

The Energy Overseer

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Black Holes in Blackout Coverage

by Arthur J. O'Donnell

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Within hours of the August 14th blackout that affected tens of millions of people in the United States and Canada, news reports offered half a dozen explanations of the cause—all of them incorrect and incomplete.

- The problem started in Ontario, Canada, according to New York City's deputy commissioner of emergency services Frank McCarton (Cable News Network).
- Canada's cabinet minister for emergency services John MacCullum countered that the cause was an event at a Pennsylvania nuclear plant (Canadian Broadcasting Corporation).
- New York Mayor Michael Bloomberg and Canadian Prime Minister Jean Chrétien each pointed to a lightning strike at a New York utility facility, although Bloomberg cited Niagara Mohawk (Dow Jones Newswires), while Chrétien implicated Con Edison before retracting his statement (New York Times).
- Initial investigations pointed to a failure on the high-voltage network between Canada and the United States (Reuters). Other reports cited the possible triggering event as a fire at the Perry nuclear station near Cleveland, or a transmission failure in Michigan (New York Times News Service).
- One commentator argued it was the result of the failure of Congress to approve oil drilling in the Arctic National Wildlife Refuge (Sean Hannity, Fox News).

Stepping back from identifying a specific root cause, other reporters nonetheless ascribed the event to underlying problems, including a lack of investment in transmission infrastructure and "a chaotic combination of regulated and deregulated markets" (Wall Street Journal). Without apparently noticing his own contradiction, a syndicated columnist blamed poor infrastructure on "faith-based deregulation." Transmission owners have failed to modernize the grid, he alleged; "because regulation limits their profits, they had little financial incentive to invest in maintaining and upgrading the system" (Paul Krugman, NY Times Service).

Not until officials of the North American Electric Reliability Council (NERC) held a news conference on Saturday, August 16, did the focus of media speculation turn on two Ohio utilities.

FirstEnergy and American Electric Power (AEP) were the earliest to report localized transmission line outages and generation failures. And because FirstEnergy's troubles started more than one hour before the massive blackout cascaded through surrounding regions, that utility still bears the brunt of accusation. Based on news reports of its involvement, investors pummeled its stock price, class-action attorneys immediately filed a string of shareholder derivative law suits, and one aspiring presidential candidate, Representative Dennis Kucinich (D-Ohio), demanded that state regulators rescind FirstEnergy's operating licenses for system negligence and other alleged crimes against electrical reliability.

The backlash against FirstEnergy was swift and damning—without much real evidence and despite indications that voltage stability problems were happening in the region well before its initial line outages. One Chicago Tribune business reporter openly worried about "turning FirstEnergy into the Richard Jewell of the blackout" as she sought expert opinions to bolster or refute the allegations against the harried utility.

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Even now, after Congressional hearings have uncovered a host of circumstances that contributed to the Great Blackout—computer failures, poor communication among utility staff, system operators and others, and even the fact that many of the power plant shutdowns were the purposeful result of automated programs designed to prevent permanent damage—the search for a scapegoat continues.

Terrorism was almost immediately dismissed as a factor in the blackout, but suspicions about the effects of deregulation linger in many media reports.

Critics who blame deregulation of the utility industry for the blackout—and the reporters trying to pursue that angle on the story—fail to recognize that transmission services have not been deregulated, so that in and of itself could not be the reason for the mess. True, several of the jurisdictions affected by blackouts had opened utility services to retail competition, but so have Pennsylvania and New Jersey, which were largely spared from the outages.

There is no evidence at all that energy-flow patterns necessitated by wholesale market transactions played any role whatsoever in the blackout.

While the root causes of the blackout remain under investigation, the black hole of blackout coverage can be ascribed to the lack of training among reporters and the general public about power systems and utility practices. If the first line of “experts” relied upon to tell the story involves politicians, the result will be political rhetoric and finger pointing. If the diagnosis of the problem is incorrect, the solutions being offered will be inadequate.

Newspapers, magazines and broadcast outlets generally did an excellent job of reporting on the effects of the blackout on people and businesses in New York, Cleveland, Detroit and Toronto. For the first time in months, the war in Iraq was all but pushed off the front pages of newspapers in those cities.

Standout coverage on the day following the event could be found in the New York Times, which devoted nine full pages to documenting the impacts of the outages on New Yorkers. However, the Times wasted nearly half a page on a pointless diagram illustrating “How Electricity is Delivered to Your Home,” when it would have been more appropriate to run a diagram of the chain of command for system reliability.

The Washington Post earns kudos for its “Blackout” section on its Internet site, featuring good graphics, story updates from numerous sources and links to documents when Congress finally held its hearings. The Wall Street Journal clearly had the best handle on describing how the utility system has been stressed by competition and aged infrastructure while pointing out underlying deficiencies in reliability protocols that contributed to the failure.

News magazines, Time, Newsweek and Macleans, the Canadian publication, suffered from deadline timing, with their cover stories dated August 25. They all had up-to-date information from legitimate sources and striking photos. Only Macleans paid much attention to the lingering Canadian outages and effects on 10 million other North Americans.

The single worst story line had to be the San Francisco Chronicle’s “Governor Sheds Light on Blackout,” in which Gray Davis took credit for California being unaffected by the Eastern blackout—as if there were a direct physical connection running between the two regions or a reality connection between the cascading collapse and type of rotating outages that plagued California during its energy crisis.

Overall, the dearth of understanding among most reporters about the physics of electricity delivery conspired with the entrenched politics of energy regulation to add confusion to a difficult, evolving story.

Timelines and maps of the path of cascading outages that appeared in many publications help explain how events unfolded. Still missing is a definitive sense of why some systems worked as designed while others did not.

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The most likely explanation will be that a unique series of events, human misjudgments, and underlying system deficiencies combined to bring about the worst power outage in the nation's history.

In account after account, the most frequently used quote was former Secretary of Energy (now New Mexico governor) Bill Richardson's claim that America is a "major superpower with a third-world electrical grid."

That statement is not at all accurate, but it's far more catchy than an explanation of how systems are supposed to work and why they sometimes don't. We are trying to operate a 21st century economy with an electrical transmission system that was designed and built for the needs of the mid-20th century. Simply building new transmission lines and power plants will not solve the underlying disconnect.

In the decades since this transmission system was configured, we have introduced many new technologies on both sides of the electrical meter. We have completely changed how we use electricity in our homes and businesses. Distributed resources are more available now than ever before to reduce the need for long-distance electricity transport. Energy efficiency is a valid hedge against the times when heavy power consumption strains the system.

Deregulation did not change the transmission system overnight; those changes have been occurring for decades. But it's clear that the entire system needs to be reimagined to alleviate the mismatch between how the grid was designed and how it is currently used.

Few, if any, of the reports in the mainstream media have brought any light to that aspect of the blackout story.

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