

Nuclear power for India is good for us all

True and well argued.

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If the deal to supply India with nuclear technologies goes through, future generations may remember it for quite different reasons than the debate over nuclear proliferation.

Nuclear power emits no carbon dioxide, the leading cause of global warming. And India, like most developing countries, has not been anxious to spend money to control its emissions of this and other so-called greenhouse gases.

India is embracing nuclear power for other reasons – because it can help the country solve its chronic failure to supply the electricity needed for a burgeoning economy. But in effect, the deal would marry their interest in power with ours in protecting the planet.

India is growing rapidly. In recent years its economy has swelled at more than 7 percent per year, and many analysts believe it is poised to grow even faster in the coming decade.

The economic growth is feeding a voracious appetite for electricity that India's bankrupt utilities are unable to satisfy. Blackouts are commonplace. Farmers, who account for about two-fifths of all the power consumed, can barely rely on getting power for half of every day. In industrial zones, the lifeblood of India's vibrant economy, unstable power supplies are such trouble that the biggest companies usually build their own power plants.

So most analysts expect that the demand for electricity will rise at about 10 percent a year. (For comparison, U.S. power demand notches up at just 2 percent annually.)

Over the past decade, about one third of India's new power supplies came from natural gas and hydro electricity. Both those sources have been good news for global warming – natural gas is the least carbon-intensive of all the fossil fuels, and most of India's hydroelectric dams probably emit almost no greenhouse gases.

However, the bloom is coming off those greenhouse-friendly roses. New supplies of natural gas cost about twice what Indians are used to paying, and environmental objections are likely to scupper the government's grand plans for new hydro dams.

That leaves coal – the most carbon-intensive of all fossil fuels. Already more than half of India's new power supplies come from coal, and that could grow rapidly.

Traditionally, the coal sector was plagued by inefficiencies. State coal mines were notoriously dangerous and inefficient. Coal-fired plants in western provinces, far from the coal fields and vulnerable to the dysfunctional rail network, often came within days of shutting operations due to lack of coal.

All that is changing. Private and highly efficient coal mines are grabbing growing shares of the coal market. Upgrades to the nation's high-tension power grid is making it feasible to generate electricity with new plants installed right at the coal mines.

These improvements make coal the fuel to beat.

So the deal struck with President George W. Bush matters. At the moment, India has just 3 gigawatts of nuclear plants connected to the grid. Government planners envision that nuclear supply will grow to 30 GW over the next generation, but that will remain a fantasy without access to advanced nuclear technologies and, especially, nuclear fuels – such as those offered under the deal with the Bush administration.

By 2020, even after discounting for the government's normal exuberance in its forecasts, a fresh start for nuclear power could increase nuclear generating capacity nearly ten-fold.

By displacing coal, that would avoid about 130 million tons of carbon dioxide per year (for comparison, the full range of emission cuts planned by the European Union under the Kyoto Protocol will total just 200 million tons per year).

The effort, if successful, would eclipse the scheme under the Kyoto Protocol, known as the Clean Development Mechanism, that was designed to reward developing countries that implement projects to reduce their emissions of greenhouse gases. The largest 100 of these CDM projects, in total, won't reduce emissions as much as a successful effort to help India embrace safe nuclear power.

The benefits in slowing global warming are not enough to make the deal a winner. Care is needed to tame the risks of proliferation, especially those connected from India's system of breeder reactors that make more weapons-capable fuel than they consume. And complementary efforts, led by Indians, are needed to fix the trouble in India's electricity sector that have so far discouraged private investors.

None of this will be easy. There are no silver bullets in cooling the greenhouse.

What is important is that the deal is not just a one-off venture, as the administration's backers, on the defensive, have suggested. It could frame a new approach to technology sharing and managing a more proliferation-proof fuel cycle that, in turn, will multiply the benefits of a cooler climate.

Coal-rich China is among the many other countries that would welcome more nuclear power and whose emissions of carbon dioxide are growing fast – even faster than India's.

Quite accidentally, it seems, the Bush administration has stumbled on part of an effective strategy to slow global warming. Now it should marry that clever scheme overseas with an effective plan here at home.

(David G. Victor is adjunct senior fellow at the Council on Foreign Relations and director of the program on energy and sustainable development at Stanford University)

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