

PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Resolution M-4792  
November 19, 1998

**RESOLUTION**

REQUIRES UTILITIES TO PROVIDE INFORMATION TO THE COMMISSION REGARDING THEIR EFFORTS TO ACHIEVE READINESS WITH RESPECT TO THE YEAR 2000 PROBLEM, TO CERTIFY THAT THEY ARE READY BY NOVEMBER 1, 1999, AND TO DEVELOP CONTINGENCY PLANS TO ADDRESS YEAR 2000 PROBLEMS WHICH MAY NONETHELESS RESULT. REQUIRES CERTAIN UTILITIES TO PARTICIPATE IN INDUSTRY-WIDE YEAR 2000 EFFORTS AND TO PROVIDE INFORMATION SUBMITTED TO INDUSTRY GROUPS AND/OR TO THE SECURITIES AND EXCHANGE COMMISSION.

**BACKGROUND**

The California Public Utilities Commission ("CPUC" or "Commission") has regulatory authority over certain essential telecommunications, energy, water, and transportation services throughout California. Most of these essential services are interrelated. Disruption, even for a few hours, of one or more of these services can significantly and adversely affect many people, communities - or even the entire state - as well as daily commerce in California.

California, along with every other state, is facing the possibility of such disruptions unless providers of these essential services adequately address what has become known as the Year 2000 ("Y2K") issue. Many date-sensitive software programs, computers and embedded controls, processing and control systems are based on having date codes that accept only two digits as a year indicator (i.e. mm/dd/yy). The two-digit date convention assumes that the century is "19." Thus, 98 equals 1998 and 99 equals 1999. Thus, 00 may indicate to most computers the year 1900. When the calendar reaches January 1, 2000, these systems may produce nonsensical results, or shut down because they will read the date as 1900 rather than 2000. Many essential processes in providing public utility services are automated and based on microprocessor and microcomputer controls

and are programmed with dates for a variety of purposes. The Y2K problem, if not properly addressed, may affect the financial control, customer and shipper service, billing, and load forecasting systems, as well as the ability of the utilities to provide utility services, which could have serious health and safety implications. Illustrations of the potential magnitude of the Y2K problem may be found in each regulated industry. For instance: a five minute telephone call placed just before midnight on December 31, 1999, may be billed as a fifty-two million-minute call, lasting from 1900 to 1999 because of software inabilities to distinguish between the year 1900 and the year 2000.

Dates other than January 1, 2000, may also cause problems for unremediated computer systems. For instance, leap year calculations are complicated by the fact that the rules for leap year calculations suggest that a year is a leap year if it is divisible by four, but if it is divisible by 100 it is not a leap year. However, the year 2000 is a special case leap year which occurs only once every 400 years. Software programs and embedded systems must recognize this fact. Also, in order to write more efficient code, which allowed for the use of less memory, many date fields were used to provide special functionality. The most common date used for this was 9/9/99. This code was used in some applications to indicate "save this data item forever" or "remove this date item automatically after 30 days." The specific meaning for this code varies by organization and software application. The solution for 9/9/99 obviously cannot wait until the year 2000. Data entries which refer to September 9, 1999 will invoke this problem.

## **DISCUSSION**

There are less than 450 days remaining until the year 2000. Numerous reports, including one study just released by the United States Senate Special Committee on the Year 2000 and another undertaken by the National Regulatory Research Institute, show utility companies lagging behind in their preparedness for the change in millennia. California has taken a leadership position on the Y2K issue, exemplified by Executive Order W-163-97 issued in October 1997. The Commission has coordinated its efforts with the state Department of Information Technology, which is managing a statewide effort ensure that essential services in all industries are maintained. While the Commission has already taken a number of steps to evaluate the readiness of California utilities with respect to the Y2K problem, as the immovable deadline approaches, the Commission has determined that the focus must change from technical compliance to actual business readiness. Pursuant to our authority under, e.g. Public Utilities Code § 451, 761, and 762, the Commission must seek to ensure that the utility industries remain ready to serve California ratepayers into the next century.

Letters were sent earlier this year to CPUC-regulated utilities and companies requesting confirmation of their Y2K plan, preparation, and timetable for readiness. Response has generally been very good. For instance, some of the larger utilities have advised the Commission that they have commenced implementing solutions to this problem by creating dedicated program offices which have carried out analysis of systems requiring remediation and have begun to install new equipment and software. We are informed that California's municipal and public utilities, under the direction of their respective managing boards, are similarly addressing this issue.

While the Commission views the Year 2000 issue as a managerial problem and its solution as a managerial decision, the Commission is concerned about the adequacy and reasonableness of such solutions, and wants to ensure that solutions are implemented not only by the largest utilities but by all of the entities under our jurisdiction. Thus the Commission is taking action today to formally require responses from each utility with respect to potential Y2K problems.

We understand that under generally accepted industry standards, to be considered Year 2000 compliant, a device or system must:

- Handle date information before, during and after January 1, 2000, including but not limited to accepting date input, providing date output, and performing calculations on dates or portions of dates;
- Function accurately and without interruption before, during and after January 1, 2000 without any change in operations associated with the advent of the new century;
- Respond to two-digit year input in a way that resolves the ambiguity as to century in a disclosed, defined and predetermined manner;
- Store and provide output of date information in ways that are unambiguous as to century; and
- Accurately determine and process 2000 as a leap year.

This definition can be applied to all systems and components where dates are gathered or manipulated; hardware, software, embedded systems, facilities infrastructure; to any suppliers of goods, commodities, or services; and to any business partners.

We further understand that under generally accepted industry standards, a device or system is considered to be Year 2000 ready where, after study and analysis, it is

determined to be suitable for continued use into the year 2000 even though it is not fully compliant. For instance, a company may find that after analyzing a critical system, the only problem found is a report that will show 1900 as the report date, when the actual year will be 2000. Suppose the estimate to repair this problem is approximately 4 staff months. If the report is only used internally, the decision may be made to let the error occur and make all recipients aware of the problem. Since this scenario violates one of the requirements of year 2000 compliancy, but is deemed suitable for use into 2000, the system is classified as year 2000 ready.

Utilities should use the definitions of "Year 2000 compliant" and "Year 2000 ready" set forth above in providing their responses to the attached checklist and survey.

While every effort should be expended to prevent service disruptions, utilities must have plans for response to unforeseen or unpreventable disruptions, minor or major. As awareness of the scope of potential Y2K problems increases, it would be unrealistic to assume that all Y2K problems will be resolved. Utility service providers must begin to raise questions of "what if" and to prepare for those potential outcomes. Disaster preparedness is one component, but other contingency plans can contribute to the protection of the public welfare. For example, the Federal Reserve recently announced that it would increase the amount of cash available in the economy near the end of 1999 in case people began to withdraw cash from banks in fear of being unable to withdraw funds from ATM machines. It marks the first time in history that the Fed has planned for a nationwide demand for extra cash. If Y2K problems are extensive, the Fed has also announced its capability to put additional cash into the system by ordering extra shifts at its regional banks, print larger denominations of currency, and slow the retirement of worn currency. The need for specific utility contingency plans will become more apparent after utilities complete the assessment and testing phases of their implementation plans. Some contingency planning can begin now. For example, electric utilities should consider contingency planning for fuel supply fairly early.

The Commission is committed to providing the public with information regarding the Y2K readiness of California utilities. To that end, the Commission has begun to publish information pertaining to Y2K readiness on its web site, [www.cpuc.ca.gov](http://www.cpuc.ca.gov). Additional material will be published on the web-site in the weeks and months to come. In addition, consumers may contact the Commission staff by telephone or in writing for such information.

## **FINDINGS OF FACT**

1. The Y2K issue, if not properly addressed, has the potential to cause serious disruptions in essential utility services to California ratepayers, which may affect the public health, safety, and welfare.
2. Commission oversight can enhance the utility response to the Y2K issue and public confidence in that response.
3. To be considered Year 2000 compliant, a device or system must:
  - Handle date information before, during and after January 1, 2000, including but not limited to accepting date input, providing date output, and performing calculations on dates or portions of dates;
  - Function accurately and without interruption before, during and after January 1, 2000 without any change in operations associated with the advent of the new century'
  - Respond to two-digit year input in a way that resolves the ambiguity as to century in a disclosed, defined and predetermined manner;
  - Store and provide output of date information in ways that are unambiguous as to century; and
  - Accurately determine and process 2000 as a leap year.
4. A device or system is considered to be Year 2000 ready where, after study and analysis, it is determined to be suitable for continued use into the year 2000 even though it is not fully compliant. For instance, a company may find that after analyzing a critical system, the only problem found is a report that will show 1900 as the report date, when the actual year will be 2000. Suppose the estimate to repair this problem is approximately 4 staff months. If the report is only used internally, the decision may be made to let the error occur and make all recipients aware of the problem. Since this scenario violates one of the requirements of year 2000 compliancy, but is deemed suitable for use into 2000, the system is classified as year 2000 ready.
5. There is a reasonable probability that some level of Y2K problems will occur even with the best of utility and Commission efforts to address the Y2K issue. Thus, utilities should prepare contingency plans to address Y2K problems which may develop.

## **CONCLUSIONS OF LAW**

1. The Commission should exercise its jurisdiction to require utilities to respond to the Year 2000 problem, report on their progress to the Commission, certify to the Commission no later than November 1, 1999, that all essential service delivery systems under their control are Y2K compliant or Y2K ready, and develop and report to the Commission contingency plans to address Y2K problems which may nonetheless ensue.
2. Prompt enforcement action should be taken against utilities which fail to respond to the attached checklist and survey and otherwise comply with the Commission's orders with respect to Y2K issues.

## **ORDER**

1. All investor-owned utilities subject to the Commission's jurisdiction shall comply with each of the following. For the purpose of these ordering paragraphs "utility" is defined to include rail transit agencies and heavy commuter rail operations. Vessel Common Carriers and Passenger Stage Corporations are excluded. The Executive Director shall advise California's municipal and public utilities of the Commission's efforts in this regard by transmitting a copy of this Resolution to them.
2. Each utility shall prioritize its Y2K efforts to address safety and reliability of service delivery systems ahead of billing and other administrative systems.
3. Each utility shall respond to the checklist and survey attached hereto as Exhibit 1 not later than December 15, 1998. Failure to respond in a timely manner may result in the imposition of fines or other penalties.
4. Each utility shall provide the Commission with quarterly updates of its responses to the checklist and survey. Quarterly updates shall be due on March 15, 1999, September 15, 1999, December 15, 1999, and March 15, 2000. The Commission may require subsequent additional updates.
5. Each telephone and energy utility shall participate in regional and industry-based Y2K efforts. For example, electric utilities shall participate in NRC, NERC and WSCC efforts, and the EPRI Year 2000 Embedded Systems Project. Not later than December 15, 1998, each telephone and energy utility shall: (a) advise the Commission of existing regional and industry Y2K efforts, and advise the Commission of which such effort(s) the utility is participating in; and (b) provide copies to the Commission of any responses submitted to regional or industry-based Y2K efforts. Future submissions to

such efforts shall be provided to the Commission contemporaneously with submission to the regional or industry-based Y2K effort.

6. Each utility which is required by the Securities and Exchange Commission ("SEC") to report to the SEC on Y2K issues shall provide copies to the Commission of all such information it has provided to the SEC not later than December 15, 1998, and shall provide any and all additional such information to the Commission contemporaneously with submission to the SEC.
7. Each utility shall certify to the Commission not later than November 1, 1999, that all of its essential service delivery systems are Y2K compliant or Y2K ready. The certification should provide that all new systems, software and equipment purchased or implemented thereafter will be compliant as well.
8. Each utility shall develop contingency plans to address Y2K problems which may ensue, and report such contingency plans to the Commission not later than July 1, 1999. A utility may report updated contingency plans to the Commission when the utility provides the certification required by Ordering Paragraph No. 7.

I certify that this Resolution was adopted by the Public Utilities Commission at its regular meeting of November 19, 1998, the following Commissioners approved it:

/s/ WESLEY M. FRANKLIN

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WESLEY M. FRANKLIN  
Executive Director

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