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March 23, 1999

Florida Public Service Commission
Bureau of Records
2540 Shumard Oak Boulevard
Tallahassee, FL 32399-0850

Re: Undocketed - Review of Regulated Utilities' Year 2000 Preparations and Readiness
(Electric and Gas)

Attached please find Seminole Electric Cooperative's responses to your questions issued 3/5/99 regarding the Year 2000 Readiness Workshop. We will be prepared to discuss these topics at the 3/29/99 workshop.

Sincerely,

William C. Cross, Ph.D.

William C. Cross, Ph.D.
Director of Information Systems

- ACK _____
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Attachment

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FPSC-RECORDS/REPORTING

2/Melinda Butler



Year 2000 Readiness Workshop

Questions for all Electric Utilities and Natural Gas Utilities

March 29, 1999

from

Seminole Electric Cooperative, Inc.

1. Has your utility bifurcated its Year 2000 remediation efforts between "mission critical" and "important" systems?

Seminole Electric has bifurcated our Year 2000 remediation efforts between "mission critical" and "important" systems.

2. If your utility has bifurcated its remediation efforts, what functions (e.g., safety, generation, customer billing, accounting, payroll) make up the "mission critical" category? What functions make up the "important" category? Please describe how you distinguish between "mission critical" and "important" systems.

Functions considered "mission" critical include:

- a. **All transmission and distribution (T&D) equipment and facilities**
- b. **All mainframe computer systems**
- c. **All personal computer and Novell networked systems**
- d. **Any system that would create a safety hazard if it failed**
- e. **Any system that causes a generation outage or a plant de-rate**
- f. **SCADA and control**

Functions considered "important" are those systems and equipment whose failure would not cause a de-rate, outage, or safety concern.

3. Has your utility prioritized its "mission critical" systems? If so, please provide the priority listing.

"Mission critical" systems were addressed in parallel including:

- a. **Power generation**
- b. **Transmission & Distribution**
- c. **SCADA & control**
- d. **Mainframe based systems**
- e. **PC and Novell network based systems**

Power generation systems were prioritized as follows:

- a. **Boiler, including all controls such as fans, burner management, feedwater controls, and condensate systems**
- b. **Turbine/Generator**
- c. **Coal Handling**
- d. **Flue Gas Desulfurization/Limestone**
- e. **Continuous Emissions Monitoring**

This prioritization was only for internal project management purposes as all mission critical systems have the same target for remediation (May 31, 1999)

4. What method are you using to test your mainframe computers? Please describe this method.

All business systems have been upgraded to the latest vendor certified Y2K compliant release. The upgraded systems are then tested for compliance with a series of dates first by the Information Systems, then by the user organizations. When user acceptance is received, and the testing is approved, the system is put into production.

Testing is done using a combination of logical partitioning (LPAR) and Hourglass 2000 software to modify system dates. Operating system software has been vendor certified as compliant and tested using both LPAR and standalone Initial Program Load (IPL).

The Leeds and Northrup 5800 computer system at our power plant in Palatka is being upgraded for Year 2000 compliance by an outside contractor, Precision Systems, Inc. Testing will be a part of this upgrade to assure compliance before acceptance. The upgrade is scheduled for completion before May 31, 1999.

Seminole's Energy Management System(EMS), which includes SCADA, was tested using a simulation of Y2K operation prior to delivery in 1985. The system has been re-tested by simulating operation in 2000 with no mission critical problems evidenced. Portions of this system are being replaced due to age, with Y2K compliance demonstration required prior to acceptance.

5. What systems do you have running on mainframe computers?

Purchasing & Materials

Plant Maintenance Planning

Billing

General Ledger

Accounts Payable

Payroll & Human Resources

Fixed Assets

Budgets

Financial Reporting

Load Forecasting

Fuels Management

Plant data acquisition

Plant alarms

6. What "mission critical" systems are not run on mainframe computers?

Plant equipment controls and safety controls for:

- a. **Turbine/generator**
- b. **Boiler**
- c. **Coal handling**

T & D devices

- a. **Relays**
- b. **Data acquisition**
- c. **Monitoring**
- d. **Meters**

Production modeling

Load Flow

Remote Meter Reading - MV90

7. What systems have you found that contain date-sensitive embedded chips?

- a. **GEM 1 meters - chips replaced**
- b. **AST 486 personal computers - replaced**
- c. **Compaq 486 personal computers - upgraded**

No devices at the power plant have been found to have non-compliant embedded date-sensitive chips. No other T & D items have been found to have embedded date-sensitive chips.

8. Are embedded chips being tested both as a stand-alone device and as part of an integrated system? If not, why?

All items containing non-compliant, embedded, date-sensitive chips have been replaced or upgraded with compliant equipment.

9. Are all "mission critical" related mainframe computers, PC computers, and embedded chips being tested notwithstanding any vendor's or manufacturer's claim that the device is Year 2000 compliant? If not, why?

All mainframe computers and PC computers have been tested notwithstanding any vendor's or manufacturer's claim that the device is Year 2000 compliant.

All plant items that have a date and time function of any kind are being tested. These items are being tested at the chip level. T & D devices listed as compliant by the manufacturer are being spot tested at the device level. We also engaged an independent contractor, TAVA/Beck, to assist with our inventory and add third party verification to our assessment. Despite their certification, and the manufacturer's and/or vendor's compliance statement, we are testing each device with date and time function.

10. Are you conducting sampling tests instead of testing all of your systems? If you are conducting sampling tests, please describe the methodology you are using and explain how and why you selected this methodology.

The sampling tests being done at Seminole are in the Transmission and Distribution arena. The majority of our devices are analog and do not carry a date and time function. The remaining devices are all of similar make and model which allows us to test a sample of each type to confirm the manufacturer's claim of compliance. No anomalies have been identified through this process.

11. What precautions are you taking to ensure that "mission critical" communications links are not interrupted? Will these precautions be detailed in your contingency plan?

Alternate systems are in place, including switched circuits (a second independent carrier is being added), leased dedicated circuits, cellular phones, and radios. Satellite telephones are being acquired as an additional backup. In addition, these precautions include procedures for manual retrieval of critical power system data using voice relays, which will be tested in Seminole's April 9th drill.

12. What dates, in addition to the millennium rollover, are being tested? Why?

Dates used in testing are:

April 8-9, 1999	99th day of 1999
September 9, 1999	all nines (9-9-99)
December 31, 1999	millennium rollover
January 1, 2000	millennium rollover
February 29, 2000	Leap Year
March 1, 2000	Leap Year rollover
April 1, 2000	Vendor recommendation
May 1, 2000	Vendor recommendation
December 31, 2000	first year end
January 1, 2001	first annual rollover
January 1, 2010	first two digit year

13. Has your utility conducted or scheduled any contingency drills? If so, please indicate the purpose of each drill.

We are scheduled to actively participate in the NERC and FRCC coordinated drills on April 9, 1999 and September 8-9, 1999. Coincident with these drills, Seminole will conduct cooperative-specific contingency drills.

The initial drill on April 9, 1999 focuses on the ability of bulk power systems to maintain critical voice and data exchange during a partial loss of primary voice and data communications systems. Drill scenarios are being prepared on interconnection wide, regional, and utility bases, that assume the partial loss of voice and data communications. Loss of data communications is assumed to partially affect EMS/SCADA functionality.

The September 8-9, 1999 drill is intended as full dress rehearsal of the millennium rollover where bulk power systems can test and assess contingency plans with sufficient time to modify the plans before they are truly needed.

14. What "mission critical" systems and locations will be manned during the millennium rollover? Will these assignments be detailed in your contingency plan?

All mission critical areas will be staffed by qualified personnel equipped with radio communications (ex. boiler feed pumps, coal feeder decks, condensate pumps, energy management center, mainframe computer facility, etc.) Wherever feasible, manual controls will be installed to allow for manual operation if electronic controls should fail. All critical substations will be staffed by qualified personnel, who would be able to re-establish transmission links if it becomes necessary. An overall Y2K site coordinator will be assigned to help assure a smooth transition. These assignments will be detailed in our Y2K contingency plans. Vacations for

key personnel have been eliminated during the millennium rollover period.

15. What is your company's internal deadline for testing and remediating the following:

- (1) mainframe computers?
- (2) PC computers?
- (3) embedded chips on a system integration basis?

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|-----|---|----------------|
| (1) | mainframe computers | 3/31/99 |
| (2) | PC computers | 3/31/99 |
| (3) | embedded chips on a system integration basis | 5/31/99 |

16. What tests are you conducting to ensure that "non-mission critical" operations, which may not be Year 2000 compliant, will not inadvertently affect "mission critical" operations?

All mainframe and personal computer devices have been tested and remediated. We have checked and re-checked drawings, instruction manuals, schematics, etc. to ensure that all devices that have any date or time functions have been fully tested. It is very unlikely that a non-time sensitive device will have a Y2K impact on a mission critical system.