BEFORE THE
FLORIDA PUBLIC SERVICE COMMISSION

In the Matter of	DOCKET NO. 990722-EG
ADOPTION OF NUMERIC CONSERVATION GOALS AND CONSIDERATION OF NATIONAL ENERGY POLICY ACT STANDARDS (SECTION 111) BY ORLANDO UTILITIES COMMISSION.	

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PROCEEDINGS:	HEARING
BEFORE:	CHAIRMAN JOE GARCIA COMMISSIONER J. TERRY DEASON COMMISSIONER SUSAN F. CLARK
DATE:	Monday, February 21, 2000
TIME:	Commenced at 9:30 a.m. Concluded at 9:45 a.m.
PLACE:	Betty Easley Conference Center Room 148 4075 Esplanade Way Tallahassee, Florida
REPORTED BY:	JANE FAUROT, RPR FPSC Division of Records & Reporting Chief, Bureau of Reporting

APPEARANCES:

ROY C. YOUNG, Young, Van Assenderp & Varnadoe, P.A., Gallie's Hall, 225 South Adams Street, Post Office Box 1833, Tallahassee, Florida, 32302-1833, appearing on behalf of Orlando Utilities, Commission.

WILLIAM COCHRAN KEATING, Florida Public Service Commission, Division of Legal Services, 2540 Shumard Oak Boulevard, Tallahassee, Florida 32399-0870, appearing on behalf of the Commission Staff.

I N D E X

WITNESSES

NAME	PAGE NO.
ROBERT L. AASHEIM	
Stipulated Prefiled Direct Testimony Inserted into the Record	5
MYRON R. ROLLINS	
Stipulated Prefiled Direct Testimony Inserted into the Record	12

EXHIBITS

NUMBER		ID.	ADMTD.
1	OUC-1	4	4
2	OUC-1	4	4
3	RLA-1	4	4
4	OUC-1	4	4

CERTIFICATE OF REPORTER 24

P R O C E E D I N G

MR. KEATING: On to the second docket, 990722, concerning the goals for OUC. Again, there are no intervenors in the docket. And unless there are any questions for any of the witnesses, staff would recommend that the prefiled testimony in this docket be moved into the record as though read.

CHAIRMAN GARCIA: There being no objection, show the -- what was it, the testimony moved into the record.

MR. KEATING: Yes: Staff also recommends that the exhibits submitted with the prefiled testimony be marked for identification as Exhibit Numbers 1 through 4 in the order that they are listed on Page 8 of the prehearing order.

CHAIRMAN GARCIA: To make sure we don't have confusion, are we using the same exhibit list for both dockets?

COMMISSIONER CLARK: No, you would use different ones.

MR. KEATING: I would be using a separate list.

CHAIRMAN GARCIA: Very good. Then show them moved into the record.

(Exhibit Number 1, 2, 3, and 4 marked for identification and admitted into evidence.)

BEFORE THE PUBLIC SERVICE COMMISSION

ORLANDO UTILITIES COMMISSION

TESTIMONY OF ROBERT L. AASHEIM

DOCKET NO. 990722-EG

NOVEMBER 15, 1999

Q **Please state your name and address.**

A My name is Robert L. Aasheim. My business address is 500 South Orange Avenue, Orlando, Florida 32802.

Q **By whom are you employed and in what capacity?**

A I am employed by Orlando Utilities Company as a Manager of Commercial Markets in the Customer Connection Department.

Q **Please describe your responsibilities in that position.**

A My responsibilities include managing a team of account representatives, residential and commercial auditors, and managing the accounts of several of OUC's largest customers.

Q **Please state your professional experience and educational background.**

A I received a Bachelors of Science degree in Electrical Engineering from Florida Atlantic University, Boca Raton, in 1986 and a Masters of Business Administration from Rollins College, Winter Park in 1997.

I have been employed by OUC since 1986 as a distribution engineer, manager of

distribution engineering and manager of materials and standards.

Q Please describe the overall process leading to the determination of the proposed numeric conservation goals for OUC?

A Six major steps were taken to determine the proposed numeric conservation goals for OUC. First, DSM measures with the highest potential of being cost-effective were chosen. Second, the avoided cost must be established. Third, the selected measures were analyzed against the avoided costs in cost-effective analyses. Fourth, results of the analyses are analyzed. Fifth, the proposed numeric goals were set based on the results of the analyses. Sixth, a DSM plan was developed for programs that OUC proposes.

Q What is the purpose of your testimony in this proceeding?

A The purpose of my testimony is to address steps four, five, and six. In my testimony, I will discuss the results of the cost-effectiveness analysis, the numeric goals proposed by OUC and the implementation of the demand side programs. I will also discuss existing programs at OUC and programs that have been discontinued. Potential future programs will be also discussed.

Q Were Sections of the OUC's 2000 Demand Side Management Plan (Exhibit OUC-1) prepared by you or under your direct supervision?

A Yes. OUC's 2000 Demand Side Management Plan was prepared by Black & Veatch under my direct supervision.

Q Are you adopting any of the Sections of OUC's 2000 Demand Side

Management Plan as part of your testimony?

A Yes, I am adopting Section 6.0.

Q Are there any corrections to this Section?

A No.

Q Have you prepared any exhibits?

A Yes. I have prepared Exhibit RLA-1 which is incorporated as part of my testimony.

Q Please describe the how the results of the cost-effectiveness evaluation for the DSM measures were analyzed.

A In general, OUC uses the Rate Impact Test as its primary criterion for determining cost-effectiveness for DSM programs. In other words, OUC will not implement DSM programs that cause rates to increase unless there are significant other considerations such as customer education.

The Rate Impact Test is a measure of the expected impact on customer rates resulting from a DSM program. The test statistic is the ratio of the utility's benefits (avoided supply costs and increased revenues) compared to the utility's costs (program costs, incentives paid, increased supply costs and revenue losses). A value of less than one indicates an upward pressure on rate levels as a result of the DSM program.

Q Please describe the results of the cost-effectiveness evaluation.

A Seven residential and four commercial measures were analyzed for cost-effectiveness. None of the measures passed the Rate Impact Test.

Q Please describe the development of OUC's proposed numeric goals for the years 2001 – 2010.

Since none of the measures passed the Rate Impact Test, OUC's proposed numeric goals are zero for demand and energy.

The numeric goals are shown in Exhibit RLA - 1.

Q Are these goals feasible for OUC?

A Yes. OUC expects to surpass these goals.

Q Please describe the measures tested from OUC's 1995 DSM Plan.

A Seven residential measures and three commercial measures were tested. I will give a brief overview of each measure, residential measures first.

The Residential Direct Load Control (DLC) Main and Direct Load Control (DLC) Pool Pumps are designed to control central air conditioners (CAC), electric furnaces, heat pump auxiliary heat operations, electric water heaters and pool pumps. The program was planned to use FM/VHF radio system. The DLC system will use a 50% duty cycle for CAC and strip heat equipment. The system sheds electric water heaters, heat pump auxiliary heaters and pool pumps. As a minimum, all DLC customers have their CAC, heating systems, and electric water

heaters controlled. Credits are given based on the number of days a customer is controlled.

The Residential Energy Survey is designed to provide residential homeowners with recommended energy efficiency measures and practices. The Residential Energy Survey includes complete attic, air duct and air return inspections. The customer is given a choice to receive a water heater jacket, low-flow showerhead, or compact fluorescent bulb. OUC Energy Analysts are presently using this walk-through type audit as a means to get OUC customers to participate in other conservation programs and to qualify for appropriate rebates.

The Residential Heat Pump Program is marketed to the owners of existing residential strip heating systems and older, inefficient central air conditioners and heat pumps. The program requires heat pumps with a SEER of 11 (or greater) and a HSPF of 7.0 (or greater) in order to qualify for rebates. Rebates range in terms of equipment SEER levels, tonnage and replaced equipment. The main strength of the program's success is the air conditioning contractors that now inspect customer's ductwork and insulation levels. Contractors often install energy efficient heat pumps plus duct repairs and additional insulation as a part of a total energy savings package for customers.

The Residential Weatherization Program is designed for existing single family homes and promotes R-19 ceiling insulation (or higher), caulking, weather-stripping, window treatment, water heater insulation, and air conditioning/heating supply and return air duct repair. The customer will receive a $140 rebate for

installing R-19 ceiling insulation (or higher), $100 rebate for duct repairs and up to $110 for other conservation measures specified above. In addition, the customer is allowed to carry payments for ceiling insulation on their electric bill for 12 or 24 months. OUC pays the total contractor cost.

The Residential Low Income Energy Fix-Up Program began in 1985 and, since inception, has made more than 3,000 homes more energy efficient. This program is offered to customers whose total family annual income does not exceed $20,000. The Fix-Up Program will pay 85% of the total contract cost for home weatherization for the following measures: (a) upgrading ceiling insulation to R-19; (b) exterior and interior caulking; (c) weather-stripping doors and windows; (d) air conditioning/heating supply and return air duct repairs; (e) installation of energy efficient doors and (f) water heater insulation. Customers are allowed to carry the 15% contractor payment on their monthly electric bill. OUC pays the customer's 15% cost to the contractor. OUC has agreed in a Memorandum of Understanding with the State Department of Consumer Affairs dated March 17, 1995 to continue this program.

The Residential Efficient Water Heating Program encourages residential customers in existing homes to install waste heat recovery units and to insulate older, less efficient, electric water heaters. Customers receive a $50 rebate for installing a waste heat recovery unit.

The Commercial Energy Survey Program is a physical walk-through inspection of the commercial facility. The commercial customer having a Commercial Energy

Survey receives a report at the time of the survey. Within 30 days of a detailed audit, the customer receives a written report. Conservation literature is provided to all customers.

The Commercial Cooling Program is a survey that targets existing commercial customers. Customers with existing HVAC units of 20 tons or less may qualify for rebates of up to $3,000.

Q Did you test any additional measures.

A Yes, we tested Florida Power & Light's (FPL) most cost-effective measure. The measure was found not cost-effective for OUC. We in essence screened and eliminated all measures screened by FPL.

Q Will any of the above programs be continued or implemented.

A OUC proposes to continue selected programs discussed above. The residential and commercial/industrial programs will be continued. OUC is choosing to continue the programs because of the high level of customer participation and the potential positive effects on the community.

Q Does this conclude your testimony?

A Yes.

BEFORE THE PUBLIC SERVICE COMMISSION

ORLANDO UTILITIES COMMISSION

TESTIMONY OF MYRON R. ROLLINS

DOCKET NO. 990122-EG

NOVEMBER 15, 1999

Q Please state your name and address.

A My name is Myron R. Rollins. My business address is 11401 Lamar, Overland Park, Kansas 66211.

Q By whom are you employed and in what capacity?

A I am employed by Black & Veatch as a Project Manager in the Energy Services Group of the Power Division.

Q Please describe your responsibilities in that position.

A As a Project Manager in the Energy Services Group, I am responsible for managing various projects for utility and non-utility clients. These projects encompass a wide variety of services for the power industry. The services include load forecasts, conservation and demand-side management, reliability criteria and evaluation, development of generating unit addition alternatives, fuel forecasts, screening evaluation, production cost simulation, optimal generation expansion modeling, economic and financial evaluation, sensitivity analysis, risk analysis, power purchase and sales evaluation, strategic considerations, analyses of the effects of the 1990 Clean Air Act Amendments, feasibility studies, qualifying facility and independent power producer evaluations, power market studies and

power plant financing.

Q Please state your professional experience and educational background.

A. I received a Bachelors of Science degree in Electrical Engineering from the University of Missouri – Columbia. I also have two years of graduate study in nuclear engineering at the University of Missouri – Columbia. I am a licensed professional engineer and a Senior Member of the Institute of Electrical and Electronic Engineers.

I have been employed by Black & Veatch since 1976 in the Power Sector Advisory Services area. In the last ten years, I have been the project manager for over 100 projects. I have conducted a majority of my work for Florida utilities. Florida utilities for which I have worked include City of Lakeland-Department of Electric Utilities, Kissimmee Utility Authority, Florida Municipal Power Agency, Orlando Utilities Commission, JEA, City of St. Cloud, Utilities Commission of New Smyrna Beach, Sebring Utilities Commission, City of Homestead, Florida Power Corporation and Seminole Electric Cooperative.

I attempt to stay abreast of Florida Public Service Commission (PSC) proceedings. For instance, I was the Project Manager for projects that prepared or provided input to the preparation of 1999 Ten Year Site Plans for Kissimmee Utility Authority, City of Lakeland, Orlando Utilities Commission and JEA. I have previously presented testimony before the PSC for the Stanton 1 & 2 and AES-Cedar Bay need for power certification and had my testimony stipulated for Kissimmee Utility Authority and Florida Municipal Power Agency's Cane Island

Unit 3 need for power certification and the City of Lakeland's McIntosh Unit 5 need for power certification. I have also participated in the preparation of testimony for the Seminole Electric's Hardee County Combined Cycle Project, the Cypress Project and the Hines Energy Center Project need for power certifications.

Q Please describe the overall process leading to the determination of the proposed numeric conservation goals for OUC?

A Six major steps were taken to determine the proposed numeric conservation goals for OUC. First, DSM measures with the highest potential of being cost-effective were chosen. Second, the avoided cost was established. Third, the selected DSM measures were cost-effectively analyzed against the avoided costs. Fourth, the results were analyzed. Fifth, the proposed numeric goals were set based on the results of the analyses. Sixth, a DSM plan was developed.

Q What is the purpose of your testimony in this proceeding?

A The purpose of my testimony is to address steps one through five. In my testimony, I will discuss the selection of the measures to be tested, the determination of the avoided costs, and methodology used to evaluate the cost-effectiveness of these goals. I will also discuss economic assumptions used in the evaluations as well as the fuel price projections used. I will show that OUC has adequately explored demand side programs and is proposing appropriate goals.

Q Was the OUC 2000 Demand Side Management Plan (Exhibit OUC-1)

prepared by you or under your direct supervision?

A Yes.

Q Are you adopting Sections of the OUC 2000 Demand Side Management Plan as part of your testimony?

A Yes, I am adopting Sections 1.0 through 6.0 and Appendices A and B as part of my testimony.

Q Are there any corrections to these Sections?

A No.

Q Please describe the evaluation process by which OUC determined the demand side management measures for cost effectiveness analysis.

A In order to reduce the cost of complying with this docket, OUC did not model each possible DSM measure. Rather, OUC's study focused on alternatives that are expected to have the highest potential in Florida for being cost-effective. The measures were taken from OUC's 1995 Demand Side Management Plan, and the recent results of Florida Power & Light's (FPL) cost-effective analysis of demand side measures associated with FPL's 1999 goals. These measures were compiled and used in a cost-effectiveness analysis versus OUC's avoided unit costs.

Q Please describe how the avoided costs were determined.

A Avoided costs are determined by selecting an avoided unit. The avoided unit is the unit that could potentially be avoided or delayed due to the implementation of DSM programs.

The selection of the avoided unit is based on the next planned unit for OUC. Based on OUC's 1999 Ten Year Site Plan, OUC's expansion plan does not require unit additions for the time period of 1999 through 2008. There has been a major change since the submittal of the 1999 Ten Year Site Plan. OUC has sold its Indian River steam units to Reliant. Under this agreement, OUC will purchase power generated from the Indian River steam units for four years. At the expiration of the four-year contract, OUC maintains the option of signing a second four-year contract.

For the purpose of evaluating DSM programs, OUC has chosen a combined cycle as an avoided unit. This represents a conservative assumption. If the cost of continuing to purchase power is less than the combined cycle, then the DSM programs evaluated will be less cost effective.

Q What type of financing has been assumed to be used for the installation of the avoided unit?

A The avoided unit is assumed to be financed with 100% debt. Because OUC is a municipal utility, it can issue low cost tax-free municipal bonds. This allows the installed cost of a new unit to be extremely cost effective and cost competitive.

Q Please describe the evaluation process by which potential DSM programs were evaluated?

A The process used to evaluate the cost-effectiveness of DSM programs conforms to that required in Rule 25-17.008, Fla. Admin. Code. Specifically, the procedures used are those set forth in the Florida Public Service Commission

Cost-effectiveness Manual for Demand Side Management Programs and Self Service Wheeling Proposals. The Florida Integrated Resource Evaluator (FIRE) spreadsheet, originally developed by Florida Power Corporation, was used to assess the potential effectiveness of DSM programs.

Using the procedures specified in Rule 25-17.008 Fla. Admin. Code, FIRE provides a systematic framework for identifying the benefits and costs associated with specific DSM programs. Avoided utility costs are economically evaluated against DSM costs and load impacts to assess the effectiveness of the program over its useful life. Three DSM program benefits / cost tests are produced by the FIRE model and are used in considering DSM cost-effectiveness. These tests are the Rate Impact Test (RIM), the Total Resource Cost Test (TRC) and the Participants Test. The results of the three cost-effectiveness tests for the DSM programs evaluated are shown in Table 5-1 of OUC's 2000 Demand Side Management Plan.

Q What economic parameters were assumed as inputs for the FIRE Model?

A The economic parameters assumed represent a consistent set of economic parameters from OUC's 1999 Ten Year Site Plan. A general inflation rate of 3.0 percent was used. The 3.0 percent annual general inflation rate is applicable to capital costs, operations and maintenance (O&M) expenses and various other expenses. A long-term bond interest rate of 5.5 percent was assumed and the same interest rate was assumed for interest during construction. These were both selected to be consistent with a 3.0 percent general inflation rate. A fixed charge rate of 8.78 percent was developed based on the 5.5 percent bond interest rate and

applied to the capital cost for a new unit addition in the evaluations.

Q What fuel forecasts were developed or used for the FIRE Model evaluations?

A The base case natural gas fuel price projection in Appendix A of OUC's 2000 Demand Side Management Plan is the same as presented in OUC's 1999 Ten Year Site Plan and was used in the FIRE Model.

Q Are the fuel price projections developed reasonable for use in evaluating different generating unit alternatives?

A Yes. The fuel price projections are consistent with current fuel prices for existing units at OUC and are reasonable to use to evaluate the avoided unit.

Q Please describe the three DSM tests used to evaluate DSM programs.

A All the DSM cost effectiveness tests are based on the comparison of discounted present worth benefits to costs for a specific DSM program. Each test is designed to measure costs and benefits from a different perspective.

The Rate Impact Test is a measure of the expected impact on customer rates resulting from a DSM program. The test statistic is the ratio of the utility's benefits (avoided supply costs and increased revenues) compared to the utility's costs (program costs, incentives paid, increased supply costs and revenue losses). A value of less than one indicates an upward pressure on rate levels as a result of the DSM program.

The Total Resources Cost Test measures the benefit / cost ratio by comparing the

total program benefits (both the participant's and utility's) to the total program costs (equipment costs, supply costs, participant costs).

The Participants Test measures the impact of the DSM program on the participating customer. Benefits to the participant may include bill reductions, incentives paid, and tax credits. Participants' costs may include equipment costs, operation and maintenance expenses, equipment removal, etc.

Q Which cost-effectiveness test was utilized by OUC in evaluating DSM measures?

A All three cost effectiveness tests were calculated for each DSM measures analyzed and considered in our evaluation. The Rate Impact Test serves as the primary test for OUC in determining cost-effectiveness of DSM measures. In other words, OUC does not, in general, support DSM programs, which increase rates.

Q Please describe the selection of DSM measures for evaluation.

A A total of 7 residential and 4 commercial potential DSM measures was evaluated to assess cost-effectiveness. The measures were selected to ensure that all potentially cost-effective measures were evaluated. The measures were selected from three areas of potentially cost-effective measures. First, the cost-effective measures from OUC's 1995 goals were selected. Second, measures from OUC's current DSM programs were selected. Third, the most cost-effective measure from FPL's 1999 goals was selected. This selection process was used in order to reduce the number of measures evaluated in the FIRE model and, thus, the cost of

complying with this docket. This process saved evaluating numerous measures only to find that they were not cost-effective. In selecting the most cost-effective measure evaluated by FPL, it was reasoned that if the most cost-effective FPL measure evaluated was not cost-effective, then none of the hundreds of measures that were evaluated by FPL would be cost-effective.

Q Please describe the results of the analysis undertaken to evaluate the cost effectiveness of potential DSM measures.

A None of the measures evaluated was cost-effective based on the Rate Impact Test.

Q Does it surprise you that no DSM measures proved to be cost-effective for OUC?

A No. I didn't expect any DSM measures to be cost-effective for OUC.

Q Why did you not expect any DSM measures to be cost-effective?

A I had recently evaluated dozens of DSM measures for similarly situated municipal utilities as part of the Need for Power dockets for Cane Island Unit 3 and the Combined Cycle Conversion of McIntosh 5. None of the measures evaluated was cost-effective.

Q Why is it so much more difficult for DSM to be cost-effective today than it was in 1995?

A A number of things have changed to make DSM less cost-effective. For one, appliances are more efficient and building codes and practices result in more efficient buildings. The cost of building power plants has decreased and the

efficiency of power plants has increased. In addition, fuel costs have decreased along with the projected cost of fuel. These, along with other factors, result in DSM being less cost-effective.

Q Why do the investor owned utilities indicate that some DSM measures are cost-effective while municipal utilities do not?

A The main reason is that municipal utilities are able to use tax exempt bonds for financing the avoided unit. Thus, the cost of financing is much less for municipal utilities than it is for investor owned utilities.

Q Does this conclude your testimony?

A Yes.

MR. KEATING: Again, staff is prepared with an oral recommendation.

MR. GOAD: Commissioners, staff would again recommend the same treatment for OUC as for JEA, that no conservation goal levels be set. However, that they be free to offer conservation programs as they deem applicable.

CHAIRMAN GARCIA: Okay.

Mr. Keating, did you have something to add?

MR. KEATING: I just got a note that we need to clarify that our recommendation is also that both dockets should be closed.

COMMISSIONER CLARK: I would move staff's recommendation on the OUC, in the OUC docket. And let the record reflect that the recommendation that we approved in the JEA docket includes closing the docket.

COMMISSIONER DEASON: Second.

CHAIRMAN GARCIA: Okay. All those in favor signify by saying aye.

(Unanimous affirmative vote.)

MR. KEATING: Just one final note. Our rule requires that within 90 days of the final order establishing goals that the utilities submit their DSM plans. In this case, in both dockets concerning OUC and JEA, there are no goals.

COMMISSIONER CLARK: Our rules require that within 90 days they file those plans?

MR. KEATING: That's correct. And we would recommend that perhaps the order indicate that there is not a necessity for them to file those plans considering that they have no --

COMMISSIONER CLARK: Are we going to run into the problem where we have to have a specific request from them to waive the rules? No?

MR. KEATING: I think in this case the rule never really becomes operative.

COMMISSIONER CLARK: Okay.

CHAIRMAN GARCIA: Okay. Very good. Do we need to vote that in or that is understood? Do we need to vote that in?

COMMISSIONER CLARK: Well, I think the record can reflect that it is our understanding that the rule does not apply and there is no need to file any plans.

CHAIRMAN GARCIA: Very good. This hearing then is adjourned.

(The hearing concluded at 9:45 a.m.)

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STATE OF FLORIDA)
:
COUNTY OF LEON)

CERTIFICATE OF REPORTER

I, JANE FAUROT, RPR, Chief,FPSC Bureau of Reporting, Official Commission Reporter, do hereby certify that the hearing in Docket No. 990722-EG was heard by the Florida Public Service Commission at the time and place herein stated.

It is further certified that I stenographically reported the said proceedings; that the same has been transcribed by me; and that this transcript, consisting of 23 pages, constitutes a true transcription of my notes of said proceedings and the insertion of the prescribed prefiled testimony of the witnesses.

DATED this 23rd day of February, 2000.

JANE FAUROT, RPR
FPSC Division of Records & Reporting
Chief, Bureau of Reporting