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The dirty green line

Erecting new transmission lines for solar and wind power is a boon to coal-burning utilities and a drain on our wallets. What's an environmentalist to do?
By Katharine Mieszkowski

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With a boost of billions in the economic stimulus plan, the White House plans to double the nation's supply of renewable energy in the next three years. There's big talk in Congress of creating a national renewable-energy standard, which would mandate that utilities get a chunk of their power from green sources like solar, wind and geothermal. So long dirty energy, hello green future.

Yet as renewable energy finally takes its place as a national priority, a tripwire lurks in the rosy scenario: transmission lines. No less an authority than President Obama is promoting the goal of building thousands of miles of new transmission lines to move power from the Great Plains and Mojave Desert to the nation's energy-hungry cities and 'burbs. And he's got plenty of political might behind him.

The power companies lobbying for new lines compare the notion of a national grid to the Interstate Highway System in the 1950s. Senate Majority Leader Harry Reid has brought legislation to help create what he calls a "electric superhighway." Large environmental groups, such as the Natural Resources Defense Council, the Sierra Club and the Wilderness Society, have joined the wind and solar industries in championing the expansion of the transmission grid.

Not all environmentalists, though, are buzzing about the expansion. To critics, the U.S. is needlessly industrializing the remote American landscape at the expense of local residents. "Renewable energy is this great excuse to build transmission lines all over the place," says Lisa Linowes, executive director of Industrial Wind Action Group. "They want to crisscross the United States. It's enormous. People have no idea what the federal government is contemplating."

Critics point out rural residents don't appreciate having their green acres trampled to send power to populated areas, especially if it means losing their land through eminent domain. Power companies, which stand to profit for decades to come when a new transmission line goes in, are using the pretext of renewable energy to win political favor for new power lines that will mostly carry energy from their coal plants. And the

profitability of lines for power companies means that renewable alternatives closer to homes and businesses may remain unexplored.

The feds are acutely aware of how slow the process of building new transmission lines can be, so the Obama administration is trying to grease the wheels. At the Department of the Interior, Secretary Ken Salazar has created a special task force to speed up the process of permitting public lands for renewable energy projects, and the power lines that go with them. "We have to connect the sun of the deserts and the wind of the plains with the places where people live," he said, announcing that the agency will assign "a high priority" to permitting an environmental review of new transmission rights of way.

In Congress, Reid of Nevada (lots of sun there!) has introduced legislation that would invest more federal dollars in transmission to increase access to renewable sources of energy. Dubbed the Clean Renewable Energy and Economic Development Act, the bill would also attempt to streamline the planning and siting process for new transmission lines, which may cross multiple states. In Department of Energy-designated "renewable energy zones," the feds would step in if regional and state regulators couldn't agree quickly on where to put the lines, siting and financing the lines themselves.

But just because the source of the electricity likely to travel on the line is green doesn't make that process any less heated. Two new power lines that could bring solar, wind and geothermal from rural to more populated urban areas in California have met stiff resistance from residents along the proposed paths, who fear losing their land and seeing sensitive wildlife areas destroyed.

San Diego Gas & Electric's Sunrise Power Link has been approved by the California Public Utilities Commission to travel from near El Centro, Calif., in Imperial County, to San Diego, a distance of over 100 miles. Plans for a line that would bring electricity from Imperial County to Los Angeles, dubbed Green Path North, remain in the early planning stages.

The original route for Sunrise Power Link would have gone smack through a wilderness area in California's largest state park, Anza-Borrego Desert State Park, but advocates succeeded in having the path diverted. Some environmentalists are skeptical the line will even carry renewable energy, as that isn't guaranteed in the permitting contracts with the state.

"It's not a renewable energy project at all. It could just as easily carry dirty coal energy as renewable energy," says Ileene Anderson, a biologist with the Center for Biological

Diversity, which has opposed the new transmission line. "Once the electrons get on the line, it's hard to tell where they came from."

Critics say that rather than having taxpayers or electricity customers fund new transmission lines, sources of renewable energy could be found closer to home. In a recent op-ed, "Home-Grown Power," in the New York Times, Ian Bowles, secretary of energy and environmental affairs for Massachusetts, wrote: "Renewable energy resources are found all over the country; they don't need to be harnessed from just one place." He cited hydroelectricity in the Northwest, offshore wind in the Northeast and potential biomass from forests in the Southeast. "In each area, developing these power sources would be cheaper than piping in clean energy from thousands of miles away." In fact, the further that electricity is transferred, the more of it is lost along the way. "Line loss" already gobbles up 2 to 3 percent of electricity nationally.

The costs of building long transmission lines eventually fall to you and me. "The rate payers fund 100 percent of all this infrastructure one way or the other, through tax dollars or renewable energy surcharges on our energy bills," says Jim Harvey of Joshua Tree, Calif., executive director of the Alliance for Responsible Energy Policy. "You can take this money and invest it in renewable technologies that are actually green. Transmission is a 19th-century technology. Adding more transmission is not going to encourage conservation and reduce our consumption. The solution is point-of-use generation. We need to look at electricity near its point of use."

Proponents of "distributed generation" argue that solar energy need not be harvested in remote Mojave Desert regions and transmitted to big cities like San Diego and Los Angeles, when it can be harvested much closer to home. Some cities are experimenting with fresh approaches to getting more solar on local rooftops. This month, Gainesville, Fla., introduced "feed in tariffs" for home and business owners who install solar panels. Essentially, the city ordered the local utility to pay a guaranteed sweet rate for the next 20 years for all solar-generated electricity, creating a big incentive to install those panels. Berkeley, Calif., has a program to help those who want to go solar but lack the cash; the city will front the cost of installation to homeowners and get paid back through an increase in their property taxes over the next 20 years. Both programs are so popular that the cities aren't accepting any new applicants for now.

Utilities are experimenting with other approaches as well. Southern California Edison is developing a massive 250-megawatt project to put solar panels on 150 commercial buildings, totaling 65 million square feet of solar cells in southern California. Los Angeles Department of Water and Power will put 400 megawatts worth of solar panels on city-owned rooftops, parking lots and reservoirs by 2014. "They're proposing photovoltaic projects on a scale that's as big or bigger than these big solar desert projects," says Bill Powers, a San Diego energy engineer.

Those exceptions aside, building new transmission lines remains profitable for utilities. "Unfortunately, the utilities are adapting renewable energy to a paradigm that's been in place for a century," says Powers. He explains that financing for new transmission lines includes a guaranteed 11 to 12 percent annual profit for the next 40 years for utilities, baked into rate payers' charges. That creates a huge incentive for utilities to contend that large-scale solar and wind projects are a necessity to meet renewable energy goals, and that new lines must be built to get the power from here to there.

Environmentalists fear power companies will use the rush to renewables as an excuse to build many new transmission lines that will be used to carry mostly dirty old coal. The Potomac-Appalachian Transmission Highline, which would run from southwestern West Virginia to central Maryland, is a dramatic case in point.

The line, which is a joint venture of American Electric Power and Allegheny Energy, which both derive the vast majority of their power from coal, would start right near the largest coal-fired power plant in West Virginia. Yet advertisements promoting the new proposed line pitch it as a conduit for wind power, complete with video of windmills spinning in the sky. "I don't think that they can promote it with renewable energy with a straight face given what the facts are," says Elena Saxonhouse, an attorney with the Sierra Club.

Transmission lines don't discriminate on the basis of where the power comes from. "These lines, of course, could carry renewable energy, but that wasn't why they were planned." Bri West, energy analyst for the Piedmont Environmental Council in Virginia, which is fighting PATH, says. "All of the lines we saw proposed for coal three years ago are now being called lines for wind."

Sen. Reid's legislation attempts to prevent power companies from pulling such a bait and switch. It requires that new transmission lines, which get a helping hand from the feds, carry 75 percent or more of renewable energy. But for now, in our predominantly coal-fired nation, such lofty goals may be blowing in the wind.

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