

**ADDRESSING THE YEAR 2000 PROBLEM FOR PUBLIC UTILITIES:
STATE ACTIONS AND OPTIONS FOR COMMISSIONS**

by

David W. Wirick
Associate Director

Wendy Windle
Systems Manager

The National Regulatory Research Institute
The Ohio State University
1080 Carmack Road
Columbus, Ohio 43210-1002
Phone: 614/292-9404
Fax: 614/292-7196
Website: www.nrri.ohio-state.edu

April 1998

This project was prepared by the National Regulatory Research Institute (NRRI) with funding provided by participating member commissions of the National Association of Regulatory Utility Commissioners (NARUC). The views and opinions expressed herein do not necessarily state or reflect the views, opinions, or policies of the NRRI, the NARUC, or NARUC member commissions. To comment on this or any other NRRI reports, contact the NRRI website listed above.

Introduction

Though much has been said about “the Year 2000 Problem,” caused by the use of only two digits to designate the year in computer programs, it is difficult to develop an accurate assessment of the dimensions of the problem and the likelihood of its general resolution. Without a doubt, however, the problem is serious. Unfortunately, action to resolve the Year 2000 Problem has been slower in coming than might have been hoped for. At this writing according to a recent survey by the Information Technology Association, 45 percent of U.S. companies surveyed have yet to start fixing the problem.¹ And according to a December 1997 survey by a professor of computer science at Hunter College (New York), two out of three large companies do not have detailed plans in place to address the problem.²

To complicate matters, the problem has become more extensive and more difficult to solve as we have learned more about it, particularly in the case of electric utilities. Initially it seemed that the largest danger to utility service delivery systems was lodged in software programs that accomplish much of the utilities’ business transactions, such as billing, inventory, and financial management. Now it appears that an even greater danger may result from “embedded systems.” According to the respected Electric Power Research Institute (EPRI):

Embedded systems - the microprocessors and chips that keep our modern society running - have not received as much attention. Logic and computation errors by date-sensitive embedded systems could have an incredible range of impacts - from compromised power quality to the complete failure of power generation and delivery systems, breakdowns in industrial equipment and processes, and unprecedented losses in customer services.³

¹ Steven Baker, “Exterminating the Millennium Bug,” *Business Week*, March 30, 1998, 72.

² Howard Rubin, as cited by Michael J. Mandel et al., “Zap! How the Year 2000 Bug Will Hurt the Economy,” *Business Week*, March 2, 1998, 93-94.

³ The Electric Power Research Institute, “The Power of the Chip,” EPRI Website, <http://www.epriweb.com/year2000/power.html>, 1998.

According to the manager of the EPRI Year 2000 program, it is too early to assess the complete extent of the problem, and whether or not electricity flow will be affected is unknown.⁴

Some now doubt that the overall Year 2000 Problem can be fully solved before the failure of major computer systems that significantly impact the public. In Britain, the former head of the task force charged with resolving the problem has stated that a satisfactory outcome is now impossible. He further indicated that the public would likely hold government responsible and, in the British system, could possibly "bring down a government."⁵

State Commission Actions to Date (March 1998)

Fortunately, some state public utility commissions have begun to address the Year 2000 Problem. The National Regulatory Research Institute (NRRI) surveyed state public utility commission executive directors and members of the NARUC Staff Subcommittee on Computers to ascertain the extent of state actions related to the Year 2000 Problem as it affects utilities, not as it affects the commissions themselves. Nine states reported that they have taken some action.⁶ Those actions include the following:

Arkansas Public Service Commission: The Arkansas PSC has sent an interrogatory to 105 utility companies. The interrogatory asks utilities about Year 2000 planning, actions to be taken to make hardware and software fully compliant, actions to be taken to identify and test embedded chips within the infrastructure, problems identified, and resources necessary to remedy the Year 2000 Problem.

⁴ Charlie Siebenthal, as cited in Mandel et al., "Zap! How the Year 2000 Bug Will Hurt the Economy," 94.

⁵ Remarks of Robin Guenier, as cited by Robert Uhlig in "Millennium Bug Cannot Be Stopped," *London Daily Telegraph*, March 27, 1998, 6.

⁶ Of course, other states may have taken action but either did not respond to the survey or were not included in "listserves" used to transmit the survey.

Florida Public Service Commission: The Florida PSC has been active in determining the extent of the problem and identifying the actions taken by Florida utilities to remedy the problem. In a survey of 25 investor-owned electric, gas, and communication utilities, Commission staff determined that 16 had developed a written Year 2000 plan, 14 had created a Year 2000 team, 18 had completed an internal risk assessment, eleven had performed an external assessment of the vulnerability of their company's systems and applications to external organizations, 12 stated that they would have testing and implementation completed by year-end 1998, and only one company's test date extended into 1999. The PSC issued a report detailing the problem and specific utility actions to date.⁷ They will continue to monitor and provide periodic reports of Y2K progress to the Commissioners.

Idaho Public Utilities Commission: The Idaho PUC sent out an inquiry at the end of 1997 to 33 utilities serving Idaho. The utilities were asked to report on their assessment of the "year 2000" problem and their plans to mitigate any adverse effects on the utility system. To date about half the utilities, including all the major utilities, have responded. Their reported actions vary greatly from one utility to another.

Maine Public Utilities Commission: The Maine PUC recently requested information from utilities and is waiting for responses. After the responses are received, the Commission will determine if a more formal approach is necessary. The Commission has met with its largest electric utility and was told that all information services systems would be compliant by the end of 1998.

Missouri Public Service Commission: The Missouri PSC sent letters to all 837 regulated utilities to which they received 81 responses. The Commission will be following up on those that did not respond.

New Hampshire Public Utilities Commission: The New Hampshire PUC began an informal investigation last summer by sending a letter to all jurisdictional utilities highlighting the issue and asking them to notify staff of plans to deal with potential problems. Within the past month, it has been suggested that a docket be opened to formalize the process and update the status of utility plans.

North Dakota Public Service Commission: The North Dakota PSC is in the process of drafting a letter to utilities concerning Year 2000 Problems. The Commission has also included links on its website to other sites providing more specific information on the Year 2000 Problem.

⁷ Jacqueline B. Edwards and Lisa S. Harvey, *Review of Year 2000 Preparations for Florida Electric, Gas, and Communications Utilities*, Florida Public Service Commission, August 1997.

Oklahoma Corporation Commission: Oklahoma has asked all utilities in their jurisdiction to examine and report back their actions to address the problem. The commission has a program in place to be in full compliance by January 1999.

Oregon Public Utility Commission: The Oregon PUC staff is in communication with Year 2000 project managers in electric and gas utilities and will continue to monitor progress. The staff is not monitoring each telecommunications utility's progress.

Washington Utilities and Transportation Commission: The WUTC held a meeting of facilities-based telecommunications and energy companies to assess their Year 2000 readiness. They used an informal, roundtable format with an assessment instrument developed by their Department of Information Services. WUTC staff are developing recommendations for further actions.

Other Potential Commission Actions

As state public utility commissions learn more about the extent of the Year 2000 Problem, they may wish to consider other options for ensuring the protection of the public interest. Those options might include:

1. Ensuring that utility efforts address the safety and reliability of the service delivery system as a first priority, ahead of billing and other systems.
2. Encouraging utilities to participate in industry-wide efforts to mitigate Year 2000 problems. For example, EPRI has established a Year 2000 Embedded Systems Project. As of late March, only about 60 electric utilities had joined that project.⁸

⁸ Electric Power Research Institute, "EPRI Year 2000 Embedded Systems Project Participants," as reported on the EPRI website, <http://www.eprweb.com/year2000/members.html>, March 1998.

3. Making use of alternative dispute resolution (ADR) and consensus-building models. Those processes hold more promise than traditional adjudicatory processes of establishing collaborative efforts with utilities that may lead to effective solutions. Processes that might be useful include workshops, technical conferences, joint commission-utility task forces, consumers' and scientific advisory committees, and scientific or "blue ribbon" panels.⁹
4. Making use of the resources of commission consumer education staff. The public is rapidly becoming aware of the potential impact of the Year 2000 Problem and will become concerned if it becomes more likely that Year 2000 Problems will result in service disruptions. Effective public education will be critical to avoiding unnecessary concern.
5. Requiring utilities to develop contingency plans in the event of service disruption. While every effort should be expended to prevent service disruptions, utilities must have plans for response to unforeseen or unpreventable disruptions.

While it may be impossible at present to accurately assess the extent of Year 2000 Problems or forecast the likelihood of their resolution, the public interest might be well-served if commissions assumed some role in ensuring that the public is protected to the greatest extent possible. Though the Year 2000 problem might be effectively resolved by utilities, the high stakes involved and the potential, however small, for public harm may demand commission participation in mitigation and resolution.

⁹ See Robert E. Burns, Esq., *Administrative Procedures for Proactive Regulation* (Columbus, OH: National Regulatory Research Institute, 1988).