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Can it happen again?

Yes, say officials, if operating standards remain voluntary

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The Journal News

The largest blackout in U.S. history started one year ago tomorrow with simple neglect in the woodlands of Ohio.

FirstEnergy Corp., the electric utility that serves parts of that state, had failed to follow one of the simpler, albeit voluntary, operating standards for the nation's power companies: Keep transmission lines clear of volatile underbrush and tree limbs.

On Aug. 14, 2003, a brush fire beneath one Ohio power line and the scraping of tree limbs near others led to short-circuits that created a ripple effect, ultimately cascading into the massive blackout that affected 50 million people in eight states in the Midwest and Northeast, and eastern Canada.

A US/Canada Power Outage Task Force, appointed by President Bush and Canadian Prime Minister Jean Chretien to investigate the blackout, found that violations of voluntary operating standards developed for the United States, Canada and Mexico were at the heart of the power disruption.

The standards apply to the training of power grid and utility operators, the maintenance of transmission lines and power equipment, and other activities needed for the smooth flow of electricity.

In Canada, the standards are mandatory, enforced by the province governments. "We are working closely with everyone in the States to make sure standards mean the same thing to all partners in the United States and Mexico," said Ghyslain Carron of Natural Resources Canada, that nation's energy agency.

Yet a year after the night the lights went out, the task force study and industry analyses, proposed congressional and Bush administration legislation, and millions of dollars in transmission system upgrades, nothing has changed in the United States

that could prevent another blackout of epic proportions from occurring at any time.

Election-year politics and industry opposition have combined to block efforts to set mandatory, enforceable standards for the nation's electric generators. It is the absence of such standards that the task force cited as the primary cause behind the sequence of events that led to the power outage.

"What everyone learned from Aug. 14, 2003," said Carol Murphy of the New York Independent System Operator, which controls the state's electric grid, "is that it's not enough for you to be operating your system in accordance with the rules and doing a really good job if a guy in another part of the country is not doing what they should be doing in terms of operating their system. The blackout was largely preventable if the people in Ohio had complied with the standards."

As Ralph Cavanagh, energy program director for the Natural Resources Defense Council, noted, people didn't lose electricity because there wasn't enough power at the time. "If you ever needed proof that those rules need to be mandatory then the blackout provided it," Cavanagh said. "Congress' failure to act is stunning. The entire Northeast was blacked out and the primary cause is clearly identified as a violation of the voluntary guidelines. Congress is holding this legislation hostage to a completely unrelated pork-barrel energy agenda."

Despite steps to improve the ability of power operators to monitor the ebb and flow of electricity on the nation's power grids, Murphy said, "there is only so much New York can do to protect its system. If another region outside our control fails to operate properly, it could happen again, and New York could be in the critical path of a tsunami of energy cascading through New York and Canada, just as we were last Aug. 14."

Last year's blackout began with a few minor incidents in Ohio that escaped the notice of both FirstEnergy and the Midwest Independent System Operator, which controls a grid spanning more than 1 million square miles from Manitoba in the north to Kentucky in the south, and from Montana to Pennsylvania.

The problem began with a small fire that erupted near Stuart, in southwestern Ohio, in grasses and brush that should have been cleared away by FirstEnergy maintenance crews. The task force reported that the company had been cutting corners and had reduced maintenance along hundreds of miles of power lines.

Such maintenance can be costly. Orange and Rockland Utilities Inc., serving some 290,000 customers in New York, northern New Jersey and eastern Pennsylvania, spent more than \$100 million during the past five years on tree trimming and brush clearing programs along the 1,300 miles of transmission lines through the 40 communities in its service area, according to company spokesmen. The brush fire in Ohio began just after 2 p.m. beneath a 345,000-volt power line that transmits electricity from southern to northern Ohio. It caused the air around the power lines to ionize and actually conduct electricity, causing the line to short-circuit. The movement from the affected power line began overloading neighboring lines - a fact unnoticed by the utility and grid operators.

Further north, near Harding, Ohio, untrimmed tree limbs swaying in the afternoon breeze were causing problems with three power lines bringing electricity to northern Ohio. The first line had shut down twice that morning for brief periods, incidents that

also went unnoticed, and it shut down for good at 3:41 p.m. By then, the other two lines had ceased carrying electricity.

The Stuart and Harding disruptions caused three power plants in central Ohio to shut down, decreasing the power needed to meet demand. This started a cascade of electric power surges as more and more lines failed and power plants shut down.

By 4:10 p.m., Ohio and Michigan were without power and, the task force report stated, "the power that had been flowing along that path immediately reversed direction and began flowing in a giant loop counterclockwise from Pennsylvania to New York, to Ontario and into Michigan."

That power surge knocked out New York state's six nuclear power plants, including Indian Point in Buchanan, creating a sudden demand for the 5,000 megawatts of electricity those plants produce. That increased demand caused more power lines to overload and shut down.

"We are all part of a larger system," said Murphy of the New York ISO. "And 99 percent of the time that is a good thing because we have the ability to import and export power to where it is needed. That's why it's important that we all follow the rules."

The task force reported FirstEnergy violated six of the standards regarding transmission line maintenance and the proper monitoring of the ebb and flow of electricity. It recommended that, "first and foremost, compliance with reliability rules must be made mandatory with substantial penalties for non-compliance."

That has not happened. The Bush administration supports a long-standing drive by the electric utility industry to give the Federal Energy Regulatory Commission the authority to enforce the standards by penalizing violators. The proposal also calls for financial incentives to induce companies to invest billions of dollars in improving the nation's transmission infrastructure, and to let FERC overrule local and state agencies when it comes to siting transmission power lines.

Yet the proposal remains part of an omnibus energy bill, which has been bogged down for the past 18 months over plans for oil drilling in the Arctic National Wildlife Refuge and other environmentally sensitive regions. New York's two Democratic senators, Charles Schumer and Hillary Rodham Clinton, have introduced stand-alone legislation addressing only the issue of mandatory standards, but they were rejected by the Senate's Republican majority and opposed by the industry.

"The problem with the stand-alone legislation is that they only address the operating standards while the energy bill has two other important items," said Bill Brier, vice president of the Edison Electric Institute, which represents about 75 percent of the electric utility industry. "They don't contain all three of the elements we think are important to make energy delivery more reliable."

"Companies cut corners on the standards," Clinton said, "because they know they face no penalties if they do not comply. We have tough standards in New York, but last year's blackout proved the state cannot protect itself, and we can be brought down by what happens outside our jurisdiction."

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