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Reader's Forum: Are we facing a future of national insecurity?

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IMAGINE AS President-elect Barack Obama was sworn in, major blackouts occurred across the northeast and western United States. Cell phone service was disrupted across the continent. Airline flights were delayed or canceled. City hospitals, police, fire departments and even water supplies were affected by these lapses in electrical and telecommunications services.

A terrorist assault? Not at all. It is a scenario quite possible given the increasing vulnerability of our critical infrastructures, even under their normal operation. We already saw a glimpse of that with the recent power outages in the East Coast before the holidays.

More than 85 percent of the nation's infrastructures are privately owned and many face the demands of an increasingly competitive marketplace. Yet the managers and operators of these infrastructures, the reliability professionals, are being asked to do more with less.

New policies, technologies and software are implemented to optimize efficiency and performance, but improvements seldom work as expected. California's electrical grid offers a glimpse into one precarious infrastructure.

We've been in the control room of the California Independent System Operator during some of its highest demand days: the October 2007 San Diego fires, the firestorms of 2008 and peak summer days. We've seen what happened when a vital transmission line or generator suddenly went offline, or a new piece of software failed, putting service and the grid itself in harm's way.

At no time did the men and women in the control room panic. Instead they acted with great skill, dedication as well as creativity to keep their critical systems operating. But we also have seen them driven to the limits of their skills and to near exhaustion by failures in policy, hardware and software systems imposed upon them by designers and external "experts" who have never set foot in a control room.

To safeguard our national security, we must rethink the reliability of our infrastructures. The answers do not lie in implementing smarter technology, opening more markets, or even spending more money.

In truth, it takes people. We must recognize and support, not replace, the skills and hard-won experiences of our infrastructure's managers and operators. We need to restrain the hubris of policy makers who intervene in our infrastructures without being accountable for their mistakes.

Many technical and policy fixes are as threatening to infrastructure reliability as the real terrorist assaults we must guard against.

Policy makers have failed to anticipate increases in electrical load in California and the failure of wholesale markets to provide needed generation. They also failed to anticipate the market power exercised by large energy companies such as Enron to dramatically increase the price of power in real-time or "spot" markets.

Indeed, it is difficult to imagine a more concerted, costly assault on the grid than that experienced in the first few years under restructuring. Yet in the subsequent turmoil surrounding the California electricity crisis, middle-level managers and control room operators kept the electric grid operating. The real story of California's electricity crisis is that the lights stayed on, and they stayed on through many close calls because of the dedication, cooperation and virtuosity among managers and operators in the midst of this perfect electrical storm.

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