

FLORIDA PUBLIC SERVICE COMMISSION

Fletcher Building
101 Gaines Street
Tallahassee, Florida 32399-0850

MEMORANDUM

February 8, 1990

TO: DIRECTOR OF RECORDS AND REPORTING

FROM: DIVISION OF ELECTRIC & GAS (TRAPP, WALSH) *qw RLT*
DIVISION OF APPEALS (SMITH) *DES*

RE: DOCKET NO. 900071-EG - FINAL REPORT, COLD WEATHER CAPACITY SHORTFALL
EMERGENCY, DECEMBER 23-25, 1989

AGENDA: FEBRUARY 20, 1990 - PROPOSED AGENCY ACTION - CONTROVERSIAL AGENDA

PANEL: FULL COMMISSION

CRITICAL DATES: NONE

ISSUE AND RECOMMENDATION SUMMARY

ISSUE 1: Should the Commission adopt the report entitled Peninsular Florida Cold Weather Capacity Shortfall Emergency, December 23-25, 1989 and the recommendations contained therein?

RECOMMENDATION: Yes.

ISSUE 2: Should the Commission issue a PAA order requiring Florida's electric utilities to prepare a specific cold weather emergency plan for the State of Florida?

RECOMMENDATION: Yes. The Commission should issue a PAA order requiring Florida's electric utilities to prepare a specific cold weather emergency plan for the State of Florida. The development of these plans should be

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coordinated by the Florida Electric Power Coordinating Group (FCG) in concert with the Public Service Commission, the Governor's Energy Office, and the Department of Community Affairs/Division of Emergency Management. The final Statewide plan should be codified through Commission rulemaking and included in the State of Florida Peace Time Emergency Plan.

ISSUE 3: In developing the Statewide Cold Weather Emergency Plan, should utilities establish more effective means of communicating with the public prior to and during a cold weather emergency?

RECOMMENDATION: Yes.

ISSUE 4: In developing the Statewide Cold Weather Emergency Plan, should utilities establish uniform guidelines and priorities for interrupting firm customer load?

RECOMMENDATION: Yes. Separate priorities should be established for critical loads, priority loads, and non-critical loads.

ISSUE 5: Should utilities review the adequacy of the current telephone systems and procedures for responding to trouble calls from consumers during emergencies?

RECOMMENDATION: Yes.

ISSUE: 6 Should utilities enhance current public education programs to better inform customers of the benefits of conservation in mitigating the adverse affects of cold weather?

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RECOMMENDATION:

Yes.

ISSUE 7: Should utilities continue to implement all cost-effective conservation programs, including those that promote the cost-effective use of natural gas in the residential sector, to moderate Florida's dependence on electric heating?

RECOMMENDATION: Yes.

ISSUE 8: Should utilities work in concert with the Commission and the Department of Community Affairs to review the Florida Building Code and the practice of using electric strip heating in Florida homes?

RECOMMENDATION: Yes.

ISSUE 9: Should the operating performance of the investor-owned utilities during the Christmas cold weather emergency be reviewed further as part of the Commission's Generating Performance Incentive Factor (GPIF) review in the Fuel and Purchased Power Cost Recovery Clause proceedings?

RECOMMENDATION: Yes.

ISSUE 10: Should utilities review their power plant winterization plans and procedures to determine whether critical control lines can be better insulated to protect them from freezing conditions?

RECOMMENDATION: Yes.

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ISSUE 11: Should utilities review power plants which use light oil as a primary fuel or back-up fuel during curtailments of natural gas to determine if existing fuel filter systems are adequately designed to ensure uninterrupted fuel flow during cold weather?

RECOMMENDATION: Yes.

ISSUE 12: Should utilities pursue alternate fuel capabilities at generating plants which currently burn only natural gas which is subject to curtailments during cold weather?

RECOMMENDATION: Yes.

ISSUE 13: Should utilities review their plans for the reactivation of generating units currently on extended cold stand-by?

RECOMMENDATION: Yes.

ISSUE 14: Should the outages which occurred at the Turkey Point 3 and 4 nuclear units be reviewed in more detail in the Fuel Adjustment Clause?

RECOMMENDATION: Yes.

ISSUE 15: Should the Commission encourage the Federal Energy Regulatory Commission (FERC) to expedite its review of the Florida Gas Transmission (FGT) Settlement Docket on the issue of open access and allow the Phase II expansion of the FGT pipeline into Florida to proceed?

RECOMMENDATION: Yes.

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ISSUE 16: Should utilities reflect the impact of the cold weather experienced during the Christmas holidays in their load and energy forecasts and generation and transmission expansion plans?

RECOMMENDATION: Yes. Weather patterns and their affect on peak load in Florida should be addressed in the Commissions Planning hearings, Dockets No. 900004-EU and 900004-EU-A, and in Docket No. 890779-EU, Investigation Into the Adequacy of the Transmission Grid in North Florida, to determine the need for additional base load, intermediate, and peaking capacity and transmission line capacity in Florida.

BACKGROUND

During the Christmas holidays (1989), Florida experienced extremely cold weather throughout the state. As a consequence of the arctic cold front which moved into and became stationary over the state, widespread shortages of electric generation were experienced by Florida's electric utilities. For a three day period beginning Saturday evening, December 23, and continuing through midday Monday, December 25, customer demand outstripped available generating capacity resulting in rotating blackouts to homes throughout peninsular Florida.

On January 3, 1990, the Commission staff held a public workshop to discuss the reasons for the statewide power shortages with executives from each of Florida's electric utilities. At the workshop, the staff issued an extensive data request to the utilities seeking to reconstruct more completely the events of the Christmas weekend. This data was received on January 17, 1990.

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On February 2, 1990, staff released its final report. The report analyzes the utility data and identifies potential areas of improved performance which may be practiced during future cold weather emergencies. Staff's recommended findings (pages 25-44 of the report) are summarized in the following issues and recommendations.

DISCUSSION OF ISSUES

ISSUE 1: Should the Commission adopt the report entitled Peninsular Florida Cold Weather Capacity Shortfall Emergency, December 23-25, 1989 and the recommendations contained therein?

RECOMMENDATION: Yes.

DISCUSSION: Each of the recommended areas of improved performance by electric utilities during cold weather emergencies are addressed separately in Issues 2 through 16.

ISSUE 2: Should the Commission issue a PAA order requiring Florida's electric utilities to prepare a specific cold weather emergency plan for the State of Florida?

RECOMMENDATION: Yes. The Commission should issue a PAA order requiring Florida's electric utilities to prepare a specific cold weather emergency plan for the State of Florida. The development of these plans should be coordinated by the Florida Electric Power Coordinating Group (FCG) in concert with the Public Service Commission, the Governor's Energy Office, and the Department of Community Affairs/Division of Emergency Management. The final

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Statewide plan should be codified through Commission rulemaking and included in the State of Florida Peace Time Emergency Plan.

DISCUSSION: Each electric utility in Florida has an emergency plan and emergency operating procedures in place which address actions to be taken in a capacity shortfall emergency. However, these plans and procedures appear to place more emphasis on managing generation resources and curtailing load during an emergency rather than managing customer demand through public awareness prior to an emergency. It is clear that utility efforts to forewarn the public of pending blackouts during the Christmas holidays were largely ineffective.

Although existing capacity shortfall plans call for public announcements and appeals for conservation as soon as an emergency appears imminent, they lack sufficient detail about how, when, and how urgently these announcements should be made. Little distinction is made between a cold weather emergency and other types of capacity shortfall threatening emergencies, such as hot weather, hurricane, or fuel shortages. No distinction is made for emergencies which occur during holidays as opposed to normal working days. Procedures for contacting other emergency officials during the course of a capacity shortfall emergency are vague and inconsistent from utility to utility. While utility functions such as generation and transmission system operating procedures appear to be coordinated statewide, there does not appear to be the same level of coordination between utilities and state and local emergency personnel during a cold weather emergency.

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As such, we believe that a specific cold weather emergency plan is needed for the State of Florida. Such a plan should begin with individual utility plans. Significant enhancements to existing utility capacity shortfall plans and procedures are needed to specifically address actions to be taken in a cold weather emergency. Particular emphasis is needed in the areas of public communications prior to and during a cold weather emergency, and communication, coordination, and cooperation with local and state emergency officials. Finally, a Statewide Cold Weather Emergency Plan is needed to ensure consistency among the individual utility plans and to establish paths of communication and coordination between utilities and state and local officials during a cold weather emergency.

ISSUE 3: In developing the Statewide Cold Weather Emergency Plan, should utilities establish more effective means of communicating with the public prior to and during a cold weather emergency?

RECOMMENDATION: Yes.

DISCUSSION: In fairness to the utilities, existing emergency procedures were followed during the recent holiday crisis. Despite attempts to communicate with the public prior to initiating widespread rotating blackouts, however, the public simply did not get the message. In many instances, they either were not alerted in sufficient time or not alerted with sufficient urgency to take meaningful action to mitigate the impact of the rolling blackouts which occurred during the Christmas holidays.

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Clearly, the first element of a Statewide Cold Weather Emergency Plan must focus on the early identification of any cold weather threat to electric service in Florida. Most, if not all, utilities in Florida subscribe to the broadcast services of the National Weather Service and therefore know when threatening weather is approaching Florida. Generally, it appears that cold weather alerts from the National Weather Service can be expected at least 48 hours in advance of a storm's approach. This leaves precious little time for utilities to prepare "custom-made" announcements and press packages. Consideration should be given to the development of "precanned" radio, television, and print media spots which can be left on file with local and statewide media networks. These may be updated and augmented as necessary as the threat of a cold weather emergency becomes more certain. To ensure the timely and uncensored release of these public announcements, media spots should be prepaid and published or broadcast on demand. Because of the likelihood of short lead times, emphasis should be placed on "live" media formats such as television and radio. Scrolling text at the bottom of television screens seems particularly effective.

The Statewide and individual utility plans should contain consistent, stepwise progressive levels of alert which escalate in their gravity as weather conditions worsen. For example, a Phase 1 Alert might communicate the approach of a severe cold weather front and trigger the release of initial conservation messages through the press. As the cold weather materializes, the urgency of conservation messages would be stepped up and the possibility of rotating blackouts emphasized. Local and state emergency facilities and

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personnel would be placed in a state of readiness. Instructions on what to do in the event of a blackout would be released, including emergency phone numbers for the utility and for local authorities. At Phase 3, when rotating blackouts are imminent, radio and television stations should be alive with blackout announcements and "scrolling" messages. By now all emergency services should have been fully activated and phone lines open to handle the inquiries from the public. By Phase 4, the actual curtailment and rotation of electric service, conservation pleas should continue to be broadcast and emergency services and contacts clearly made known.

The point of this example is not to predetermine or dictate the exact content of a Statewide Cold Weather Emergency Plan. Rather, it is intended to emphasize the need for preplanned, coordinated communication between utilities and their customers and utilities and local and state emergency personnel during a cold weather emergency. Only through this high level of communication and cooperation can the chaos, confusion and, ultimately, anger and dissatisfaction which occurred during the recent "Cold and Dark" Christmas be avoided.

ISSUE 4: In developing the Statewide Cold Weather Emergency Plan, should utilities establish uniform guidelines and priorities for interrupting firm customer load?

RECOMMENDATION: Yes. Separate priorities should be established for critical loads, priority loads, and non-critical loads.

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DISCUSSION: The firm load rotation schemes currently employed by most of Florida's electric utilities differentiate only between critical loads and non-critical loads. Staff observes that a third distinction for "priority" loads may be appropriate. Critical loads are generally defined as facilities which serve the public health and welfare. Examples are hospitals, emergency medical centers, police and fire protection, and critical water and wastewater facilities. Priority loads are generally defined as individuals with special health related needs. These may range from a life support system in the home to the special heating requirements of the elderly or infirm. Non-critical loads are generally defined as the remaining population of firm service customers.

The distinction between and treatment of "critical" loads and "priority" loads during a period of firm load shedding is not consistent from utility to utility. This should be addressed in the development of a Statewide Cold Weather Emergency Plan. Generally, the staff believes that critical loads which serve to protect the public health and welfare should not be included in utility rotation schemes. We also believe that individuals with special medical requirements such as life support systems should be given special consideration in utility rotation schemes. However, there is a need to balance the special requirements of individuals with the need to protect the long term integrity of the bulk power supply system in Florida and to minimize electric service disruptions to the public as a whole. It seems prudent that electrical service to customers depending on life support systems in the home should not be intentionally interrupted unless absolutely

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necessary. If such loads are to be subjected to rotating blackouts, utilities should be required to establish procedures to identify each customer with special in-house medical equipment and ensure that they are warned of an impending emergency which may affect their electric service. It should also be determined whether these customers have access to a back-up power supply in the home or to appropriate public health facilities. Special consideration should also be given in each utility's load shedding scheme to minimize the frequency and duration of interruptions to "priority" customers.

ISSUE 5: Should utilities review the adequacy of the current telephone systems and procedures for responding to trouble calls from consumers during emergencies?

RECOMMENDATION: Yes.

DISCUSSION: As rotating blackouts were initiated statewide, utility switchboards were swamped by calls from consumers. While the utilities called in additional personnel to man the phones, there simply were not enough phone lines to handle the onslaught of calls. This also appears to have been exasperated by poor communication with other emergency personnel such as fire and police who had nothing to tell people who called them other than to refer them to the electric utility.

Utilities should evaluate the adequacy of their existing telephone systems and procedures. Technology in the telecommunications industry has improved significantly in the last few years, and equipment appears to be available in today's marketplace which may be better suited to handling the

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volume of calls utilities experienced during the Christmas emergency. Utilities should also review procedures which require live operators to answer trouble calls. While under normal circumstances human interaction may be preferred from a customer relations viewpoint, during an emergency it is more important that the phone be answered, even if by a recording, and that the caller's information be imparted, even if it is to a recording device. Utilities should consider using recordings to intercept phone calls that cannot be answered due to volume. These recordings could advise customers of the general state of affairs during an emergency and give instructions to either continue holding or leave a brief and concise message indicating the problem they are experiencing.

ISSUE: 6 Should utilities enhance current public education programs to better inform customers of the benefits of conservation in mitigating the adverse affects of cold weather?

RECOMMENDATION: Yes.

DISCUSSION: It is obvious from the actions of consumers during the Christmas cold weather emergency that utilities have not been entirely successful in their efforts to educate the public. The numerous incidents of overloaded distribution lines and transformers which occurred as service was restored to homes after controlled feeder rotations is indicative of the lack of public understanding of how the electric system works and why. Electric distribution systems are designed to withstand a certain amount of simultaneous peak loading. Normally, however, some amount of diversity exists among the major

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home appliances, such as heating equipment, being served by a distribution circuit. During the extended cold weather that Florida experienced over the Christmas weekend, there was very little diversity in electrical home heating loads. Under more "normal" cold weather conditions, while a certain amount of circuit overloading might be expected, on the whole the distribution systems of the utilities would probably have held up. With home heating interrupted during rotating blackouts, however, heat loss from homes was accelerated. As service was restored, home heating systems all came on at once operating at full blast. The resulting surge placed on the electrical system quickly overloaded distribution circuits and in some cases actually melted distribution lines and destroyed neighborhood transformers. The consequences were extremely long outage times. Phone lines were jammed with outage reports, and utilities scrambled to route trouble crews to affected areas. Much of this might have been avoided had consumers been better informed as to what to expect and what to do during extreme weather conditions. Such simple advice as: "Turn down thermostats, wear warm clothing, and if the power does go out, turn off all electrical heating loads until a few minutes after service is restored so you can be sure to have heat again" would suffice.

Too often, utility informational advertising appears aimed more at "image" enhancement or "load" building than at promoting cost-effective conservation. As the saying goes: "The best offense is a good defense." An informed public, knowledgeable in the ways of energy conservation, is perhaps the most valuable resource available to utilities faced with generation and

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distribution equipment stretched to their limits. Systematic and continuous consumer education on the effects of severe weather on weather sensitive loads in Florida is of paramount importance.

ISSUE 7: Should utilities continue to implement all cost-effective conservation programs, including those that promote the cost-effective use of natural gas in the residential sector to moderate Florida's dependence on electric heating?

RECOMMENDATION: Yes.

DISCUSSION: According to 1986 end use statistics compiled by the staff, 74.2 percent of all home heating in Florida is done with electricity. Only 8.4 percent of home heating is done with natural gas. Because of this reliance on electricity for home heating, Florida is particularly exposed to the surge and overload conditions experienced on local distribution facilities and the peak demands placed on generating equipment during severe cold weather like that which occurred over the Christmas holidays.

Natural gas is a clean, efficient and, in many instances, a cost-effective alternative to the use of electricity for home heating. According to a study prepared for the Commission by Howard Kuhns in 1982, from central Florida through north Florida, natural gas heating during the winter coupled with high efficiency air conditioning equipment for use during the summer appears to be the most cost effective approach to home climate control. If these results continue to be valid, and staff believes that they are, it would appear prudent for Florida's electric utilities to consider the

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role natural gas usage might play in mitigating the volatility of winter electrical peaks in Florida. Where natural gas is available for use in residential subdivisions, electric utilities should include natural gas use in their conservation plans where such is a cost effective means of reducing peak demand and the need to construct expensive new power plants.

ISSUE 8: Should utilities work in concert with the Commission and the Department of Community Affairs to review the Florida Building Code and the practice of using electric strip heating in Florida homes?

RECOMMENDATION: Yes.

DISCUSSION: As has been stated, a total of 74.2 percent of all Florida homes are heated with electricity. Of the homes heated electrically, 77.2 percent use electric resistance strip heat. In this type of heating electric current is run through a high resistance wire and the friction caused by the impeded electrons heats the wire. A fan is then used to blow air over the heated wire, thereby circulating the warmed air and heating the home.

Electric strip heating is the most inefficient means of heating a home. Electric heat pumps and natural gas heating systems, for example, are two to three times as efficient as electric strip heat. But because of its low installed cost, the use of electric strip heat is widespread throughout Florida. With the adoption of the 1986 revisions to the Florida Building Code, significant restrictions have been placed on the use of electric strip heat in new homes located in north Florida and, to some extent, central Florida. However, electric strip heat is still widely used in new homes in

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south Florida. Also, a large percentage of existing homes throughout Florida continue to rely on electric strip heat. For example, in panhandle Florida approximately 57 percent of existing homes use electric strip heat.

Because of this high saturation, staff believes that utilities should continue to pursue cost-effective alternatives to electric strip heat in their service areas. Further, the Florida Building Code should be reviewed to determine whether a more aggressive stance may be taken with respect to the development and enforcement of building standards applicable to new construction, with focus on south Florida, and retrofit applications to existing homes throughout Florida.

ISSUE 9: Should the operating performance of the investor-owned utilities during the Christmas cold weather emergency be reviewed further as part of the Commission's Generating Performance Incentive Factor (GPIF) review in the Fuel and Purchased Power Cost Recovery Clause proceedings?

RECOMMENDATION: Yes.

DISCUSSION: According to statistics provided by the utilities in the 1989 Planning Hearing 20 Year Plan, as of December 1, 1989, the State had access to a total of 33,973 MW of generating capacity, 2,400 MW of firm purchased power from the Southern Company, and 247 MW of generation by Qualifying Facilities, for a total of 36,620 MW capacity. Based on the forecasted winter peak of 29,752 MW, Florida utilities had a planned reserve margin of 23 percent. However, during the Christmas weekend an average of 7,900 MW of capacity was unavailable to serve peak load. Based on utility filings, approximately 3,566

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MW of generation was unavailable prior to and during the Christmas weekend due to planned or forced maintenance. Therefore, it appears that approximately 4,333 MW of generation was affected by unplanned outages or deratings during the Christmas weekend. Because of the number of outages, staff has not been able to meaningfully analyze each of these outages in this report. As such, we suggest that these outages be reviewed in further detail in the Fuel Adjustment proceedings. The following recommendations highlight some of staff's concerns in this area.

ISSUE 10: Should utilities review their power plant winterization plans and procedures to determine whether critical control lines can be better insulated to protect them from freezing conditions?

RECOMMENDATION: Yes.

DISCUSSION: A number of generating plant outages and deratings which occurred during the extended cold weather occurred when boiler feedwater sensing lines and other critical water lines froze within the plant. This occurred at the JEA/FPL St. Johns Units 1 and 2 (1248 MW), FPL's Martin 1 (790 MW) and Sanford 3 (139 MW), Seminole's Unit 2 (640 MW), and Lakeland/Orlando McIntosh 3 (340 MW). Winterization plans and procedures should be reviewed at each of these facilities.

ISSUE 11: Should utilities review power plants which use light oil as a primary fuel or back-up fuel during curtailments of natural gas to determine if existing fuel filter systems are adequately designed to ensure uninterrupted fuel flow during cold weather?

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RECOMMENDATION: Yes.

DISCUSSION: A number of generating plant outages and deratings which occurred during the extended cold weather occurred when oil fuel filters became clogged and the unit had to be taken off-line to clear or replace the filters. This occurred at FPC's Debarry P6 (55 MW), Intercession City P1 (57 MW) and P3 (57 MW), and Suwannee P2 (65 MW); FPL's Port Everglades and Fort Lauderdale Gas Turbines (1458 MW); Kissimmee's Diesel Unit 16 (2 MW), and Orlando's Indian River CTA (96 MW).

Fuel delivery systems at these plants should be reviewed to determine whether design improvements can be made to improve the reliability of fuel delivery from fuel storage tanks to the power plant. Dual fuel lines and filters should be installed where practicable.

ISSUE 12: Should utilities pursue alternate fuel capabilities at generating plants which currently burn only natural gas which is subject to curtailments during cold weather?

RECOMMENDATION: Yes.

DISCUSSION: Because of home heating requirements in the rest of the nation during the Christmas holidays, non-firm gas deliveries to Florida power plants were curtailed from Friday, December 22, until Tuesday, December 26, 1989. At many of the generating plants in Florida which burn natural gas as a primary fuel, light oil is used as a back up. However, due to current environmental constraints, the use of light oil is not permitted at some plants. As a consequence, when non-firm natural gas supplies were curtailed on Friday,

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December 22, the following generating plants were shut down: FPL's Cutler 5 (68 MW) and Cutler 6 (131 MW); Gainesville's Deerhaven GT 1 (18 MW) and GT 2 (18 MW); and Tallahassee's Purdom GT 1 (12 MW) and GT 2 (12 MW).

Utilities should investigate the possibility of obtaining environmental waivers to burn light oil at these facilities during capacity shortfall emergencies. Additionally, pressure should be brought to bear on the Federal Energy Regulatory Commission to expedite their review and approval of the Phase 2 expansion of the Florida Gas Transmission (FGT) pipeline in Florida. Estimates from FGT are that had this additional capacity been available during the Christmas holidays, Florida utilities could have contracted for adequate supplies of firm gas and transported it into Florida. The curtailments which occurred at Florida power plants would then not have been necessary.

ISSUE 13: Should utilities review their plans for the reactivation of generating units currently on extended cold stand-by?

RECOMMENDATION: Yes.

DISCUSSION: During the Christmas cold weather the following generating units were on extended reserve cold standby: FPL's Riviera 2 (71 MW); TECO's Hookers Point 1-5 (206 MW); Jacksonville's Southside 1-3 (107 MW) and Northside 2 (262 MW); Lakeland's Larsen 4-7 (119 MW) and Larsen GT 1-3 (39 MW); and Tallahassee's Purdom 1-4 (32 MW). On Saturday, December 23, the City of Lakeland was able to return Larsen 7 (51 MW) to service, and on Sunday, December 24, Larsen 6 (25 MW) was returned to service.

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Current utility plans call for most of the units on extended reserve cold standby to be returned to service during the early to mid 1990's. These units were placed on cold standby because of the high cost of oil and because of adequate reserve margins at the time. In light of the capacity shortfalls which were experienced during the Christmas weekend, these plans should be revisited. Where practicable, cold standby units should be returned to service earlier, or their status should be enhanced from a state of "cold" standby to "hot" standby.

ISSUE: 14: Should the outages which occurred at the Turkey Point 3 and 4 nuclear units be reviewed in more detail in the Fuel Adjustment Clause?

RECOMMENDATION: Yes.

DISCUSSION: Turkey Point 4 (688 MW) tripped off line at 11:14 p.m. on Saturday, December 23 as a result of a short circuit which occurred in control circuits to the unit's main steam isolation valve. The problem was found to be due to corrosion of terminal boards which control the unit's main steam isolation valve. The unit was not returned to service until 6:50 a.m. Thursday, December 28. Because of the forced outage experienced at Turkey Point 4, FPL decided for safety reasons to shut down and inspect Turkey Point 3. Turkey Point 3 (688 MW) was taken off line at 1:36 a.m. on Monday, December 25. During the safety inspection which ensued, similar corrosion of the terminal boards controlling the main steam isolation valve were detected. It was determined, however, that the unit could be returned to service and it was brought back on line at 8:52 a.m. on Monday, December 25.

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The reason for the corrosion found in the terminal boxes at both units is not known at this time. The Nuclear Regulatory Commission (NRC) is investigating the problem. The Commission should monitor the review by the NRC and address any issues of prudence which may arise from it in the Fuel Adjustment Clause.

ISSUE 15: Should the Commission encourage the Federal Energy Regulatory Commission (FERC) to expedite its review of the Florida Gas Transmission (FGT) Settlement Docket on the issue of open access and allow the Phase II expansion of the FGT pipeline into Florida to proceed?

RECOMMENDATION: Yes.

DISCUSSION: FGT's open access docket and the expansion of the FGT pipeline has been in litigation before the FERC for about three years. The parties have agreed on most issues. All that remains is for FERC to hear and resolve some minor rate structure issues and update their Environmental Impact Assessment. The Florida Commission has intervened in the docket. We should encourage FERC to expedite their review.

The Phase II expansion will increase natural gas supplies in Florida by approximately 100 MMCF per day. Under the FGT open access settlement agreement, Florida utilities would be able to contract for firm gas in the field and transport that gas to power plants in the state without the constant threat of interruption. It appears that gas supplies were available during the Christmas cold weather emergency, and had Florida had the pipeline

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capacity to transport it, Florida Power & Light, and perhaps other Florida utilities, would not have suffered interruptions to their gas-fired power plants during the Christmas holidays.

ISSUE 16: Should utilities reflect the impact of the cold weather experienced during the Christmas holidays in their load and energy forecasts and generation and transmission expansion plans?

RECOMMENDATION: Yes. Weather patterns and their affect on peak load in Florida should be addressed in the Commissions Planning hearings, Dockets No. 900004-EU and 900004-EU-A, and in Docket No. 890779-EU, Investigation Into the Adequacy of the Transmission Grid in North Florida, to determine the need for additional base load, intermediate, and peaking capacity and transmission line capacity in Florida.

DISCUSSION: The Commission opened Docket No. 890779-EU in June 1989 to investigate the adequacy of the electrical transmission grid in north Florida. This docket was originally opened to determine whether additional transmission capacity was needed to avoid transmission bottlenecks projected to occur in north Florida in the mid 1990's. The effects of the rotating blackouts which occurred during December 23-25, 1989 should also be considered in this docket.

Specifically, the Southern companies have stated that during the cold weather emergency experienced in peninsular Florida, the Southern system had generating capacity to sell in addition to the 3400 MW already being sold to peninsular Florida utilities. Southern estimates that had additional

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transmission capacity been available in Florida, Southern could have sold an additional 800 MW to peninsular Florida before encountering transmission limitations on the Southern system. Therefore, one issue that needs to be addressed in Docket 890779-EU is whether additional transmission lines should be built by peninsular Florida utilities to take advantage of emergency power purchases from the Southern system during times of capacity shortfall in the state.

The Commission has also opened Docket No. 900004-EU and 900004-EU-A as part of our ongoing planning hearings to review the long range load and energy forecasts and generation and transmission plans of the utilities in Florida. The effects of the December 23-25, 1989 cold weather should be taken into consideration in the utility plans and forecasts to determine the need for base load, intermediate, and peaking capacity in Florida.