

America's Perfect Storm

WILL THE COUNTRY BE ABLE TO KEEP UP WITH THE growing demand for energy?

It's hard to escape the media coverage surrounding climate change. Lawmakers, business leaders, clergy and environmental groups compete for sound bites. According to ABC News and other recent polls, the American public is generally aware of climate change and the need to reduce greenhouse gas emissions. They are unclear, however, about what needs to be done, who should do it and what it will cost. Resoundingly though, consumers say they don't want to get stuck with a big price tag to pay for climate change solutions.

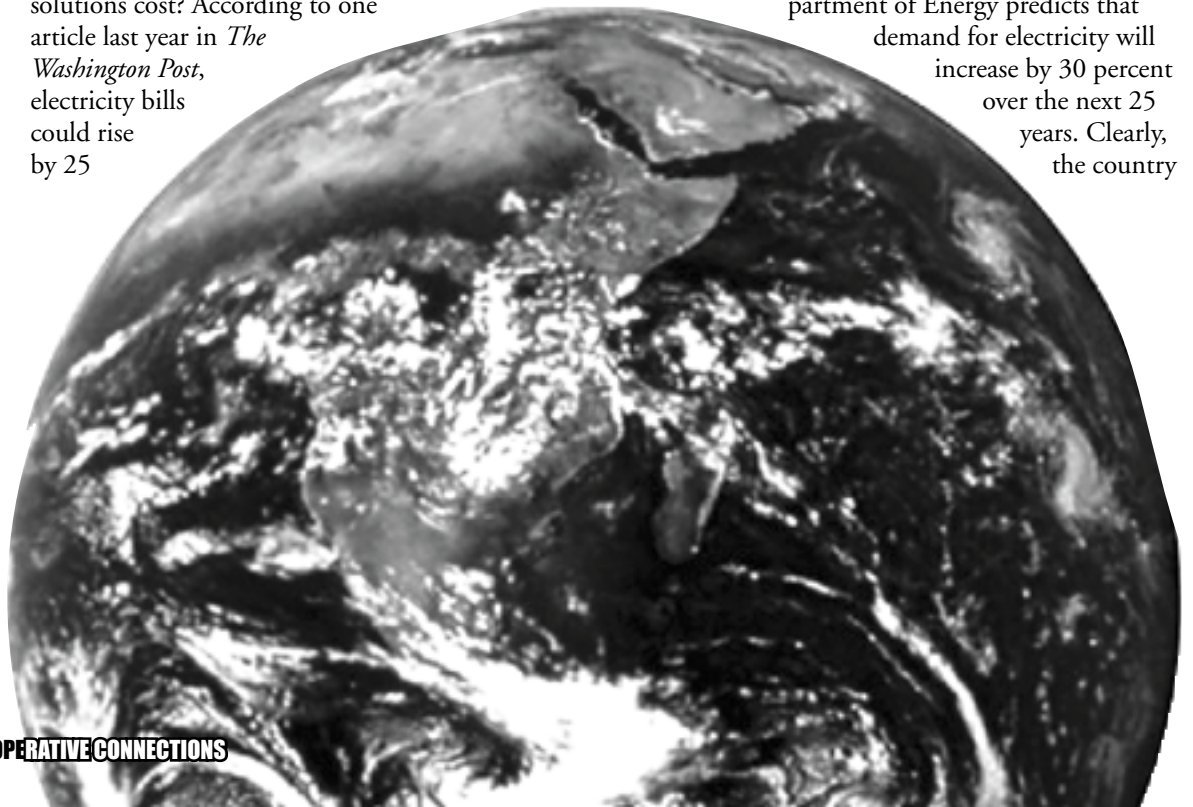
Solutions to curbing greenhouse gases, including carbon dioxide, include energy efficiency, new technologies (such as finding ways to store carbon dioxide emissions produced by coal- and natural gas-fired power plants), nuclear power and renewable energy resources. But what will these solutions cost? According to one article last year in *The Washington Post*, electricity bills could rise by 25

percent to 33 percent just to “stimulate and pay for new technologies.”

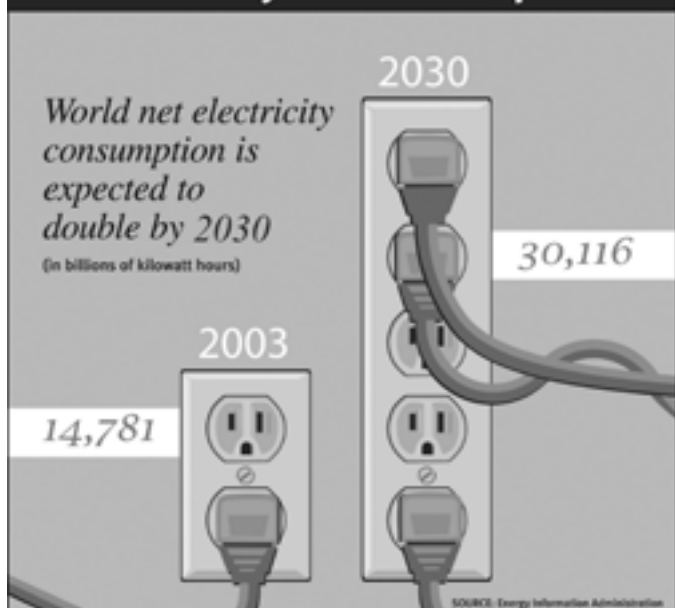
“All of this presents a huge challenge for electric utilities, especially electric cooperatives,” says Glenn English, CEO of the National Rural Electric Cooperative Association (NRECA), the service arm of the nation's 900-plus not-for-profit, consumer-owned electric co-ops. “Electricity demand is increasing because of growth and we need to build more generating plants and transmission lines to meet this growing demand.”

According to the North American Electric Reliability Corporation – which oversees reliability of the bulk power system covering the United States and most of Canada – demand for electricity will increase over the next 10 years by 18 percent, although the electric industry's capacity to generate power will increase by only 8.5 percent.

A longer-term forecast by the U.S. Department of Energy predicts that demand for electricity will increase by 30 percent over the next 25 years. Clearly, the country



Electricity Consumption



could face brownouts and blackouts unless additional power plants are brought into service.

“We have an obligation to keep the lights on and prices affordable at a time when the costs of fuel and raw materials to build new generation are skyrocketing,” states English. “With a shortage of electric capacity, huge increases in demand for power and the cost of climate change, we have the making of a perfect storm.”

Based on calculations by Charles River Associates, a utility analysis firm, climate change proposals currently circulating in Congress, if passed, could result in a 50 percent to 80 percent increase in wholesale power costs by the year 2020. Translate that into retail rates and electricity bills could climb by 25 percent to 40 percent.

“When it comes to climate change, Congress will legislate, the U.S. Environmental Protection Agency will regulate and state and local governments are already moving forward,” says NRECA Vice President of Environmental Issues Kirk Johnson. “With carbon constraints in our future, it’s essential that lawmakers and elected representatives understand the financial repercussions their political actions could cost Americans.”

The New York Times and *The Wall Street Journal* observed this past summer that the issue of cost should be put on the table. If climate change legislation is not handled intelligently and carefully given these accumulating factors, electric bills could double or even triple, based on the best available estimates.

The Electric Power Research Institute (EPRI), a nonprofit utility-sponsored consortium, whose members include electric co-ops, has developed a seven-part plan to reduce carbon dioxide emissions based on technological solutions including energy efficiency, carbon capture and storage, and renewable sources. Although ambitious, the EPRI model would cut carbon dioxide emissions to 1990 levels

(45 percent) by 2030.

Energy efficiency, by reducing the amount of power needed, remains one of the easiest and most cost-effective ways to reduce carbon dioxide emissions. Over the past three decades, electric co-ops have emerged as leaders in helping their members use electricity wisely. However, energy efficiency alone can’t indefinitely postpone the need to build new power plants or solve climate change. EPRI notes that efficiency improvements will reduce electric demand just 9 percent over the next 22 years.

Renewable energy and nuclear power development are greatly impacted by massive global price increases for raw materials like nickel, copper, steel and concrete, all of which raise construction costs for new generating plants. And renewable energy sources, like wind turbines, require transmission lines to move any power generated. At present, the nation’s electric grid is not equipped to do so.

With 50 percent of the nation’s power supply produced by burning coal, research and development of carbon capture and storage technology becomes crucial for keeping coal-fired power plants viable – and the lights on. EPRI asserts, however, that cost-effective carbon capture and storage technology will take years, if not decades, to become commercially available. The best guess – assuming the federal government embarks on a massive \$30 billion research and development program (bigger than putting a man on the moon) – affordable carbon capture and storage technology could hit the market as early as 2020.

Since no single “silver bullet” solution for tackling climate change exists, electric co-ops are working closely with policymakers to seek long-term, practical and affordable remedies to our nation’s energy challenges. Through it all, electric cooperatives remember their commitment to delivering a reliable supply of electricity at a competitive price.

Source: National Rural Electric Cooperative Association, North American Electric Reliability Corporation, Electric Power Research Institute, Department of Energy, Charles River Associates, *The Washington Post*, *The New York Times* and *The Wall Street*

