

Comments to the FERC ERO Technical Conference
By Terry Boston, Executive Vice President,
Power System Operations
Tennessee Valley Authority
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- Thank you Joe. I'm Terry Boston, E.V.P., Power System Operations with TVA. I want to thank the Commission and staff for hosting this series of conferences on issues of such vital importance to our industry, our nation and our continent.
- TVA's primary relationship with the North American Electric Reliability Council is through the regional council in the Southeast . . . SERC.
- We are a dues-paying, card-carrying member of the Southeast Electric Reliability Council . . . and we are extremely active in NERC/SERC standing committees, work groups and nationwide compliance audits—and I have to admit that we have learned as much from our sitting in on audits of others as we have from our own audits.
- We fully expect to have a similar level of engagement with the new ERO and we believe

NERC should be selected as the nation's electric reliability organization.

- TVA is a nonprofit Federal corporation . . .
- TVA is funded entirely by ratepayer dollars and we have a federal statutory obligation to our customers to make reliable power available to them at the lowest feasible cost.
- Last year, our customer outage time averaged 3.34 minutes per year across our entire system . . . the lowest in our history.
- For the past six consecutive years, we have provided power to our customers that translates to 99.999 percent reliable.
- With the growth of robotics and sensitive electronics in manufacturing, five 9's of reliability is what we consider the threshold necessary to support a digital economy.
- In our last NERC/FERC compliance audit we were recognized for creating a "culture of reliability" . . . which I consider a badge of honor for our Operators and Planners.

- We strongly supported SERC as it adopted one of the first compliance programs in the nation that featured enforcement backed by financial penalties.
- SERC has been mercifully spared the widespread outages that have plagued other regions . . . beginning with the Northeast blackout of 1965 that ultimately led to the creation of NERC and SERC.
- August 1976, South Florida plunged into darkness due to grass fires under EHV lines.
- New York City was again blacked out in 1977 when lightning struck two high voltage lines . . . and this time there was chaos in the streets.
- In response to blackouts... investment in Transmission...inflation adjusted... grew to an all time high in the mid 70's and we had almost two decades of good performance---measured by the lack of cascading outage
- Going forward to Sept. '92---E-PACT '92 was a textbook example of the law of unintended consequences.

- Its authors never dreamed it would lead to over-reliance on a single fuel . . . natural gas . . . for new generation.
- Nor did they imagine that electrically sound planning principles . . . which dictate that transmission and generator planning must occur in lock-step and closely integrated. . . would be abandoned in the rush to site new generators near gas pipelines and well heads.
- Nor did they envision that investment in new transmission would dry up because few would commit to firm transmission service that required lines to be built.
- What followed was one of the toughest periods in the industry's history pushing the grid to edge of its reliability limits.
- In 1996, a massive 14-state blackout occurred on the Western Interconnection when a line sagged into a tree.
- Within six weeks . . . and before the ink was dry on the official report to the President saying we know the root cause and won't happen again . . . it did.

- We're all familiar with the well-publicized rotating blackouts in California and the great Midwest/Northeast blackout of August 14, 2003.
- But there have also been lesser known disturbances, such as the widespread cascading interruption in the upper Midwest in 1998.
- And since mid August, 2005, we have seen 5 major frequency excursions on the Eastern Interconnection caused by missing interchange schedules by 2,000 to 3,000 MW.
- I believe that one reason the Southeast has not had large-scale cascading blackouts is because SERC members are close-knit in both operations and planning, sharing data, and collectively invest more than \$1 billion per year in new transmission.

- We strongly believe in the reliability model that has existed since the inception of NERC and the regional reliability councils . . . a model which has been tested and refined for decades.
- Reliability . . . when you work for it . . . it works.
- Despite the recent challenges electricity providers have faced, the philosophy and methodology that underpin the industry's approach to reliability have been extremely effective and should not be jettisoned outright for untested approaches.
- Today, there is cause for optimism. As David Mohre (NRECA) said, Congress got this right. . . . but there are also new risks.
- As we move to a new ERO and regional reliability entities, TVA believes that changes should be incremental and measured.
- To paraphrase Einstein . . . solutions should be as simple as possible . . . but no simpler.

- We agree with SERC that we should build upon the existing structure that encourages participation by those who use, own and operate the grid.
- TVA is committed to the accurate and timely filing of all assessment information and data.
- We take any recommendations from NERC and SERC very seriously and . . . when they apply to TVA . . . we track them to completion and report our progress.
- We believe strongly in the ANSI process currently in use to establish minimum reliability standards.
- We also support the INPO-type model for transmission self-improvement that has driven excellence in the nuclear industry.
- The major challenges we see in implementing the new ERO is keeping our eye on the prize . . . a strong and reliable power grid . . . and not discarding basic structures that have built the kind or reliability that is fueling our digital economy.
- Dramatic change . . . for the sake of change . . . risks contributing to the very problems the ERO is being created to prevent . . . much as energy policy

in the 1990s and subsequent regulatory uncertainty led to the lowest investment in transmission (as a percentage of revenue) since the Great Depression.

- EPRI estimated that the societal cost of power failures . . . including power quality problems . . . grew from \$25 billion in 1996 to \$119 billion by 2001.
- According to Joe Eto's 2004 DOE report, power interruptions annually cost the U.S. economy \$80 billion . . . not counting power quality issues, thus confirming EPRI's estimates.
- It is vitally important that we get this right . . . to protect our economy . . . to serve our customers . . . and to safely integrate power markets as they evolve.
- But we must recognize that without reliability, we shut down our economy . . . without reliability, we jeopardize our customers' livelihood and sometimes even their lives . . . and without reliability, there can be no markets . . . electricity or otherwise.

- At the end of the day, Ohm's Law and Kirchoff's Law has and can preempt Keynesian Economic Theory.
- After a decade of experimentation -- we must get it right . . . for the people we serve. We are committed to work with the Commission to Get It Right.
- Thank you for inviting me.

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