
The Webb Patterson Report

Energy In America

“A good plan executed right now is better than
a perfect plan executed next week.”

—General of the Army, George Patton

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Editor's Note:

Webb Patterson Communications periodically analyzes what is being written and said about workplace influences in America. We look at the key issues. We ask how various organizations will address these issues. How will Corporate America respond? And we ask ourselves how all this will impact the local business community. In this issue of The Webb Patterson Report, we look at the energy crisis in California and deregulation across the United States and take a glance at the Bush administration's early version of an energy policy for the country.

The Webb Patterson Report published in October 2000 was entitled "Power Dynamics: A Study of What Can and Will Happen with Electric Utilities Deregulation."

It is interesting in light of recent events to look back at what we said in that report that was published just months before the lights began going out in California. Here are a few excerpts from the October 2000 Webb Patterson Report as an historical perspective.

- There are now more than 100 companies selling power in California. Residents can buy electric power over the Internet there. And its not just little-known companies contending for power customers. Even a MasterCard subsidiary and the Walt Disney Company are looking into the lucrative power business.

- The truth is, no one—from federal regulators to utilities executives to the average consumer—knows just what to expect from deregulation of one of the most important aspects of daily life, the local provider of power to heat and cool our homes, run our computers, even make certain the traffic lights are timed properly. It is fairly certain that changes are just around the corner, and those changes will affect who will provide power on a local basis, how that power will be delivered, and how the consumer will pay for it, as well as how much the consumer will end up paying.

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Ripple Effect Across the Country

The ripple effects of California's power squeeze already are being felt as far away as New England, and from Arizona retirement communities to New Mexico mining towns. Buyers in France of Silicon Valley computer chips, and senders of Mother's Day flowers that were grown in California also have felt the price impact of the California power shortage.

Energy-intensive industries are ready to halve production and lay off workers. Some already have shut down in neighboring states so power can be sold to California. And states from New Mexico to the eastern United States are reconsidering their own deregulation plans.

Some states, including North Carolina, stopped deregulation steps in mid-stream in light of the California debacle. The North Carolina deregulation question had been studied for more than three years by a long-standing commission. Only a month or so before the California crisis evolved, the commission was poised to recommend following a similar course: expose power prices to natural market forces as early as 2006. Legislators quickly got cold feet and put the plan on hold, saying they “want to see the smoke clear in California.” North Carolina lawmakers now say the state may not deregulate electricity for another 10 years. Other states, including Idaho, have done likewise.

Like Passengers on the Titanic

In some ways, Americans are like the passengers on the Titanic who went to their doom not knowing that their fate was sealed by faulty and inadequate planning on the part of the ship's owners. The Titanic's owners and the passengers thought the ship was unsinkable, so little thought was given to having enough lifeboats for the passengers and crew. The crew was not trained in lifeboat safety, and there were no drills. The result is history.

We also should take a lesson from our fellow Americans in California who for years refused to see a looming crisis regarding their power supply. For more than a decade, Californians refused to allow any new power plants to be built in spite of the fact that demand had long since outpaced supply.

There Are No “Quick Fixes”

California paid the price last summer for the mistakes made in the early to mid-1990s, and the citizens and businesses of the state will pay dearly again this summer. But the pain and suffering on the West Coast can't be solved by the governor's quick-fix infusion of cash to bolster the bankrupt utilities. There is no quick fix, just questions with complex answers. For example, how does California's problem translate to the rest of the country? What can be done to solve the energy problem, and how long might it actually take to get control of the problem?

Perhaps equally important, what has California learned and what can the leadership of the rest of the states learn from California's mistakes?

The projected California energy need for June 2001 is approximately 46,000 megawatts, rising the following June to 47,000 megawatts and in June 2003 to 47,500 megawatts. The July need is expected to peak at 46,000 megawatts in early weeks and drop to about 45,200 megawatts later in the month. It is expected to be 47,000 megawatts in 2002 and peak at 48,000 megawatts in 2003. The August figures are 45,000 megawatts this year, rising steadily next year, and reaching 50,000 megawatts by August 2003.

Further frustrating seekers of a solution is the fact that existing power plants that could generate several hundred megawatts or more are out of operation because of financial problems. These plants are under long-term contracts to the state's major utilities, which haven't been paying them because of the cash crunch caused by the electricity crisis. Without the payments from the utilities, the power plants had to stop operating.

Emergency Steps Taken

To conserve energy and prevent rolling blackouts, California has taken some emergency steps:

- Proposing to add 5,000 megawatts of new generating capacity this summer. This would

increase available supplies by about 10 percent.

- Appointing an “energy construction czar.” By early May, the first energy czar had already quit and returned to his utility job, and the governor was already projecting he would fall 1,500 to 2,000 megawatts short on the projected new generating capacity.
- Offering rebates for energy-efficient consumer appliances.
- Paying businesses for using less electricity during peak demand periods.
- Installing thousands of sophisticated electric meters to track usage.
- Urging people to conserve through widespread publicity campaigns. The governor signed legislation in April 2001 allocating \$850 million to the above programs that he says should reduce demand by more than 2,000 megawatts this summer.

How Will the Rest of the Country Fare This Summer?

Early in May, President Bush warned of possible shortages of power in the Northeast. As early as February, local power officials said New York City faced electricity shortages this summer. The most accurate guess is that the city will be 528 megawatts short of supplies needed to be “reliable” under all conditions. The state power authority is pushing to complete by June 1 seven small power plants that will add an additional 450 megawatts on high-load days. This addition, coupled with upgrades on several small, privately owned plants, should give New York about a 100-megawatt cushion, although pockets such as Long Island could have only a 15-megawatt spread.

Taking New York City out of the scenario, the rest of New England is in good shape for the summer of 2001. Each part of the Northeast has access to enough power to meet the highest demand forecast for summer's hottest days. By July, New England will have added about 2,600 megawatts of new generating power. Add to that the imports the New England states normally purchase from Canada, and the region should have a 20 percent reserve cushion. Statewide, New York should have an 18 percent margin throughout the summer.

Call for a National Energy Policy

Virtually every U.S. citizen has felt the fallout of California's energy crisis. It has been described as a “looming national security crisis” and “an economic threat.” The momentum that followed has touched off the first real call for a national energy policy that will consider tapping into the vast oil reserves known to be in Alaska.

Energy producers are not waiting for the government to act. They are drilling for natural gas, building gas pipelines, and constructing power plants at an unprecedented pace as companies respond to high energy prices by significantly boosting investment in energy production for the first time in a decade. This investment boom may do more and do it more quickly than any government relaxation of regulations or government-mandated plan. The investment in energy areas that were unattractive financially only a few years ago will be felt quickly in a cyclical increase in supplies that industry executives and private analysts say will stabilize or reduce prices in only a few months.

“Prices go up and we start drilling,” as one well-digging company executive put it. The Ohio-based company plans to drill up to 20 natural gas wells this year. The executive explained that there is plenty of natural gas available for now, and “we're going to get it to the market.” But, he added, Washington has a role to play in the future in opening currently restricted land for gas exploration.

Industry analysts estimate there were 955 to 980 new natural gas drilling rigs in operation in early May 2001, and big oil companies plan to invest more than \$40 billion in natural gas exploration this year alone.

In addition to exploration, companies are building natural gas transportation pipelines at an almost frenzied pace. More than 1,900 miles of new pipelines were added last year, and the Federal Energy Information Administration says it expects companies to add 4,300 miles this year and another 4,700 next year, both record increases in capacity.

No Energy Deficit Exists, Say Some

There is no energy deficit, say some energy watchers, including Jay Hakes, former director of the Energy Information Administration in Washington. They point to the recent surge in activity by energy

companies as evidence that there is no lack of supply.

The problem, they say, is not that energy companies cannot respond to demand. The problem is that the newly deregulated energy companies cannot be certain of a guaranteed return on investments that state and federal regulators once provided.

These energy watchers say oil, gas, pipeline, and utility companies postponed investment plans and shut down marginal operations when energy prices slumped in the 1990s.

Prices were so low in the 1990s that some companies actually left the natural gas business. Demand in the late 1990s accelerated when power plants began using natural gas (which burns relatively cleanly) to produce "green" electricity. The natural gas industry has struggled to fill orders since the mid-1990s. This demand prompted companies by the year 2000 to embark on a fresh investment binge that is starting to close the gap between need and supply.

Energy Is Profitable Again

Even without Washington's help, the energy industry seems to be catching up to the need because it is again profitable to do so.

Late in the year 2000, major natural gas producers on Alaska's North Slope announced plans to build a multibillion-dollar pipeline to the lower 48 states. The companies control tens of trillions of cubic feet of natural gas in Alaska, but never tapped it because the cost of building a delivery pipeline was not economically feasible when prices were low.

On the government side, a bill introduced in late February by Sen. Frank Murkowski (R-AK) seeks to overhaul energy policy and encourage domestic oil exploration. The bill is expected to set off one of the year's most heated policy debates. The oil industry will be pitted against the conservationists over a provision that would permit oil drilling inside the Arctic National Wildlife Refuge. The refuge is located in the far northeastern part of Alaska and is almost the size of South Carolina.

President Bush, a strong supporter of drilling in the Alaskan refuge, favors the 300-page bill, which seeks to reduce the U.S. reliance on foreign oil by six percentage points to 50 percent by opening up new tracts of land for exploration.

National Energy Security Act

Formally known as the National Energy Security Act, the bill also seeks to promote the production of natural gas, coal, and nuclear energy and increase home heating assistance for the poor.

In addition to supporting the Murkowski Bill, President Bush has developed a national energy strategy of his own. The policy emphasizes streamlining of regulations. Administration officials blame some of these regulations for causing the gap in energy supplies. The main weaknesses, according to administration watchers, include a shortage of refineries, power plants, natural gas pipelines, and other energy infrastructure.

Each Energy Source Has Supporters

Hydroelectric plants are among the oldest and most popular sources of electricity. They are dependent on an abundance of rainfall during critical periods of the year. Natural gas and oil supplies for heating purposes are stretched thin during the winter months. Nuclear energy has been somewhat neglected due to the cost of building a power station and safety concerns on the part of the public. Coal, one of the most abundant sources of heat and a fuel source in older electric power plants, is a major pollutant. Conservation seems almost un-American, but it holds some potential.

Coal Is Plentiful, But Burns Dirty

Coal is the primary source of fuel for many of the older power plants in the U.S. It is one of the most abundant sources of fuel, it is easily mined and transported, and it was until recently inexpensive when compared to other sources such as natural gas and nuclear power. That last qualification seems to be tenuous at best, as prices have risen nearly 130 percent since 1998.

Almost anything done with coal-fired utilities is going to come into conflict with environmentalists and "green power" advocates who promote non-polluting sources of energy.

As part of his energy package, President Bush proposes to revise portions of the Clean Air Act by imposing limits on four major pollutants. The most controversial of these proposals affects carbon dioxide. The inclusion of carbon dioxide, which comes from burning fossil fuels such as coal, is rapidly turning into a political problem because some observers fear it might affect

approval of the pending global warming treaty known as the Kyoto Protocol. The Kyoto Protocol would strictly regulate carbon dioxide emissions. Scientists writing in the June 2001 issue of *Scientific American* estimate the economic damage by mid-century in the range of hundreds of billions of dollars per year due to the global warming effect of carbon dioxide.

The Kyoto Protocol emissions targets represent a diplomatic agreement rather than any careful weighing of cost and benefit or science. Mr. Bush had pledged to oppose the Kyoto Protocol during the presidential campaign. When Mr. Bush made good on his pledge in March, he was able to take some political comfort in the fact that 95 of the 100 Senators earlier had voted against the protocol.

A Multi-Edged Sword for Utilities

The problem has a multi-edged effect on utilities. Three years ago, then Vice President Gore met with a group of eight utilities to discuss clean air. As the utilities told the vice president at that meeting, they could lower carbon dioxide emissions by improving efficiency at older plants. By doing so, they would trigger a Catch-22 situation under the Clean Air Act called “new source review.” This requires an environmental review of older plants when they undergo significant changes. This review undoubtedly would expose those older facilities to additional regulations and potential fines. When Mr. Gore suggested the utilities meet with the EPA, the plan fizzled after three meetings when EPA head Carol Browner opted to sue several major utilities for alleged violations of the “new source review” section.

Clean Air as a Campaign Issue

The clean air aspect entered the Bush camp during the presidential campaign when the advocacy group Environmental Defense lobbied for the multi-pollution approach at the Bush headquarters in Austin. So did the Clean Energy Group that includes nine major utilities. Among the Bush advisors who enthusiastically supported the concept was Tom Kuhn, Mr. Bush's classmate at Yale and now head of the Edison Electric Institute. While details still need to be worked out, there are strong indications the Clean Air Act will be changed to impose national limits on man-made carbon dioxide and three other pollutants. The largest target would be the nation's coal-fired power plants, which

produce one-third of the U.S. carbon dioxide emissions and a major portion of the other pollutants. Utilities would get a 15-year moratorium from federal air pollution restrictions to give them time to invest billions of dollars in new power plants. Theoretically, the utilities would know in advance the pollution parameters and therefore avoid expensive retrofits later.

Four Northeastern states are pushing at the same time for significant pollution reductions from older plants in the face of complaints from utility officials that the new rules threaten the reliability of electricity supplies for the region. Connecticut, Massachusetts, New Hampshire, and New York are seeking reductions that would require older power plants to reduce sulfur dioxide emissions by up to 75 percent and reduce nitrogen oxide emissions by 75 percent. On top of those cuts, New York and Massachusetts want the plants to reduce carbon dioxide emissions by seven percent and reduce mercury emissions by up to 90 percent.

Pollution/Technology

Ultimately, the two “E”s—Energy and Environment—will clash. The demand for cheap power, specifically that produced by the nation's oldest power plants, led to legislation last year barring New Jersey customers from buying power from polluting coal-fired plants.

Sixty-four of New Jersey's largest manufacturers recently formed a \$135 million compact to buy power from Allegheny Energy Supply of Pennsylvania. Allegheny was exempted 20 years ago by Congress from having to keep up with technology to clear up dirty air emissions. The pollutants from the plants' smokestacks are carried by the jet stream over New Jersey, resulting in air that is unhealthy for New Jersey residents one of every three summer days.

The New Jersey legislation forbids purchase of this type of electricity by the year 2003 and encourages the sale of renewable energy in the state—so-called “green power.” Although the concept sounds good, environmentalists are realizing that “green energy” or “green power” has many definitions, not all of which are clean. Power brokers must be aware of the following in discussing the merits of green power:

- Choosing green electricity does not necessarily mean that the power coming to the home or office is generated using environmentally friendly methods. It merely means that some “green” method of

generation was put onto the electric grid at some point in the process.

- Green sometimes means using coal-fired generators that have purchased or acquired "green credits."
- Hydropower, even though it doesn't create air pollution, may contribute to habitat destruction.
- "Green" offerings may include energy conservation measures based on the premise that electricity not generated locally is electricity that does not pollute.
- Nuclear energy has been included in a few "green packages," because it doesn't produce air emissions.
- Some "green" offers include donations to environmental groups, not all of which may appeal to customers of a utility.

North Carolina was one state that tried to do something about the pollution problem. In late 1999, then-Governor James Hunt proposed new regulations designed to cut by two-thirds the nitrogen oxide pollution billowing out of 14 coal-fired electric power plants serving the three most populous areas of the state.

The governor said the coal burning power plants produce up to half the nitrogen oxides released each year into North Carolina's air. That amounts to the pollution generated by up to 15 million cars, according to the governor.

The problem was generated by North Carolina's two giant utilities, Carolina Power & Light (now a subsidiary of Progress Energy) and Duke Power. Both have enjoyed a 30-year exemption to the federal Clean Air Act that has allowed them to burn millions of tons of coal without modern pollution controls while city dwellers were told not to mow their lawns in order to keep smog from getting worse.

Coal burning provided 60 percent of the power consumed in North Carolina in 1996, and all 14 of the state's plants are exempt from the stiffer requirements of the amended Clean Air Act. As a result, North Carolina's industrial nitrogen oxide emissions currently add up to more than what is produced in New York, New Jersey, Maryland, Massachusetts, Connecticut, and Delaware combined, according to EPA statistics. Technology also is making deregulation (or what is actually more like re-regulation) of the utilities industry more practical than at any other time in history.

Conservation? What's That? Say Some Americans

Conservation is a word foreign to many Americans who have been accustomed to using resources as desired, not as needed, for most of their lives. Americans have had a love affair with their cars that for the most part has not been slowed even as gasoline approaches and tops \$2.00 per gallon and huge sports utility vehicles make the two-block trip to the corner grocery store and home.

The need for energy conservation is not in question. What is in question is the depth of the pain the average American must suffer before he or she begins to cut back.

Everyone Feels the Pain

At what point does the average American begin to feel the heat seriously? Is it felt at the gas pump filling the 35-gallon tank on the SUV? Is it on the tree-lined street in middle America in mid-July at mid-day when the humidity is in the mid-90% range and the temperature is approaching the same number? Is it on an early evening at the kitchen table when the household bill payer opens the utility bill for the previous month when there were nine straight days of record temperatures?

Conservation? Many Now Favor That Solution

If everyone feels the pain to some degree, would it not be logical that everyone should do something about it? Most Americans feel they contributed in some way to the cause of the energy crisis, and they believe they also can contribute to the solution. Fifty-three percent of Americans participating in a nationwide poll said they favored conservation as the primary solution to the energy crisis. The poll results were released just days before President Bush presented his energy plan to the country.

Energy Plan Released Mid-May

President Bush released his long-awaited energy plan in mid-May. Not surprisingly, the 163-page policy orders federal agencies to modify regulatory barriers that slow gas, electrical, coal, and nuclear power production, and it proposes opening federal lands for oil drilling. The plan sets aside \$10 billion in tax incentives over the next decade

for conservation and projects involving renewable energies such as wind and solar power. Half that money is already in the Bush budget, but some \$4 billion has been earmarked for tax incentives for people who buy energy-efficient cars or use alternative energies. The plan also orders a review of fuel economy standards and hints mandatory fuel efficiency standards may loom on the horizon.

“Nobody Will Be Overcharged”

Although not specific on how he plans to do it, President Bush also promised that federal regulators will ensure that “nobody in America gets illegally overcharged” for energy.

Senator Trent Lott (R-MS) is in charge of ushering the plan through the Senate. He acknowledged there would be opposition to some parts of the plan, specifically the provision for oil drilling on federal land and the taking of private land for power line erection. Mr. Bush specifically called for development of Alaska's Arctic National Wildlife Refuge.

The Bush energy plan includes these recommendations:

Production

- Ease restrictions on oil and gas development on public lands
- Open eight percent of the Arctic National Wildlife Refuge in Alaska
- Ease permit process for refinery expansion and construction
- Speed license procedures for dams and geothermal plants

Power Plants

- Streamline approval process for siting power plants
- Give government authority to take property through eminent domain for power lines
- Provide tax breaks for developing clean-coal technologies
- Ease regulatory barriers, including clean air rules

Nuclear

- Adjust regulations to speed relicensing of reactors and licensing of new plants
- Speed process to ensure disposal of nuclear waste
- Urge siting, construction, and activation of a national nuclear waste repository
- Give tax breaks for the purchase of nuclear plants
- Reauthorize law limiting industry liability from nuclear accidents

Renewable Energy

- Provide tax credits to encourage development of energy plants that use organic waste, or biomass
- Continue tax credits for wind energy generation
- Give tax credit of 15 percent for homeowners who buy solar panels

Conservation

- Give tax credit for purchase of high-mileage, gas/electric vehicles
- Provide tax benefits and regulatory relief for co-generation plants producing heat and electricity

Other

- Review economic sanctions with Iran to foster energy development
- Spur U.S. participation in Caspian Sea oil/gas development
- Step up diplomatic efforts to expand oil production in Latin America, Asia, and Caspian Sea area

It should be noted that a majority of the programs included in the Bush plan can be enforced by Executive Order, meaning the President can with the stroke of a pen order the events to begin happening without Congressional approval or oversight.

A Renaissance for Nuclear Power

The energy crisis has brought a renaissance in the popularity of nuclear energy

as a safe, reliable, and emission-free provider of electricity. Nuclear power is clean, safe and efficient, according to its proponents. But nuclear energy has the perception of being extremely expensive when compared to the more heavily polluting coal-fired generating systems. Not so, say industry sources, which point out that in January 1999 the production costs at all U.S. nuclear power plants were the lowest of any major expandable energy source. The nuclear-produced electricity dropped below the cost of that produced at coal-fired plants for the first time in more than a decade, according to information compiled by the Utility Data Institute. The report covered 1999, the latest available full year of data.

In 1999, production costs, which include fuel, operations, and maintenance at nuclear power plants, averaged 1.83 cents per kilowatt-hour. The average for coal-fired utilities was 2.07 cents/kwh and 3.18 cents/kwh for oil-fired plants. Natural gas plants had the highest production costs at 3.52 cents/kwh. Nuclear power plants held a similar advantage for years until costs forced by regulatory requirements raised the cost to produce above that of fossil fuels. Nuclear power undoubtedly will be a major part of the United States energy policy in years to come, not only because of the long-term cost savings, but also for environmental reasons. In 1999, U.S. nuclear electricity production reached a record 728 billion kilowatt-hours, according to the Nuclear Energy Institute.

Last year, the production of electricity by nuclear energy rose to 754 billion kwh. That represents approximately 19 percent of all electricity generated in the United States from all sources. Compared to the rest of the nuclear generating countries in the world, the United States produces 29 percent of all electricity from nuclear generation. France is the second largest generator, producing some 16 percent of the world's electricity generation capacity from nuclear plants. Japan follows with 14 percent.

France leads the world in domestic generation of electricity by nuclear means, producing 76 percent of its total domestic electricity requirement from nuclear sources. Sweden and the Ukraine follow with 45 percent of total electricity generation through nuclear plants. Germany (29 percent), Japan (32 percent), South Korea (38 percent), and the United Kingdom (29 percent) all produce at least one-fourth of their total electricity requirement by nuclear power. Of the major countries in the world, only Canada at 12 percent and Russia at 13 percent

produce under 25 percent of their total electricity needs by nuclear power.

Why does the United States lag in construction of nuclear power plants when the rest of the world appears to accept the system? Much of the answer lies in the early education of the populace to the overall safety and dependability record of nuclear energy, according to sources at the Nuclear Energy Institute.

As President Bush has pointed out recently, there are no quick fixes to the energy problem. This statement applies across the board, but especially to the construction of nuclear power plants.

Currently, there are 104 nuclear power plants in the United States. Only 103 are actively generating power. Unit One at Browns Ferry nuclear generating facility in Alabama has been down for 14 years. There is no fuel loaded at that generating plant, which is one of three at Browns Ferry. The facility would require Nuclear Regulatory Commission (NRC) approval to restart, and there is no anticipation that it will be relicensed any time soon. There are no commercial nuclear reactors in Alaska or Hawaii.

The entire nuclear generating capability in the United States was built between 1969 when the first four licenses were issued and 1996 when the last license was issued. Only four licenses were issued in the entire decade of the 1990s, two in 1990 and one each in 1993 and 1996.

According to statistics released by the Nuclear Energy Institute, it will take an average of five years from groundbreaking to flipping a switch and getting electricity from a new nuclear power plant. As of May 2000, there is not a single application on file to site and build a new nuclear generating facility.

Reprocessed Nuclear Fuel a Hot Potato

Regarding nuclear power, the president is asking federal agencies to examine whether spent fuel from nuclear reactors can be reprocessed for production of electricity. Reprocessing in other parts of the world turns spent power rods into weapons-grade plutonium. This could create a national security risk.

The report calls for the "safe expansion" of nuclear energy by establishing a national repository for nuclear waste. This could be a very interesting aspect of the "new" energy policy, because Congress mandated a national storage facility more than a decade

ago. The facility was scheduled to open in 1998, but as of May 2001 a site has yet to be chosen officially. North Carolina was selected to be the national repository, but pulled out of the regional nuclear pact when it became impossible to select a suitable location for the waste site.

A nuclear waste repository has been open at the Savannah River Plant in Barnwell, SC, since shortly after World War II. When the Barnwell site began filling, several southern states banded together in an attempt to locate a new nuclear waste site. North Carolina was chosen as the host state, and after failing over a several-year period to site the nuclear repository, South Carolina closed the Barnwell facility to nuclear waste from other states in 1999.

Nuclear Fuel Storage Sites Filling

This has led to utilities making emergency plans to store their nuclear waste in temporary sites. Without the national repository, 38 states currently have to house spent fuel and contaminants in their own generating facilities until suitable permanent national storage or burial facilities can be sited. And some of these sites are filling.

For example, CP&L originally planned four 40-foot-deep concrete and steel water pools at the Shearon Harris nuclear power plant near Raleigh, NC. The pools would be used as temporary storage of spent rods until the national repository could be built. Only two of the pools were completed and put in service.

The first two storage pools are nearing capacity, and the company petitioned the NRC in December 1998 for a license amendment that would allow the company to begin using the two pools that were not completed when the plant was built in the early 1980s. The plant already stores nuclear waste generated on site as well as from two other company-owned nuclear plants in North Carolina and South Carolina.

The request for license amendment was protested hotly by individuals, environmental groups, and the nearby Orange County Board of Commissioners, which spent nearly \$50,000 in the original phase to stop the application. After a series of public hearings before the Atomic Safety and Licensing Board (ASLB), the NRC staff issued the necessary permits to Shearon Harris in December 2000. The ASLB eventually ruled against the protests in March 2001.

In what may become a message to the nuclear power industry, Orange County refused to let the matter drop, filing an appeal

in mid-June with the U.S. Court of Appeals under the claim the county had not been allowed to present evidence refuting claims by the NRC and CP&L.

Orange County also introduced another tactic that may be replicated by future foes of nuclear generation. The Orange County Commissioners requested by letter that U.S. Sen. John Edwards, D-N.C. intervene in the process by conducting a field hearing in the state on the waste storage plan for Shearon Harris.

Orange County spent slightly more than \$236,000 from early 1999 to mid-2001 in legal and technical consultant fees to halt the storage expansion at Shearon Harris. The appeal is being funded by contributions from individuals and foundation grants made to the environmental group NC Warn. This should be viewed as a message to nuclear proponents that they must find a way to reach and educate the private sector, environmental activists and even some elected bodies before they can count on acceptance of nuclear power.

All the arguments about temporary storage safety and transportation to and from temporary sites may finally be dropped, because the permanent facility may be right around the corner.

The search began in the early 1980s for a permanent national storage site for nuclear waste. Congress began with nine sites, and after a multi-billion-dollar study, narrowed the selection to Yucca Mountain in Nevada. President Bush has said publicly that he will push for final approval of the site this year, and that the final decision will be made on purely scientific data.

Based on those criteria, Yucca Mountain is a suitable site. Testing has shown that the facility with hundreds of miles of tunnels under the mountain will not leak radiation for the 10,000-year minimum and 100,000-year maximum limits at which the testing program was managed. All indications are that Congress will accept the DOE report and report favorably to the president on the Yucca Mountain site. The president could make the final decision in December 2001. Some critics say the site may be safe, but transporting spent nuclear fuel to Nevada over the nation's public highway system is dangerous. Not so, say observers at the NEI. More than 3,000 used fuel rods have been shipped over the nation's public roads since the late 1960s without a single accident or nuclear leakage. The system of transportation is both safe and proven effective, so there is no reason to change procedure once the Yucca Mountain facility is open, NEI officials say.

Solution(s) As Easy To Define As the Problem Itself

The solution to America's energy situation, problem, crisis—the correct word depends on whether you are talking about heating oil, gas for the car, or electricity, and what part of the country you are talking about—is both complicated and long term. But no matter what the proposed solution, the key element to success was exactly the element that appears to make nuclear energy more acceptable to Europeans than to Americans—education and communication. Any successful solution must include education as to why it will work better than another concept, and it must be communicated to the people in order to ensure acceptance. It took America and the rest of the world decades to get into the energy crisis in which we “suddenly” find ourselves, and it will take at least a decade to feel the beginnings of a working solution. That is, if we begin right now working diligently toward one.

As General Patton said, “A good plan executed right now is far better than a perfect plan executed next week.” ■

This white paper on the energy in America has been prepared by Webb Patterson Communications, Inc., for the private use of our clients and associates. It is intended to be a publication of general use in understanding an important aspect of the business environment that generally has not been well covered by the mainstream news media. For more information on this subject, or to learn how to create and manage a successful employee communications program, please contact Webb Patterson Communications, 112 West Parrish Street, Durham, NC 27701. (919) 680-6111. Or, visit us online at www.webbpatterson.com.