



Digital Power

By PETER M. CURTIS

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Managing in Uncertain and Volatile Times

The rules have changed

We can barely see over the horizon as the revolutionary changes unfold in the global financial, energy, and technology industries. Key strategic industries are becoming more intertwined and interdependent on one another everyday, while we struggle to identify the new risks and rules in designing and operating today's critical infrastructures.

Managing and operating critical infrastructures in today's environment is quite different than just a few short years ago. New paradigms include scalability, container systems, floating data centers, cloud computing, virtualization, escalating power densities, and clean/secure energy. Infrastructures embodying these concepts demand financial resources to build and employ. These represent quite a transformation for the conservative critical-data infrastructure industry, which until very recently was averse to operating out of the box. To date, the critical infrastructure industry has only considered proven, mature technologies.

If we were to look in the mirror, we would see ourselves redefining and transitioning ourselves, reacting and adapting to volatility, and accommodating fast-paced market changes that our global financial, technology and energy sectors are experiencing. All of this change is occurring during the most fragile and tumultuous economic time periods that I can remember.

Who could have predicted that in early 2008 that market price for a barrel of oil would reach \$144 and fall to less than \$40 after another six months? The same can be said about the Dow Jones Industrial Average, which reached 12,000 in June only to fall to 7,500 by mid-November. This has made strategic planning and business modeling for future projects far more challenging, to say the least.

How do we incorporate best design and operation practices into an industry that is experiencing vast technology

changes, while simultaneously adapting to uncertainty in the global economy and an antiquated energy delivery system, both required to be supported by the technology that drives our ever-growing digital society?

Two things we know: 1) the rules have changed and 2) expect and be prepared for the unexpected. Going forward this philosophy needs to be part of our decision-making equation. We also know energy and financial market volatility significantly affects how we invest our capital dollars

and calculate a dynamic ROI in building new and renovating existing critical infrastructures. These moving financial, energy, and technological targets appear rapidly on our decision making radar for every major capital improvement project investment.

During transition periods, instituting a strong enterprise-level best practices model becomes even more imperative to sustaining stringent reliability levels required for 24/7 environments. As design practices change, the goal of 100 percent reliability and availability for equipment and software remain the same.

What has changed is the way we assess new ideas and consider all practical options. The important thing to remember is to assure that all projects have a tangible benefit, with a realistic investment grade financial model before you expend those capital dollars.

As we settle into the dawn of a new era, the decisions we make today will affect our future and we must think about the basket where we will put our precious investments. It's not just money we are investing; it's also the time, and the time we lose by not making the right decisions. If only we were able to see over the horizon, or were fortunate enough to have a satellite's view. ■

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