

# BEFORE THE WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

In the Matter of the Commission Staff  
Investigation into PUBLIC SERVICE  
COMPANY Analysis of "Year 2000"  
Computer Issues

Docket No. U-9718535

## QUARTERLY REPORT OF PUGET SOUND ENERGY, INC. For the Quarter Ended March 31, 1999

Pursuant to the Commission order dated June 5, 1998, Puget Sound Energy is submitting its fourth quarterly report to the Commission on the status of its Year 2000 efforts. This report provides a quarterly progress update on the Year 2000 Project. It discusses major project areas, current project schedule, and major quarterly accomplishments. It also includes a statistical survey form submitted to NERC and a survey form in the AGA gas format.

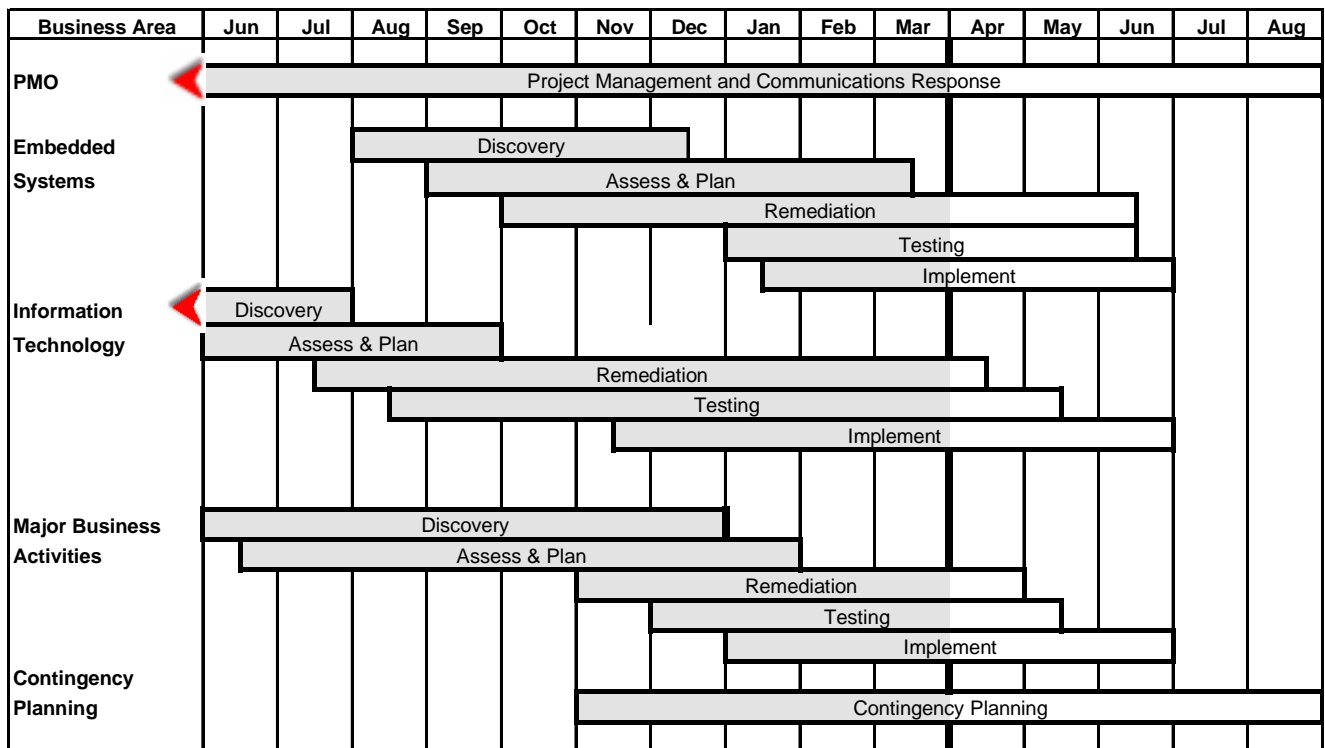
Information contained in this document is a "Year 2000 Readiness Disclosure" in conformance with the Year 2000 Information and Readiness Act of 1998 (Public Law 205-271, 112 Stat. 2386) enacted on October 19, 1998.

### MAJOR PROJECT AREAS

The following describes the major project areas:

- **Project Management Office:** The Project Management Office (PMO) acts as the corporate focal point for all Year 2000 activities. The PMO is responsible for coordinating planning, monitoring and reporting all aspects of the Y2K project. In addition, the PMO produces and disseminates project methodology throughout the Company. The PMO supports the corporate communications program in providing necessary information to customers and regulatory agencies.
- **Embedded Systems:** A cross-functional project has been established that deals with embedded computer chips in operational areas. This project includes generation, transmission, electric/gas distribution, telecommunications and EMS/SCADA systems.
- **Contingency Planning:** This project is responsible for development of scenario and contingency planning. The project will continue to develop recovery and contingency plans for certain Y2K disruption conditions.
- **Information Technology:** The Information Technology project includes business applications, networks and desktop software that must be analyzed and remediated.
- **Business Units:** Workgroups have been formed for various business units to deal with Y2K issues and activities that related to their areas. The business units are managed and tracked by separate master plans.

## CURRENT PROJECT SCHEDULE



Mar 31

## MAJOR QUARTERLY ACCOMPLISHMENTS

- Project Management Office (PMO):** The PMO continued to provide overall direction and management to the Year 2000 Program at Puget Sound Energy. The following activities were managed by the PMO:
  - Project Monitoring:** The PMO monitored project progress in all areas of the company through frequent status meetings and reviews of testing results.
  - The Vendor/Supplier Notification Process:** The PMO has contacted over 99% of the inventoried vendors and suppliers. This activity is expected to continue through April, 1999.
  - The Communications Plan:** Project stakeholders continued to execute the Y2K communications plan previously developed. Communication activities included the submission of status reports to regulatory agencies (WUTC, NERC). Corporate Communications updated specific materials to respond to customer inquiries on Year 2000 issues, including an extensive booklet for our customers and municipalities. Regular status presentations were given to executive management.
  - A bill insert in response to the WUTC's business customer notification requirement** was provided to Puget Sound Energy customers in their January-February bills.

- **Embedded Systems:** Progress has continued on schedule for the Embedded Systems effort at Puget Sound Energy. Puget Sound Energy continued to utilize the TAVA/R.W. Beck engineering database to assess embedded systems components. Additionally, the following milestones were met:
  - As of March 31, Puget Sound Energy has completed both the discovery and assessment phases for the significant components of embedded systems. With these phases complete, we determined that less than two percent of the embedded systems within the company were not Y2K compliant. While none of these would have caused severe service disruptions, we did find items requiring remediation.
  - To complete the Y2K readiness process, we physically surveyed 1,526 different locations within the company for embedded systems issues. The information gathered from more than 25,000 items was then entered into a TAVA/Beck component database, enabling the company to assess each embedded component to determine its Y2K compliance. Through this careful and comprehensive process, we identified 523 unique components containing embedded systems that required assessment from TAVA/Beck. Of those, we determined that less than 2 percent would require remediation.
  - The planning, remediation, testing, and implementation phases are currently in progress or complete for all items found, and we are on schedule to complete all but a few minor projects by June 30, 1999 (those remaining Y2K issues will be remediated, if necessary, during scheduled maintenance in the summer).
  - In addition to remediation, our embedded systems team is also involved with testing components and systems. They are using a variety of testing methods, including field tests, lab tests, component tests, vendor tests and integrated systems testing.
  - Following are highlights of the company's progress with embedded systems remediation, testing and implementation:
    - Electric Transmission, and Gas and Electric Distribution - The assessment phase revealed that most equipment used within our transmission and distribution systems is Y2K compliant. Minor changes, such as a few natural gas commercial meter changeouts and some modem replacements, will be complete by the end of May. Currently, the company is double-checking a few devices on the electric systems to further ensure compliance. Following are examples of equipment that we inventoried and assessed on the T&D systems:
      - ◇ Special metering functions that provide revenue metering and substation power demand, and enable system monitoring and control of the natural gas and electric systems
      - ◇ Equipment that controls the pressure and flow of natural gas
      - ◇ Electronic regulator controls, which raise or lower voltage levels
      - ◇ Power circuit breakers, which enable the system to automatically isolate outages that may occur on a line or in a substation
      - ◇ System protection devices on the electric system

- Generation - During the assessment phase, we determined that most of the equipment within our generating plants is Y2K compliant, with the exception of a few electronic recording devices, a fire protection system, a flow monitoring system, and the alarm system at two hydroelectric plants. We've completed remediation, testing and implementation on all but two of our 11 generation sites. The remaining sites – the White River hydro plant and the Fredonia Combustion Turbine – will be complete by May 1.
- Telecommunications: - The assessment phase, which included all communications equipment such as microwave systems, fiber optic systems, mobile radio systems, leased telephone lines, telemetering, transfer trip and remote terminal units, is complete. Remediation and testing for all mission critical systems is well underway. These include:
  - ◇ Ericsson Radio: Remediation of 900 megahertz radio system, which is used by Puget Sound Energy's gas operations. Installation, testing and implementation will be complete in June.
  - ◇ Racal Transmission Resource Management "Cloud" Rollback: In case of a communication circuit outage, the "cloud" automatically reroutes critical PSE voice and data over alternate communications paths, which allows critical PSE business functions to continue uninterrupted. Remediation to this important communications system involves using a common process of resetting the software back 28 years. With this measure, all days of the week from 28 years ago will align with the days of the week in the Year 2000. This approach is commonly used whenever the year is not important to an overall function. We have tested a 28-year rollback extensively, and are now ready to install the new software in time for implementation in mid April.
  - ◇ Remote Terminal Units (RTUs): We are in the process of upgrading 52 RTUs, which transmit operations data and instructions from transmission/distribution devices to and from a central system. Remediation, testing and implementation completion by late May.
- Energy Control Systems (Energy Management Systems/Distribution Management System/Supervisory Control and Data Acquisition):
  - ◇ EMS: Remediation, testing and implementation (including module/software/hardware/firmware changeouts) began in early November and will be finished by the end of May. This work will enable Puget Sound Energy to begin end-to-end testing where appropriate, which will cover EMS, telecommunications, remote terminal units, substation equipment and generation equipment as a complete whole.
  - ◇ DMS: In late June, remediation and implementation will be complete on this system, which enables operation of our electric distribution system.
  - ◇ Natural Gas SCADA: Remediation on this system used to monitor the distribution of natural gas began in January and will be finished in April. Our efforts have included changing applications, firmware and software.

- **Energy Supplier Verification:** Written contact has been made with our major upstream providers (BPA, Chelan PUD, Douglas County PUD, Grant County PUD, PacifiCorp and Montana Power), and Northwest Pipeline Company, the interstate pipeline that transports natural gas supplies to Puget Sound Energy. Meetings are being scheduled with these suppliers in order to receive status reports on their Y2K efforts. Also, because Puget Sound Energy uses Bonneville Power Administration lines for the majority of our high-voltage transmission of power, we are requesting BPA to provide information regarding their Y2K transmission readiness efforts.
- **Contingency Planning:** Puget Sound Energy has adopted a contingency planning approach based on guidelines provided by NERC. A contingency planning project team, comprised of representatives from all major operating divisions, is in the process of developing the company's Y2K contingency plan. A final contingency plan will be sent to WUTC and NERC by June 30, 1999.

The contingency planning process is based on six steps:

- **Identify Y2K operating risks:** Identify sources of risk, both internal and external, that may impact the capability to sustain reliable operations up to and beyond the year 2000 transition.
- **Perform scenario analysis:** Analyze potential Y2K operating scenarios that represent probable and credible worst case situations. The analysis includes probabilistic judgements of likely occurrences, and defines periods of vulnerability for each scenario.
- **Develop risk management strategies:** Develop strategies to mitigate the consequences for each risk scenario. Risk management strategies define the use of staff resources, additional equipment, backup systems, special operating procedures, training and drills.
- **Document general preparations:** Prepare documentation that defines appropriate operating procedures, training requirements and drills, installation and testing of backup capabilities.
- **Perform power system operations planning:** Perform system studies based on scenarios to determine appropriate reserve requirements, commitment of generation and transmission facilities, special system operating limitations and operating strategies.
- **Implement Y2K system operating plan:** The Y2K system operating plan will be implemented in the final months, weeks and days leading up to the Y2K transition period. This step consists of the commitment, scheduling and management of resources according to the operations plan. This step includes monitoring system conditions and responding according to the contingency response plans.

- **Information Technology:** The Information Technology project is proceeding on schedule with the remediation of various IT business applications.
  - Many of the major computer systems used by Puget Sound Energy have been replaced as a part of the merger between Puget Power and Washington Natural Gas. For example, the financial systems were replaced in September 1998.
  - Puget Sound Energy's customer information system is expected to be Y2K-ready in the third quarter of 1999.
  - The Y2K project for our core network systems is complete. Personal computers are expected to be complete by the end of April.
- **Business Units:** All business units have completed the discovery and assessment phases for significant systems. Upgrades or replacements are in progress, with 50% complete and 40% in process.

## **OVERALL PROJECT STATUS**

The project remains on schedule and plans to complete all remediation activities by the end of June 1999, with exceptions as noted.

## **ADDITIONAL REPORTING INFORMATION**

Starting this quarter Puget Sound Energy is providing the commission with our current monthly North American Electrical Reliability Council (NERC) survey for electrical energy and the American Gas Association (AGA) survey format for gas.