

IN OUR VIEW Nuclear power has role to play

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More nuclear power plants -- including one in Utah -- would be a good thing, according to about half of Utah residents. A recent poll showed an even split, with 43 percent favoring building a nuclear power plant, and 42 percent opposed.

More power is obviously needed, and coal and natural gas are limited. Utah's population reached 2.7 million in 2007, growing in one year by more than 84,000. Those people and the folks who will join us in coming years all need to turn on their lights, cook their meals, charge their cell phones and watch "Dancing with the Stars" on television.

Utah has long relied on coal. The industry and the U.S. Department of Energy are trying to develop clean coal technology. But the results won't show up for years. At legislative hearings last week, experts touted the potential of Utah's huge oil-shale reserves. That sounds great, but getting at the oil shale might involve strip mining or open-pits. We don't like the image of the Green River region ripped open in the hunt for fuel.

Producing fuel from oil shale requires lots of water, not one of Utah's abundant resources. The RAND Corp. estimates it might take 30 years before the industry can produce useful amounts of fuel.

Oil's price creeps toward \$100 a barrel, much of it pumped from unreliable or hostile nations. Some estimates have it stabilizing at \$125, which would mean \$5 per gallon gasoline. Other energy sources remain intriguing, but many of the contenders are found to have major flaws, once you look past the hopes and hype.

Take wind power. We are learning more about its flaws, such as the defects of the turbines themselves. In Scotland this month, three high-tech wind farms were shut down because one of the giant machines collapsed. That's just the latest mechanical failure.

Solar power? Utah has plenty of sun. But the world doesn't have enough silicon. A shortage of the material vital to solar cells has sent prices skyrocketing and put a choke hold on the industry's growth.

The nation should explore all these sources, and other promising alternatives, such as hydrogen fuel-cell technology. A good motto for energy development is "the more the merrier." But we are decades from full development, and can't wait for a perfect solution. Technologies that might help in 2027 or 2057 cannot be counted on now.

Certainly, nuclear power has some drawbacks. But it has major benefits. For starters, it's a virtually unlimited source of energy. Increasing its use would lessen our dependence on foreign oil. It is proven technology, supplying nearly 20 percent of the nation's electric power now, despite the 1970s-era hysteria that stalled U.S. projects. Other countries do a lot more. For example, French nuclear plants supply about 80 percent of that nation's power. All over the world, nuclear plants provide energy effectively and safely.

Except for the waste problem, which is substantial, nuclear technology protects the environment with zero atmospheric emissions. Whether you believe that global warming is a natural phenomenon or caused by humans, most people would agree that putting gunk into the air is a bad idea.

As for the soil, consider just one fact: The American nuclear power industry generates about 2,000 tons of waste annually. But each year coal-fired plants produce 100 million tons of ash and sludge, laced with dangerous substances such as mercury and nitric acid.

Consider, too, the landscape. Imagine Utah littered with giant wind turbines, solar-panel farms or swarms of oil- and gas-drilling rigs to produce more fossil fuels.

The disposal of atomic waste remains a serious technological and political issue. But on-site storage gives us a way to deal with the waste as we develop other solutions. (Matthew L. Wald details some in "A New Vision for Nuclear Waste" in *Technology Review*.)

Rising costs might hamper the construction of nuclear power plants, but there, too, the nation and the industry can find answers if we act wisely and soon.

This doesn't mean that Utah should issue blank checks to the nuclear power industry. But the state ought to be open to nuclear power. If we reject it, then we must develop other sources, and face the consequences.

Irrational fears should be dismissed, and Utah should move forward, vigorously and boldly. To procrastinate, pretending that the energy solution will be cheap, easy and flawless, will only put us in an energy jam not too far down the road.