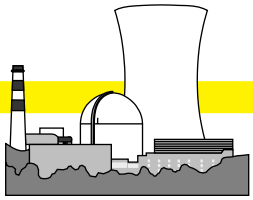

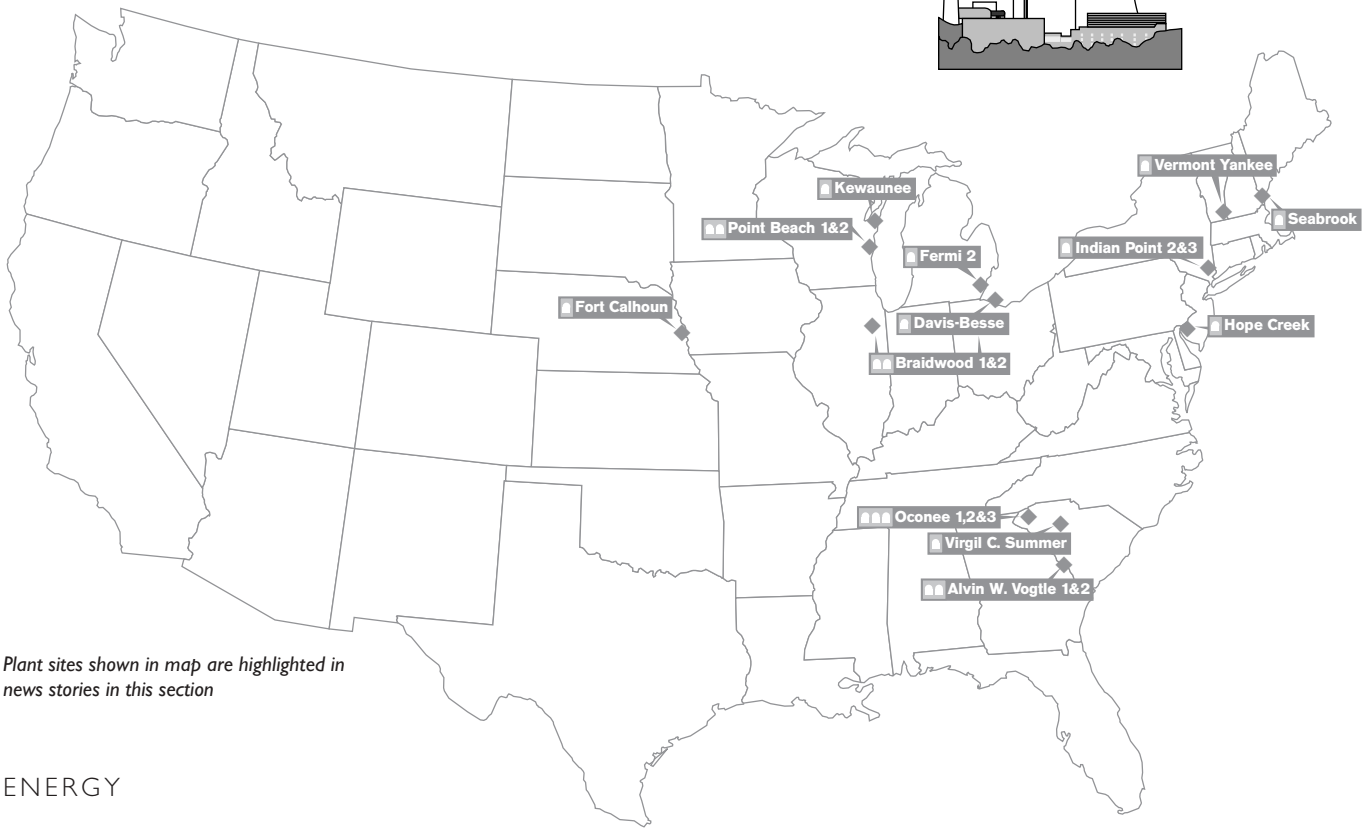

Plant sites shown in map are highlighted in news stories in this section

ENERGY

Abraham touts nuclear's benefits to U.K. audience

U.S. energy policy calls for a diverse mix of fuels: oil, natural gas, hydro/ renewables, coal, and nuclear.

DURING AN AUGUST 5 speech at a World Nuclear Association luncheon, in England, U.S. Energy Secretary Spencer Abraham delivered a strong message promoting the role of nuclear power in the United States and around the world.

Abraham explained that the Bush administration, in one of its first tasks when it took office in January 2001, put together a national energy policy addressing the long-term issues related to ensuring energy security deep into the 21st century. A central element of this policy, he said, was a plan for a diverse mix of fuels, including oil, natural gas, hydropower and other renewables, coal, and nuclear energy.

Abraham

"Forcefully declaring that nuclear power should be part of the world's fuel mix took some people by surprise, but to us it was just common sense" because of nuclear's history, recent progress, ongoing research, and future promise, Abraham said.

But, he added, several goals had to be reached in order to further the role of nuclear power. First, a case for nuclear power "in 21st century terms" would have to be developed. Second, a number of obstacles would have to be hurdled.

First challenge

Calling nuclear a mature technology, Abraham said that a rationale for promoting it for 21st-century use was the administration's commitment to cleaning up the environment. "Nuclear power plants emit none of the pollutants associated with the burning of fossil fuels," he said. "Nuclear powered plants in the eastern part of the U.S. have made it possible for many states to meet the requirements of our federal Clean Air Act. Since the mid-1970s, in fact, nuclear energy has enabled the U.S. to avoid emitting over 80 million tons of sulfur dioxide and about 40 million tons of nitrogen oxides."

Nuclear, then, should be in the middle of the climate-change discussion, he declared. "It is obvious to me that an energy source capable of supplying a significant proportion of the world's power with no greenhouse gas emissions should be at the center of this debate," he said. "Nuclear power could, conceivably, accomplish far more toward eliminating greenhouse gas emissions than many of the proposals to sacrifice economic growth put forward by those who advocate the Kyoto Protocol."

Yet, he continued, many of the "fiercest enthusiasts" for Kyoto are the "most ferocious opponents" of nuclear power. "To put it bluntly," Abraham said, "the opponents of nuclear power offer an illogical and inherently inconsistent argument. These are folks who happily embrace the virtues of solar power, wind power, and biomass, but somehow miss the reality that nuclear power has the same type of benefits touted for renewable energy sources, along with the added virtue of being extraordinarily economical."

Abraham stressed that it wasn't his job to downplay the benefits of renewable energy, and, in fact, the Bush administration was "aggressively pursuing" these technologies. Instead, he reasoned, "my point is simply that the arguments for clean power ought to be applied fairly."

Rather than criticize the arguments of antinuclear opponents, more could be accomplished by clarifying the true arguments for nuclear power, he said. "Each of us must take on the challenge of educating a public

that in some instances might not have considered certain benefits of nuclear energy, or in other instances might be laboring under misperceptions," he said.

Abraham observed that much of the general public's perceptions of nuclear energy might be "frozen in a time marked by bell-bottom jeans [and] 8-track tapes . . . but it's not the 1970s any more. Nuclear power today is safer than ever, more reliable than ever, less expensive than ever, and it is absolutely vital for our future."

Second challenge

Abraham then addressed the second challenge for developing nuclear's use in the 21st century, and that is "the several direct obstacles" that if left unaddressed might prevent nuclear from continuing to play a significant role in the world's energy mix.

Significant barriers make it "extremely difficult" for a utility to make the business decision to order a new nuclear power plant, he noted. How, then, can "impediments that increase financial risk and create uncertainty" be removed?

There are several steps, he answered. First, Congress must pass the Price Anderson Act, which guarantees compensation for victims of nuclear accidents, "and it must be clear to all parties what the parameters of that liability are," he said.

Second is the issue of nuclear waste, and in this regard Congress recently approved the administration's recommendation of Yucca Mountain as a permanent repository for commercial spent fuel and defense high-level nuclear waste in the United States.

Third is to actively push forward on nuclear research and development, Abraham said, while at the same time trying to overcome regulatory hurdles that are no longer appropriate or beneficial.

One R&D effort explained by Abraham is the Nuclear Power 2010 program, which aims at getting a new nuclear power plant built and brought on line by the end of this decade. The program involves the government and the private sector working closely together to explore sites that could host new nuclear plants. The program would demonstrate the effectiveness of key Nuclear Regulatory Commission processes designed to make licensing of new plants more efficient and predictable, and would allow the conduct of research needed to make the safest and most advanced nuclear plant technologies available in the United States.

Other actions the Department of Energy can take to help the development of advanced nuclear technologies in the near term is to work with both industry and international partners to conduct the research needed to ensure that advanced gas reactor technology, such as the Pebble Bed Modular Reactor and the Gas Turbine Modular Helium Reactor, "can be considered real options in the U.S.," Abraham said.

In the longer term, "we are investing . . . heavily in Generation IV advanced nuclear technology," Abraham said. "While the second and third generation reactors we've relied on for several decades are adequate for today's purposes, we envision a new era of nuclear energy marked by enhanced safety, improved waste reduction, better economic performance, and—perhaps most importantly—improved physical security and proliferation resistance."

Meeting this last challenge won't have beneficial effects only for electricity generation, Abraham noted. It also "will go a long way toward safeguarding Americans and our allies from the perils posed by those seeking to acquire dangerous nuclear materials," he said.

Abraham added that expanding nuclear energy's role also could facilitate the transition to a hydrogen economy, and he praised Bill Magwood, director of the DOE's Office of Nuclear Energy, Science and Technology, for his "outstanding job helping to enhance nuclear power in America and ensure energy security for us and our allies."