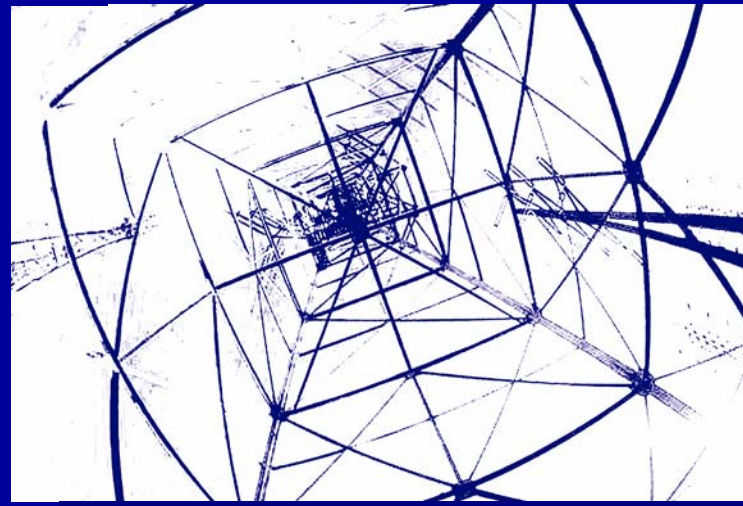




The National Regulatory Research Institute

State Electric Reliability Rules and Standards



Results of 2004 Survey on Electric Reliability and Service Quality

**A Report to the NARUC Staff
Subcommittee on Electric Reliability**

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Nov. 15, 2004

Background and aegis of survey

- ◆ Bob Burns, Senior Institute Attorney, conducted the survey at the request of the NARUC Staff Subcommittee on Reliability
- ◆ Updates 2001 survey – one question was changed
- ◆ Survey was conducted between April and October 2004
- ◆ Forty-one states responded, one more than three years ago
- ◆ Survey is web-based

A lot has happened since the last survey

- ◆ IEEE 1366 Trial Use Guide became IEEE 1366-2001 Standard Guide
- ◆ A major blackout crippled the Northeastern United States and Canada Aug. 14, 2003
 - Joint U.S.-Canadian task force report
 - NERC report
- ◆ Hurricanes caused widespread outages in 2003 (and in 2004)

Areas covered by the survey

- ◆ Formal standards
- ◆ Use of IEEE guidelines
- ◆ Benchmarks for standards
- ◆ Tree trimming
- ◆ Outage reporting
- ◆ Power quality
- ◆ Service quality as a component of incentive ratemaking

Commissions that participated in the 2004 electric reliability survey

- ◆ Alabama
- ◆ Alaska
- ◆ Arkansas
- ◆ Colorado
- ◆ Connecticut
- ◆ Delaware
- ◆ District of Columbia
- ◆ Florida
- ◆ Georgia
- ◆ Idaho
- ◆ Illinois
- ◆ Indiana
- ◆ Iowa
- ◆ Kansas
- ◆ Louisiana
- ◆ Maine
- ◆ Massachusetts
- ◆ Minnesota
- ◆ Mississippi
- ◆ Missouri
- ◆ Montana
- ◆ Nebraska
- ◆ New Jersey
- ◆ New Mexico
- ◆ New York
- ◆ North Carolina
- ◆ North Dakota
- ◆ Ohio
- ◆ Oklahoma
- ◆ Oregon
- ◆ Pennsylvania
- ◆ Rhode Island
- ◆ South Carolina
- ◆ South Dakota
- ◆ Tennessee
- ◆ Texas
- ◆ Virginia
- ◆ Washington
- ◆ West Virginia
- ◆ Wisconsin

Comparison of participants in 2001 and 2004

- ◆ 40 states participated in 2001 and 41 in 2004
 - No response '04: AZ, CA, HI, KY, MD, MI, NH, NV, VT, WY
 - If information was the same for 2001, a state which did not respond in 2001 could fill in the information in 2004
- ◆ Only states that participated in neither year are CA, NH and WY

Some states that reported new proceedings

- ◆ Oklahoma: rulemaking in 2004
- ◆ Delaware: interim standards through 2005
- ◆ Maryland: information supplied in the survey is based on working group conclusions; no order issued at time of the survey
- ◆ Virginia: requires reporting indices both inclusive and exclusive of impact of storms

Formal standards on reliability and service quality

- ◆ Reporting and monitoring: 24 states
- ◆ Performance standards: 21
- ◆ Penalties and/or rewards for meeting the standards: 15
- ◆ None of the above: 14

IEE P1366 trial use guide for electric power distribution indices

- ◆ Customer average interruption duration index (CAIDI): 21 states
- ◆ Customer average interruption frequency index (CAIFI): 2
- ◆ System average interruption duration index (SAIDI): 25
- ◆ System average interruption frequency index (SAIFI): 30
- ◆ Momentary average interruption frequency index (MAIFI):

IEEE 1366-2001 standard guide for power distribution reliability

- ◆ Yes: 16 states
- ◆ No: 24 states

Benchmarks for standards

- ◆ Nineteen states reported they have not set benchmarks for reliability standards:
AL, AR, CT, GA, HI ('01), IN, IA, KS,
MD, MT, NE, NV ('01), NC, SC, SD, TN,
UT, WV, WI
- ◆ Most benchmarks are utility-specific:
AK, CO, DE, FL, LA, ME, MN, MS, NY,
ND, OH, OK, OR, PA, RI, TX, VT, WA, DC

Benchmarks, cont.

- ◆ Illinois and New Mexico reported uniform, statewide benchmarks
- ◆ Kansas said so far there is insufficient conforming data to establish meaningful standards
- ◆ Iowa has no benchmarks now, but the Board plans to gather five years of data and then review standards
- ◆ Typically, states using benchmarks rely on a historical average

Specific requirements for tree trimming

- ◆ Most states said they do not have specific requirements or cited adoption of National Electric Safety Code
- ◆ Iowa
 - Utilities required to have a vegetation management plan but not specific schedule or trimming methods
 - Board inspectors review adequacy of the plans in field inspections
- ◆ Oklahoma: Plan must be integrated part of reliability program

Outage reporting required

- ◆ Outage cause: 25 states
- ◆ Number of customers affected: 23
- ◆ Outage duration: 26
- ◆ Critical facilities or customers affected:
13
- ◆ Media coverage of outage: 3
- ◆ Other: 10

Power quality: ANSI C84.1-1977 for steady state voltage

◆ Yes: 13

◆ No: 24

Service quality incentives

- ◆ Seven states said “yes,” they do account for service quality in performance-based or incentive ratemaking mechanisms, with no change from 2001: CO, ME, MA, MS, NY, ND, and OR
- ◆ Two states that said “no” in 2001 said “yes” in 2004: IA and MN

Service quality added to incentives

◆ Maine

- Specific service quality indices set based on historical performance
- Penalties not yet directly refunded to electricity customers

◆ Minnesota

- Rules do not spell out the details
- Could be company earnings docked in rate case, fines, or customer refunds

◆ Iowa

- Case by case, with everything from managerial efficiency reward to mandated requirements on investments

How to find the survey results

- ◆ Commissioners and staff, go to the members' center of the NRRI website www.nrri.ohio-state.edu
- ◆ Click on the summary information or state by state information
- ◆ Select the year from which you want to see data (2001 or 2004)
- ◆ Click on the state you want and hit "submit"
- ◆ Enjoy

Next steps

- ◆ Summarize results of the survey on state electric reliability programs
- ◆ New project: the value of electric reliability from the customer's point of view
 - We would like to proceed with an Internet survey
 - The methodology would be the same as our Consumer Utility Benchmark Survey (CUBS)
 - We will work with the Staff Subcommittee on Reliability to see if this project is desirable and feasible

Summary

- ◆ More state activity
- ◆ More use of performance standards
- ◆ More states, though still a minority, with penalties and/or rewards for meeting standards