HOW DO WE MINIMIZE FUTURE BLACKOUTS?

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CALDWELL ENERGY COMPANY

The recent blackout in the northeastern United States and Canada should be a wake-up call for the power industry and regulators. The blackout covered over 9,000 square miles and affected over 50 million people. The problems that led to such a massive system failure are under investigation and fingers are pointing in several directions. Is there anything we can do short term to help the situation?

The power industry has been in the midst of deregulation for several years, and the days of the protected territory for the public utilities has ended. Enter competition. Now the most efficient producer of electricity was going to sell the power to the consumers. Accordingly, the nation saw a most incredible surge of new power plants being designed and built. Most of the power plants were utilizing combustion turbines, run with natural gas to turn the generators to generate the power, and they were transmitting the power into the existing transmission infrastructure "grid". It is during this time that we saw many companies grow enormously, only to be deflated when the boom in the power industry collapsed in 2001.

Can It Happen Again?

There are endless opinions on what needs to happen to prevent this type of catastrophe in the future. To simplify, there are two major components to getting electricity to the consumer: generation and transmission. The generation piece of the puzzle has gone through significant change over the past few years, with new power plants being developed and brought on-line in very short order. The transmission system has a much slower construction process considering nobody wants additional power lines near their homes or neighborhoods. The transmission grid has over 150,000 miles of wire and is very complex. The older transmission systems have been further taxed by deregulation, as consumers demand power from far away places.

How Can We Get More Power Without Further Taxing The Transmission Systems?

You can make an immediate impact and reduction of load on the transmission grid if companies were not required to utilize these complex avenues to send electricity to the consumer. If "local" plants were optimized to generate more power, in an equal or more efficient manner, this would undoubtedly relieve some of the congestion and burden on the grid. Why not do this?

Currently, for a power generator to install equipment to make a plant more efficient, it must go through a similar permitting process as building a new power plant. In order to make a component of your plant more efficient, the entire plant sometimes comes under scrutiny. Many times this precludes generators from upgrading their equipment to the best available technology in the marketplace.

Caldwell Energy—a turnkey provider of turbine inlet cooling, heating, thermal energy systems, stacks, and deionized water tanks for the power and process air industries, Louisville, K.Y.—is currently working with a customer to install a power augmentation system that makes the power generation plant more efficient and produces more electricity. However, prior to obtaining a permit for such a system, the customer must review 4,000 compliance points regarding environmental permitting. All this for equipment that makes the plant more efficient and has less of a global environmental impact? If the regulations for plant upgrades were relieved to allow companies to make decisions that make plant components more efficient, with less environmental impact, this could greatly reduce the load on the strained grid system.

The quickest way to make an impact on the current power generation and transmission system is to allow generators the flexibility to optimize the current assets they have, without the burdensome red tape in order to do so.