolutely !! necessary "

build nuclear plants !

to nuclear power!

MEADE NORMAN. 5021 Bella Collina St., Oceanside CA 92056. (760)630-6384

MAY-16-2005 02:49 PM

STOP BEING BLACKMAILED BY WYOMING COAL SUPPLIERS !!!

URGENT!!! (COAL contains U, Th, and Hg { Mercury is poisoning lakes & the fish in oceans, and birds in Lakes!

We can **NOT** continue to rely on fossil fuels (oil, gas, coal) to generate electricity! California IMMEDIATELY needs to construct several more nuclear power plants .... and the ~$23 billion we wasted on the energy crisis would have paid for ALL of them! ... along with adjacent breeder reactors needed to process the spent fuel rods and thus reduce the volume of waste that would have to be stored at Yucca Mtn.

NUCLEAR POWER PLANTS and some hydroelectric ones are the ONLY* way to meet California's major energy needs AND to keep the air CLEAN .... that is, free from the 181,000 tons of sulfur dioxide and the 7.7 million metric tons of carbon particulates produced by current fossil fuel plants! (*Renewable sources may someday provide ~20% of energy needs) MAYBE!

Water treatment and desalination plants are a necessity .... but can only be operated economically with a nuclear power source (it costs only $.028/kwh ... ~¼ the cost of fossil fuel plants!) ..... and there is **NO** air pollution !! (or ⅕ the cost?)

Also, you can not economically produce hydrogen for fuel-efficient hybrid cars (or fuel cells) without NUCLEAR POWER! (Renewable energy sources are only a drop in the bucket!)

A nuclear plant can be built in ~18 months (for ~$1.5 billion) and will produce ~1000 to 1400 megawatts at ~$.028/kwh. It should pay for itself in about 5 years. The breeder reactor program was shut down years ago by the government, and now by the time we get back to it, it'll be **TOO Late!**

Politicians have been brain-washed by "Eco-frauds," "Eco-freaks" (Sierra Club, John Muir Project, and others) against the use of nuclear power and how to dispose of nuclear waste. The truth is, the nuclear waste generated by a family of 4 for a period of 20yrs would fit in a shoe box. But if we reprocessed the spent fuel rods in breeder reactors then this waste for the family of 4 would fit in a PILL BOX!

★ Visit these websites - PUSHBACK.COM (pushback.com/energy/NewIdeas.html), THENEWENVIRONMENTALIST.COM, nei.org, GREENSPIRIT.COM, OCEANODUNES.ORG, and KGO.COM under "personalities" click on "BILL WATTENBURG". Also, read "Naturally Dangerous" by James Collman, Prof. of Chemistry, Stanford Univ. It dispels all this hysteria re: radioactivity. Read "The Environmental Case for Nuclear Power" by Robert C. Morris (Pub. by Paragon House)

★ GET THIS BOOK! ★

Thank You Meade & Norma [illegible]-6204

On June 10, 2003 the U.S. Senate endorsed a plan for U.S. Gov't to provide loan guarantees for 6 NUCLEAR power plants. (Sen. Pete Domenici, R-N.M., said Gov't assistance is needed to jump-start NUCLEAR power). California needs 6 more NUCLEAR power plants A.S.A.P.!

Please take advantage of the U.S. Gov't LOAN GUARANTEES and obtain permits for at least 6 more NUCLEAR power plants in CALIFORNIA!.. and HYDROELECTRIC plants.

* They are POLLUTION-FREE!! NUCLEAR plants produce electricity at 1/4 to 1/5 the cost per kwh as compared to fossil-fuel plants. The **ONLY** ECONOMIC source of electricity for DESALINATION plants and for HYDROGEN production for hybrid cars.... is NUCLEAR POWER !!!

The C.P.U.C. and the C.E.C. MUST change their plans involving the present decommissioning of all nuclear plants. Don't be as stupid as Germany which now plans to remove ALL of its nuclear power plants!... ..(but will continue to receive some of its electricity from nuclear plants in France, etc.)!!

Currently ~1/2 of electricity in U.S.A. is from COAL-powered plants — the DIRTIEST, FILTHIEST fossil fuel that we could possibly use!!! (AIR-POLLUTING) Natural gas prices are at $6.59/1000 cu.ft. and we are being SCREWED/BLACKMAILED by the companies that control natural gas supplies — (~~ALREADY~~ $7.50/1000 cu.ft. ~~in~~ IN January 2004!)

California needs to construct nuclear and hydroelectric power plants so it can be "energy-independent" and not have to rely on outside energy sources. NOW!! (other States and Mexico)

PLEASE REPLY

MEADE NORMAN (760) 630-6384
5021 BELLA COLLINA ST.
OCEANSIDE, CA 92056

Thanks to the many idiot ("if-the-shoe-fits,-wear-it") lawmakers at all levels of government, there hasn't been any serious, concerted effort to build any new nuclear power plants in California since the event at Three-Mile Island.

IMPORTANT !!

Now, if most all of our electricity was produced by nuclear energy, which is less expensive per Kwh, then California could save enough money to wipe out its massive debt! ... and help clean up our air that is currently being polluted by power plants that are generated by fossil fuels – oil, coal and gas. (50% of CO_2 in air-pollution is from coal-burning plants)!

But, alas, this critically important decision has been left up to a bunch of brainless twits ("if-the-shoe-fits,-wear-it") in our government.

All cities and counties need to **actively** put pressure on the C.P.U.C., the C.E.C. and State and Federal officials to reinstate the program of building more nuclear power plants and breeder reactors in California. Every day they delay this program it brings Calif. that much closer to the next energy crisis. Air-polluting fossil-fuel power plants can NOT produce electricity for only $.028/Kwh ..... we need NUCLEAR power plants to be able to get electricity for this LOW price! (Electricity from fossil-fuel plants is 4 to 5 times more expensive.)

* We would need 40 more nuclear reactors. (USA)

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VISIT THE WEBSITE www.nei.org !

Also on KGO.COM

Please upgrade your web browser to enjoy a better view of this site.

Trust me—you really don't know what you're missing.

Intel and Sun CEOs Propose Nuclear Plants—Here is some ammunition for them

Tune in to KGO radio 810AM on (almost) every Sat. + Sun. night 10PM to 1AM. Make an extra effort to call in 1(415) 80 80 810 on your dial (OR on KGO.COM)

Dr. Bill Wattenburg
KGO Radio 810AM
"The Open Line to the West Coast Show"
ABC San Francisco
Consultant, Lawrence Livermore National laboratory
www.drbill.org
February 22, 2001

Here are some new ideas from knowledgeable scientists who are very realistic about the modern realities of nuclear power vs. all other alternatives.

CALIFORNIA STOP BEING BLACKMAILED By

- Western States Must Build More Hydroelectric and Nuclear Power Plants to Stop Being Blackmailed by Out of State Natural Gas Suppliers. and by Wyoming Coal Suppliers !!
- The Auburn Dam Must be Completed.
- Nuclear Plants Can be Built Near Hydro Reservoirs for the Ultimate Safety Factor That Guarantees no Nuclear Accidents.
- California and Nevada Should Build Several Nuclear Power Plants at the Former Nevada Test Site that Would Make Both States Energy Independent.
- Ironically, Burning Fossil Fuels is Putting 2,000 tons of Radioactivity in the Air We Breath Every Year and Producing our Most Toxic Waste Sites (www.ornl.gov/ORNLReview/rev26-34/text/colmain.html).
- Natural Gas Supplies are being Depleted, Pipelines Overloaded. All States Will be Blackmailed for Higher Prices as Populations Increase.

The recent energy crisis in California is a wake up call. There will be continued crises and rate increases so long as we are totally dependent on outside suppliers for natural gas. All western states will suffer the same fate as supplies of natural gas are depleted. We are in this trap because our whole country has been forced to burn non-renewable fossil fuels, gas, oil and coal, for most of our power since environmental hysteria stopped the building of hydro and nuclear power plants in the U.S. And yet, our hydro and nuclear plants have been supplying

more than thirty percent of our power, silently, reliably, for the last forty years with none of our money being paid to outside power suppliers. California and its neighboring western states must build and share more hydro and nuclear power plants that will give us all some energy independence.

It is foolish for our political leaders to give up the only bargaining chip that we can use to force natural gas suppliers to keep their prices reasonable. Hydro and nuclear plants don't need their natural gas at all. These suppliers will lose a major captive market if we build more hydro and nuclear plants. There is only one way that they'll offer long term contracts for greater supplies of natural gas—and that is when they realize California is going to build its own power plants that don't need them—forever.

AND TRANSMISSION LINES

Tell Wyoming !!

The governor and the legislature must immediately investigate our options for building and sharing more hydroelectric and modern nuclear plants on the many sites that could be used in California, Nevada, and Arizona, and Mexico. The governors of these states must appoint a blue-ribbon commission of our most knowledgeable scientists, lay people, and business people to look at reality, to find the truth and tell it to the public and the press.

More hydroelectric and nuclear power plants would protect us against economic blackmail by the suppliers of natural gas and cleanup our air. These plants don't need an energy source from anyone but nature itself. For decades our hydroelectric and nuclear plants have been producing pollution free energy for California at a fraction of the cost we are now paying for non-renewal, air polluting energy from burning fossil fuels. The new natural gas fired power plants being built will make us even more dependent on the out of state energy suppliers who are blackmailing California now. We are playing right into their hands. Certainly, we need to build more power plants of any sort for the short term, but California must protect itself for the long term.

Unfortunately, our political leaders have not even mentioned this possibility for California to become more energy independent and stable. Our leaders are intimidated by self-proclaimed environmentalist groups. Anyone who even dares call for a new study of hydroelectric or nuclear power plants is immediately labeled as an anti-environmentalist. Many in the press routinely publish all scare stores about nuclear plants on the front page. The truth has long been smothered by hysteria propagated by self-serving nuclear fear mongers, in the same way that scientific frauds terrified the world over the non-existent Y2K disaster.

A scientific report from the Oak Ridge National Laboratory at the end of this article (http://www.ornl.gov/ORNLReview/rev26-34/text/colmain.html) will show you the enormous environmental damage that has been done to this country and the world by the so-called environmentalists who forced us to use only fossil fuels. Did you know that you have been breathing a thousand times more radioactivity in the air—every year—then could ever come from all of our nuclear power plants? It is ironic that those who claimed to be environmentalists in attacking hydro and nuclear power have in fact done enormous damage to the environment

and the air we breath. Now the gullible public is also paying ten times more for the dirty power we were forced to use than we would be paying had we increased our supply of clean hydro and nuclear power with inexhaustible energy supplies.

Desirable Sites for New Nuclear Plants

The states of California, Nevada, Oregon, Arizona, and the nation of Mexico could build many modern nuclear plants on any number of remote, uninhabited sites in a way that would give all these areas energy independence and enormous savings for their economies.

Vast uninhabited high-plains areas exist in northeastern California and southeastern Oregon that are appropriate sites for new nuclear plants. These sites are close to existing power transmission lines that feed power to the western states. The Herlong Weapons Storage Depot in Lassen County, Northern California, is a large area that was used to store material that is thousands of times more dangerous than any imaginable threat from a nuclear Power plant.

The Nevada Nuclear Test Site, for instance, is a vast area that is off limits to development forever. Over 500 underground nuclear weapons tests at NTS created hundreds of times more nuclear material than all the nuclear power plant waste now stored in this country or that could be generated in the next several hundred years. This nuclear material is safely buried thousands of feet under the ground. A nuclear power complex at NTS could supply inexpensive, reliable power forever to the burgeoning Nevada economy as well as hook up to the major power transmission lines that feed California and Arizona. Thousand of new jobs and billions of dollars of permanent income would be created in Nevada.

Nuclear Plants Below Hydro Reservoirs

Nuclear plants can be built below existing hydroelectric dams such that the cooling water flowing through the nuclear plants warms the uncommonly cold water coming from the hydro reservoirs. Environmentalists complain that hydro reservoirs keep the downstream river waters too cold for the fish. We have spent hundreds of millions to alleviate this problem (see the forebay at Oroville Dam where hundreds of millions were spent to warm the water before it re-enters the Feather River). Why not solve two problems at once and gain the energy we need by putting nuclear plants below the hydro reservoirs. This gives us two sources of power and helps restore the ecology of the downstream rivers.

New nuclear plants built below existing or new hydro plants can share the power transmission lines and many other facilities needed by both. The massive amount of water in the reservoir above can be released immediately to provide the ultimate safety factor for any possible overheating of the nuclear core. The entire plant can be immersed in water. All concerns about an earthquake damaging the nuclear plant go away because any hydro dam will collapse long before the nuclear plant will be damaged. This was demonstrated in the recent massive earthquake in India. Two large nuclear plants on the earthquake fault were not damaged.

Nuclear plants installed below hydro dams easily can be installed such that the massive release of water from the hydro reservoir would drown the nuclear plant below with no release of the nuclear material that is entirely contained within the sealed nuclear reactor core. Modern nuclear plants approved by the U.S. Nuclear Regulatory Commission already have this added safety feature. Any possible overheating of the nuclear core triggers automatic release of an emergency reservoir of water to cool the core in a manner that operators can not disable, as happened in the Three Mile Island accident.

The scare stories about dangers from earthquakes were put to the test recently by the massive earthquake in India. Two of the world's largest nuclear plants are located almost on the fault zone that experienced one of the biggest jolts of this century. The plants suffered no serious damage. This was expected because billions of dollars were invested in the construction to guarantee the integrity of the plants. We build nuclear plants in the U.S. the same way—like Diablo Canyon. ★

Fears of earthquake damage have been grossly exaggerated. A great deal of the expense of a nuclear plant goes into massively strong structures to protect against earthquakes and contain any radioactivity released inside. These buildings are stronger than our missile silos designed to withstand the blast of nuclear weapons nearby which produce shocks must greater than any imaginable earthquake. & soon including CHINA!

The U.S. has been building nuclear plants for the rest of the world for the last twenty years. The designs are the safest and most modern in the world. The U.S. Nuclear Regulatory Commission has indicated that it will give swifter approval to new nuclear plant designs that have additional safety features and performance upgrades that have been developed from forty years of operational experience with nuclear plants throughout the world.

There are several nuclear plant sites in the state that are now unused. These were approved for nuclear plants long ago. They certainly should be approved in reasonable time for new plants or upgrades of the existing plants. The Rancho Seco nuclear plant owned by the Sacramento Municipal Utility District (SMUD) was shut down because of a combination of operational problems and community sentiment. But it was fully operational and could have been improved rather than shut down. Now SMUD is saddled with the enormous expense of de-commissioning a nuclear plant that is no longer producing income. SMUD should be more than happy to let the state or another utility take over the plant and either upgrade it or build a new one on the site. This could be done within two years. There is a site near Eureka that has an abandoned nuclear plant.

Why Continue to be Blackmailed by Natural Gas Suppliers? !

The gas pipelines into California are running at full capacity. New power plants being built will use even more of the dwindling supplies of natural gas. This will leave homeowners and businesses with even less. We can expect prices to increase again. Even this supposedly

AND COAL (causes 50% of AIR POLLUTION)

clean natural gas is a major contributor to air pollution in the state. !!

New hydro and nuclear plants are the only safeguard that California and its neighboring states will not be blackmailed again in the near future by natural gas producers. What good does it do to build new natural gas power plants when we have to buy the gas from the same outside suppliers who are robbing us now for the electricity they generate with their gas? They will do it again with certainty as our population and economy grow. Gas supplies are already in short supply. It will get worse rather than better as the nation's energy demands grow. And we will be back where we are now—paying five to ten times more for energy than it costs to generate power with new hydro and nuclear plants.

READ THIS

Just the threat that California will build several new nuclear plants that perform as well as Diablo Canyon will strike fear in the outside power producers who will lose their ten billion dollar market for selling high-priced power and natural gas to California. We should do more than threaten. We should build some hydroelectric and nuclear plants as soon as possible. !

There are only two sources of clean, inexhaustible power available to California within the next few years. These are more hydroelectric dams and nuclear power plants. They have silently and reliably supplied 25% of California's power for decades. They are the cheapest sources of clean, guaranteed power that require no expensive fuel from outside energy suppliers. They throw no pollution into our air.

The biggest threat to the outside power suppliers that are blackmailing us now are new power plants that need neither the electricity they generate nor the natural gas they sell. Only two things can give us this edge: more hydroelectric plants or more nuclear plants. We can not build enough new hydro plants to generate another 20,000 megawatts within the next ten years. (A typical major dam with hydro turbines produces maybe 1,000 megawatts. We do not have the rivers and reservoir sites to build 20 more). But we should build those that we can. The Auburn Dam on the American River has been delayed for decades. Millions have been spent on the design and preliminary work. It must be completed as soon as possible.

However, several nuclear plants could be up and running within three years if we cut through the senseless red tape and fraudulent environmental claims and hysteria. Fortunately, citizens now hurt in the pocketbook are getting sobered very quickly about the realities of the economy and safety of nuclear plants as compared to the promises of cheap natural gas that the so-called environmentalists gave us.

Objections and legal actions by those who call themselves environmentalists have stopped the building of both hydroelectric dams and nuclear power plants for the last twenty years. These objections—and the public hysteria that they have caused at times—must now be compared to the real damage to our environment and economy by continuing to be burn enormous quantities of highly polluting and increasingly expensive fossil fuels for the energy California needs.

Experts in the power business tell us that solar, wind, geothermal and all other alternative sources of power will not be able to supply more than 3% to 5% of our total power needs in California within the next ten years. There are very real technical and economic reasons way these alternative energy sources supply less than 1% of our power today. (How do we cover 10,000 square miles with solar panels or wind mills? Then what do we do when the sun is not shinning and the wind is not blowing?) !!

The great hydroelectric projects in the west fueled our economy and provided water storage for agriculture and urban centers. For more than forty years, over a hundred nuclear power plants in the nation have given us the only major source of no-polluting power that can not be held hostage to foreign supplies of oil and natural gas.

The reservoirs of hydroelectric dams create an explosion of animal life and provide bountiful recreation facilities for our people. We have paid billions of dollars to provide means for fish to pass by the dams on their way to spawning upstream. The dams give us needed water storage and flood control. But these advantages are seldom mentioned by the environmental hysteria cult that objects to any use of our natural resources for the benefit of mankind—a group that is also an important species on this planet.

★ **Burning Coal and Fossil Fuels Puts ~~2000~~ In 2005, Now >10,000 Tons of Radioactivity in the Air Every Year.** !!! Every year 60 people die from the mercury and thorium and uranium and other pollutants emitted by coal-burning power plants !!

Read this report from the Oak Ridge National Laboratory on coal burning power plants: http://www.ornl.gov/ORNLReview/rev26-34/text/colmain.html

Being forced to burn coal and fossil fuels for most of our power in the U.S. and the world has poisoned the environment and puts more than ~~2000~~ 10000 tons of radioactivity materials in the air we breath every year. This is a ~~thousand~~ 5000 times more radioactivity in the environment than could ever be released by nuclear power plants if we callously dumped all nuclear waste on the ground somewhere. The millions of tons of open ash piles and slag heaps at coal plants are the most toxic sites in the world containing tens of thousands of tons of radioactive uranium and thorium. The self-proclaimed environmental organizations don't dare acknowledge what they have forced on the world.

On KGO Radio I warned our listeners, both Governor Wilson and Governor Davis, and the legislature many times over the last three years that utility rates would skyrocket if they didn't stop the forced sale of power plants owned by the utilities and the people of this state. Now, they will only do the difficult things that will solve this problem when you, the voters, tell them in a fashion that will make them listen. You must tell them you will not vote for them again—that you will support movements to recall them if necessary. And, you will not forget before the next

ATTN: C.E.P.A. + ATTN: C.P.U.C MICHAEL PEEVEY
FAX 1-(415)703-1758

STATE OF CALIFORNIA – THE RESOURCES AGENCY ARNOLD SCHWARZENEGGER, Governor

CALIFORNIA ENERGY COMMISSION
1516 NINTH STREET
SACRAMENTO, CA 95814-5512
www.energy.ca.gov

* 26 YEARS of delay, inaction and EXCUSES, EXCUSES, EXCUSES !!

March 19, 2004

Now it's 27 years of delay - another year of excuses!

Mr. Meade Norman
5021 Bella Collina St.
Oceanside, CA 92056-1924

IN THE MEANTIME... BUILD NUCLEAR PLANTS NOW!

Dear Mr. Norman:

Governor Schwarzenegger has asked that I respond to your recent letter requesting government assistance to promote the construction of several new nuclear and hydroelectric power plants in California. WE NEED THEM NOW!!!

It is very unlikely that new nuclear power plants will be built in California, at least in the near future, since state law prohibits the construction of any new units until the California Energy Commission finds that the federal government has demonstrated and there exists an approved technology for the permanent disposal of spent fuel from these facilities. The U.S. Department of Energy (DOE), the federal agency responsible under federal law for disposing of the nation's spent nuclear fuel, is expected to submit a license application to the U.S. Nuclear Regulatory Commission later this year to construct a repository at Yucca Mountain, Nevada. DOE projects 2010 as the earliest date this federal repository could be licensed, constructed, and begin accepting spent fuel. However, continued delays, legal challenges, and "scientific" disagreement on the waste disposal technology and suitability of the Yucca site make the 2010 date highly optimistic at best.

"2010" would be 32 years of EXCUSES! DELAYS BY U.S. GOVT.!

Only by those who don't know any better!!

★ No new orders of nuclear power plants have been made in the United States since 1978. New nuclear plants are not likely to be built in California in the near future because of concerns about seismic safety and the scarcity of inland water in California for cooling the fuel. California's utility officials have indicated no intent to build new nuclear power plants in light of the high costs of construction, long regulatory and construction lead times, and public concern about siting nuclear power plants.

EXCUSES!

"ECO-FRAUD" groups + N.I.M.B.Y.'s

Your letter mentions the cost of electricity from nuclear power production in comparison with other electricity sources. The cost effectiveness, benefits to California's economy, and environmental impacts of alternative electricity sources are evaluated in California's very active energy resource planning and acquisition process. ? Oh, yeah? SHOW ME!!

California's four operating commercial nuclear power plants--Diablo Canyon Units 1 and 2 and San Onofre Generating Station (SONGS) Units 2 and 3--are major components of California's electricity generation system. These plants are expected to continue to generate electricity at least through their operating license expiration dates of 2021 and

2025 for Diablo 1 and 2, respectively, and 2022 for SONGS Units 2 and 3. Decommissioning these plants is regulated by the federal Nuclear Regulatory Commission. in Rockville, MD (301) 816-5100. (7:15A - 4:15P EasternTime)

← CONTACT THEM !

To keep track of the changing electricity supply and demand situation and make sure we do not experience another electricity crisis like 2000-2001, the Legislature requires the Energy Commission to publish a biennial Integrated Energy Policy Report (IEPR) and provide annual IEPR Updates, which forecast and assess California's expected energy supplies and demand projected at least ten years out as well as monitor our progress towards reliable, affordable electricity. To meet growing electricity demand, the state is taking steps to help ensure that preferred* energy resources are available by implementing new efficiency standards and programs, evaluating the benefits of dynamic pricing, and aggressively developing renewable energy resources, as required by state law. We currently are on schedule to achieve our goals. In this encouraging new electricity environment, the "need" for new nuclear power at least in the near-term appears to be remote. !

EXCUSES !

Thank you for your interest in California's energy issues. For further information, you may want to consult the Energy Commission's web site at www.energy.ca.gov.

Sincerely,

ROBERT L. THERKELSEN
Executive Director

*PREFERRED ??? By WHOM ??!
preferred only by the oil, coal and gas companies !!

VISIT THE WEBSITE www.nei.org
(Nuclear Energy Institute)

"HYDROGEN HIGHWAY" (production) is only economically feasible with NUCLEAR POWER !

BACKGROUND AND BASIS

Nuclear power is the only sustainable energy option available for large-scale development to help meet future energy needs. After several decades of development by governments and investment by electric utilities, it currently provides about 7% of the world's energy supply and 17% of the world's electricity needs.

By 2050 the world's population is expected to reach 10 billion. The scale of economic activity then will likely be three to five times larger in order to meet the living standards of that population. The consumption of resources will increase markedly as the low-income countries embark on their own "Industrial Revolution" to achieve higher standards of living. Given these conditions, the use of non-carbon emitting energy sources must be maximized, if national and international carbon emission commitments are to be met.

Increasing the supply of nuclear electricity can help meet the goal of satisfying increasing public demands for clean, reliable energy, while at the same time limiting carbon dioxide emissions. Initially, the increase in nuclear power should take place in those countries that already have the necessary, established industrial infrastructure. In the less developed countries, as industrial infrastructures improve, nuclear power will be needed to develop their economies and reduce their dependence on fossil fuels.

The table shows the Gross Domestic Product (GDP) compared to the carbon emissions of the four largest world economies in terms of GDP per tonne of carbon dioxide emitted to the atmosphere. Also shown in the table are the data for the two largest populations of the world, China and India. Most of the more efficient countries obtain a significant part of their energy from nuclear power. France, for example, now relies on nuclear power for 42% of its energy and has the highest GDP/tonne of carbon emissions rating in the world. !!

GOODS AND SERVICES PRODUCED per TONNE OF CARBON DIOXIDE EMITTED

$GDP/tonne CO_2

(These six countries account for over 60% of the global economy and almost half the population)

1996 data from (BP, 1998; EIA, 1996)

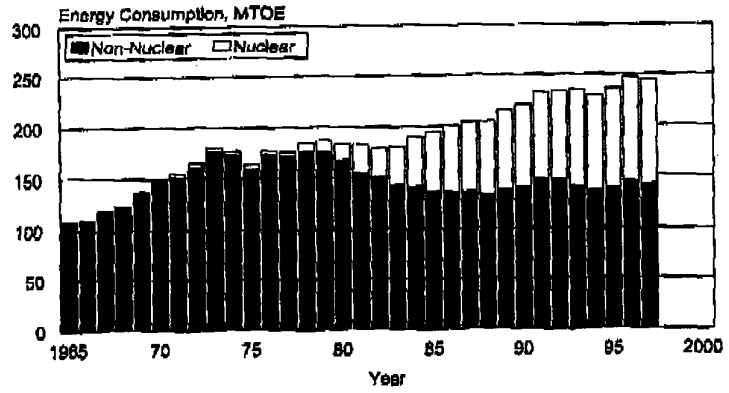
Country	Population Millions	Gross Domestic Product (GDP)(a) Billions US$	$GDP/tonne CO_2	Of Total Energy Consumed% Nuclear
France	58	1456	3378	42
Japan	125	4319	2947	14
Germany	84	2096	1926	12
U.S.A.	266	7713	1148	8
India	952	567	534	1.4
China	1210	813	192	0.5

(a) Gross Domestic Product at Market Exchange Rates

WHAT A DISGRACE! U.S.A. is only 8% Nuclear power!

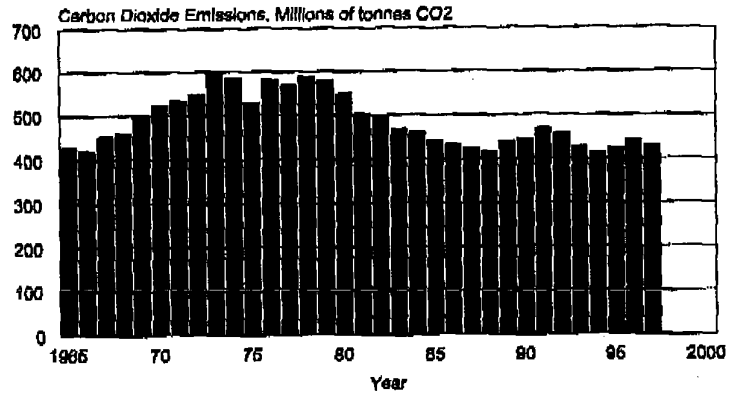
The French program is a clear example of the potential of nuclear power to reduce carbon dioxide emissions. From 1998 data (BP 1998), French carbon dioxide emissions peaked at 600 million tonnes in 1973 when the total energy consumed was 180 million tonnes of oil equivalent (MTOE). By 1997, energy consumption had increased by 35% to 244 MTOE. However, as shown in the figures below, at the same time nuclear power had grown from 4 MTOE (2% of total) to 102 MTOE (42%), and carbon dioxide emissions had decreased by 28% to 430 million tonnes.

ENERGY USE IN FRANCE



From data in BP Review 1998

FRENCH CARBON EMISSIONS



From data in BP Review 1998

BUILD MORE NUCLEAR POWER PLANTS AND BREEDER REACTORS THAT ARE NECESSARY TO PROCESS SPENT FUEL RODS !!

★ Nuclear power is an energy source that is safe, commercially proven, contains its waste products, and minimizes the environmental impacts of energy generation. The amount of waste produced is very small relative to the energy generated and methods are available for managing this waste. By using demonstrated technologies, nuclear fuel reserves in nature can be extended for centuries of operation. An important feature of nuclear power is that the cost of fuel is small compared with capital cost. Thus, once built, nuclear power plants produce electricity at a cost that is relatively insensitive to inflation or the fluctuations of prices on the world energy market.

The United Nations International Atomic Energy Agency (IAEA) has been effective at monitoring nuclear material safeguards and instrumental in obtaining international safety agreements. It should continue receiving strong, international support in its role of controlling nuclear proliferation while sharing the peaceful uses of nuclear technology. In addition, the World Association of Nuclear Operators has established high safety performance standards, and monitors and improves operations at facilities throughout the world.

Other than the traditional use of biomass, renewable energy sources currently provide about 2% of the world's energy, virtually all as hydroelectric power. Hydroelectric power could, if environmental concerns were managed, maintain its current contribution to the global energy supply, by utilizing all potential rivers. Even if the other renewable technologies such as wind, solar and biomass grow to contribute 40% of the global energy supply in 2050 (WEC/IIASA 1996), the World Energy Council predicts that carbon emissions would still increase to 50% above the 1990 levels.

Of the alternatives that the countries of the world must consider in strategies to reduce carbon dioxide emissions, maintaining and expanding the use of nuclear power is the leading solution and should be the preferred path.

REFERENCES

1. BP Statistical Review of World Energy, British Petroleum Company plc, London (1998).
2. International Energy Annual 1996, Energy Information Administration, U.S. Department of Energy, Washington, (1996).
3. "Energy Use and Carbon Emissions: Some International Comparisons", Energy Information Administration, U.S. Department of Energy, Washington DC, (1994).
4. "Energy for Tomorrow's World", World Energy Council, St. Martin's Press, Inc., New York, ISBN 0-312-10659-9, (1993).
5. "Global Energy Perspectives to 2050 and Beyond", World Energy Council and the International Institute for Applied Systems Analysis, published by the World Energy Council, London, (1995).

The American Nuclear Society, founded in 1954, is a not-for-profit scientific and educational society of over 11,000 scientists, engineers, and educators from universities, government and private laboratories, and industry.

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EXECUTIVE SUMMARY

As a result of California's electricity crisis during 2001, policy makers recognize that maintaining a reliable supply of energy at a reasonable cost is by no means an easy task. The task will be made harder as forecasts expect California's population to grow by six million by 2012. Electricity consumption will jump by an estimated 60,000 gigawatt hours as a result.

Nuclear power was very helpful to the state during the recent electricity crisis. Four operating reactors at two nuclear power plants produce approximately 18 percent of California's power. Given the dearth of in-state supplies of natural gas and coal, the volatile price of natural gas imported from out of state, and the expense of alternative energy sources, the media, industry analysts, and some legislators have broached the idea of building additional nuclear power plants.

This report outlines the benefits and risks associated with the production of nuclear power in California. The purpose is to provide policy makers with information necessary to determine whether additional nuclear power plants can help supply Californians with a reliable and safe supply of energy at a reasonable cost.

BENEFITS

Reduction in Air Pollution. Californians are clearly concerned with poor air quality, which is associated with a number of health problems and with global climate change. Nuclear power can also be part of a strategy to address carbon emissions. Nuclear power plants emit no carbon dioxide, sulfur dioxide, or nitrous oxides. A recent article in *Science* stated that one way to hold world carbon dioxide emissions constant given expected population growth of three billion people, is to increase nuclear energy production tenfold. The European Commission released a report that Europe would need at least 85 new plants to meet the emission targets outlined in the Kyoto Protocol to reduce global warming.

Price Stability. Since nuclear technology was first introduced in the 1950s, the cost of producing electricity from nuclear power (not including construction costs) has remained relatively constant, unlike prices of natural gas and petroleum. During this period, the industry has quietly found ways to improve plant performance, reduce operating costs, and increase capacity utilization.

Improved Safety. According to the U.S. Department of Energy, the number of events at nuclear power plants that trigger any of a multitude of safety systems have dropped from 2.37 in 1985 to .03 in 2000. In addition, recent research shows that the frequency of accidents and the number of deaths from nuclear power production is less than for energy production from coal, oil, natural gas, or hydropower.

Reduced Reliance on Energy Imports. Increased reliance on nuclear power in the United States means a reduced reliance on oil imported from other countries. Some

Nuclear Energy Institute: Site Map

Protecting the Environment
How clean nuclear energy preserves the environment—including air, land, water, and wildlife, helps states attain compliance with the U.S. Clean Air Act, and helps countries comply with international clean air agreements.

Reliable, Economical Energy
Why nuclear energy is a dependable, efficient, inexpensive source of energy, and even more economical than we might at first believe.

Safety and Security
How safety systems, procedures, and regulations achieve the nuclear industry's number one priority—the safe operation of nuclear plants, given that radiation can be effectively measured and controlled. How nuclear plant security is ensured by physical construction, security forces, and clearances and background checks for plant employees.

Nuclear Waste Disposal
The national program in the United States for managing high-level waste—used nuclear fuel—and nationwide regulations and procedures for disposing of low-level waste—solid items exposed to radioactive materials by hospitals, pharmaceutical companies, manufacturers, and research facilities as well as nuclear plants.

Transportation Safety
The wide range of procedures, regulations, and test: developed by the nuclear energy indus and government agencies to ensure th used nuclear fuel is shipped safely.

Nuclear Technologies
Basic information—benefits, procedures, techniques, equipment—on the use of nuclear energy in electric power generation, medicine, food processing, agriculture, and industry as well as nuclear fuel manufacturing.

Public Policy Issues
Quick summaries and indepth discussions of the key public policy issues involving nuclear energy as well as endorsements of nuclear energy by policy makers, business leaders, and organizations. Especially for policy makers—elected officials, their staff, and regulators.

Newsroom
A listing of major developments—legislative, regulatory, business—in nuclear energy with background information, news releases, speeches and testimony, nuclear energy data as well as NEI media contact information and a guide to nuclear energy experts. Especially for the news media—journalists, editors, and publishers.

Financial Center
Status reports on major issues of economic consequence, state and federal industry restructuring information, an industry data digest, a U.S. commercial nuclear plant directory, and a list of recent analyst reports on the nuclear industry. Especially for financial analysts and investor relations executives.

Nuclear Data
Convenient nuclear data packages, either current and concise detailed and historic as well as plant lists owner, state, country and performance, an monthly, online, interactive nuclear d publication.