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June 1, 2004

VIA HAND DELIVERY

COMMISSION
CLERK

JUN - 1 PM 12:42

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Blanca Bayo, Commission Clerk
and Administrative Services Director
Florida Public Service Commission
2540 Shumard Oak Blvd.
Tallahassee, FL 32399-0850

RE: Petition for Approval of Numeric Conservation Goals by JEA
Docket No. 040030-EG

Dear Ms. Bayo:

Enclosed please find the original and fifteen (15) copies of: (1) the testimony of J. Jay Yarnell; (2) the testimony of Myron R. Rollins; (3) Exhibit JEA-1, 2004 Numeric Conservation Goals: Demand Side Management Measure Evaluation and (4) Exhibit JEA-2, 2004 Numeric Conservation Goals: Demand Side Management Plan for filing in the above-styled case.

Also enclosed are copies of these filings to be stamped and returned to our offices. The Department of Community Affairs, 2555 Shumard Oak Blvd., Tallahassee, FL 32399-2100 and the Executive Office of the Governor, Office of Planning and Budget, General Government Unit, The Capital, Room 1502, Tallahassee, FL 32399-0001, the parties of record in this docket, have been provided with true and correct copies of these documents on this date.

Should you have any questions or need any additional information, please contact me. Your attention to this matter is appreciated.

Very truly yours,

Suzanne Brownless for Michael Wedner,
Attorney for JEA

CMP _____

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RCA cc: M. Wedner

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Yarnell - (06190-04)
Rollins - (06191-04)
JEA-1 - (06192-04)
JEA-2 - (06193-04)

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FPSC-BUREAU OF RECORDS



**BEFORE THE
FLORIDA PUBLIC SERVICE COMMISSION
PETITION FOR APPROVAL OF NUMERIC CONSERVATION GOALS**

DOCKET NO. 040030-EG

JEA

JUNE 1, 2004

TESTIMONY AND EXHIBITS OF:

J. JAY YARNELL

DOCUMENT NUMBER-DA
06190 JUN-1
FPSC-COMMISSION CLE

1 BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

2 JEA

3 TESTIMONY OF J. JAY. YARNELL

4 PETITION FOR APPROVAL OF NUMERIC CONSERVATION GOALS

5 DOCKET NO. 040030-EG

6 JUNE 1, 2004

7

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

9 A My name is J. Jay Yarnell. My business address is 21 West Church Street,
10 Jacksonville, Florida 32202-3139.

11

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

13 A I am employed by JEA as the Director of Rates and Market Development.

14

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

16 A As a Director of Rates and Market Development, I am responsible for all issues
17 related to rates, cost of service studies, rate design, implementation, and
18 monitoring of effectiveness of rates. I am also responsible for developing new
19 products and services to enhance customer loyalty and generate non-traditional
20 revenue for JEA. Products developed include the Solar Incentive Program,
21 District Chilled Water, Performance Contracting for Energy Services, Engineered
22 Power Quality Solutions, and the Efficient Lighting Program.

23

24

25

DOCUMENT NUMBER-DATE

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FPSC-COMMISSION CLERK

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

2 A I received a Bachelors of Science degree in Chemical Engineering from the
3 University of South Florida. I am also a licensed professional engineer in the
4 State of Florida.

5

6 I have been employed by JEA since 1997. Prior to joining JEA, I was the
7 Director of Process Engineering for a fertilizer company, served as Project
8 Director for a large fertilizer mining and manufacturing facility, and owned a
9 business which sold heat exchangers and pollution control equipment to industrial
10 customers.

11

12 **Q Please describe the overall process leading to the determination of the**
13 **proposed numeric conservation goals for JEA?**

14 A Determination of JEA's proposed numeric conservation goals consisted of a
15 number of steps. Initially, a list of DSM measures was compiled. Second,
16 information on the avoided generating unit was developed. Next, the DSM
17 measures compiled in the initial step were analyzed for cost-effectiveness using
18 the Florida Integrated Resource Evaluator (FIRE) model. Once the cost-
19 effectiveness analysis was complete, the results of the three FIRE model benefit
20 to cost ratio tests were reviewed. Based on these results, the proposed numeric
21 conservation goals for 2005 through 2014, and the corresponding Demand-Side
22 Management Plan, were developed.

23

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

25 A The purpose of my testimony in this proceeding is to discuss the results of the

1 cost-effectiveness analysis, as well as the numeric conservation goals proposed by
2 JEA. I will also discuss the existing conservation and demand-side management
3 programs currently offered by JEA to its customers, and any planned changes to
4 these programs or implementation of new programs.

5
6 **Q Were the JEA 2004 Numeric Conservation Goals: Demand-Side**
7 **Management Measure Evaluation (Exhibit JEA-1) and the JEA 2004**
8 **Numeric Conservation Goals: Demand-Side Plan (Exhibit JEA-2) prepared**
9 **by you or under your direct supervision?**

10 **A** Yes, JEA's 2004 Numeric Conservation Goals: Demand-Side Management
11 Measure Evaluation (Exhibit JEA-1) and JEA's 2004 Numeric Conservation
12 Goals: Demand-Side Management Plan (Exhibit JEA-2) were prepared by Black
13 & Veatch under my direct supervision.

14
15 **Q Are you adopting Sections of the JEA 2004 Numeric Conservation Goals:**
16 **Demand-Side Management Measure Evaluation (Exhibit JEA-1) and the**
17 **JEA 2004 Numeric Conservation Goals: Demand-Side Management Plan**
18 **(Exhibit JEA-2) as part of your testimony?**

19 **A** Yes, I am adopting Sections 4 through 6 and Appendices D and E of JEA's 2004
20 Numeric Conservation Goals: Demand-Side Management Measure Evaluation, as
21 well as Sections 2 and 3 of JEA's 2004 Numeric Conservation Goals: Demand-
22 Side Management Plan as part of my testimony.

23
24 **Q Are there any corrections to these Sections?**

25 **A** No, there are no corrections to any of these Sections.

1 **Q Have you prepared any exhibits?**

2 A Yes. I have prepared Exhibit JJY-1, Proposed Numeric Conservation Goals,
3 which is incorporated as part of my testimony.

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

6 A Of the three DSM cost-effectiveness tests performed by the FIRE model, which
7 are each designed to measure costs and benefits from a different perspective, JEA
8 utilizes the Rate Impact Test as its primary criterion for determining whether or
9 not a DSM measure is cost-effective. In other words, JEA generally will not
10 implement DSM measures that cause rates to increase, which is the parameter
11 measured by the Rate Impact Test.

12

13 The Rate Impact Test is a measure of the expected impact on customer rates
14 resulting from a DSM measure. The test statistic is the ratio of the utility's
15 benefits (avoided supply costs and increased revenues) compared to the utility's
16 costs (program costs, incentives paid, increased supply costs, and revenue losses).
17 A value of less than one indicates an upward pressure on rate levels as a result of
18 the DSM measure. Stated otherwise, a measure with a Rate Impact Test result of
19 less than 1.0 would not be considered cost-effective from the utility's perspective.

20

21 **Q Please describe the development of the avoided transmission and distribution**
22 **costs used in the FIRE model cost-effectiveness analysis.**

23 A Analyses performed for the *2004 Ten-Year Site Plan* indicates that there is
24 adequate transmission capacity on the JEA system to accommodate capacity in
25 excess of the avoided unit. Therefore, JEA is of the opinion that the value of the

1 avoided transmission cost used in the FIRE model should be zero.

2
3 For the avoided distribution costs, JEA estimates that an additional distribution
4 substation and feeders will be required. The cost of the distribution substation
5 and feeders was estimated and divided by the capacity of the avoided unit. The
6 resulting avoided distribution cost is \$134.97/kW.

7
8 **Q Please describe the selection of DSM measures for evaluation.**

9 A Approximately 200 DSM measures, consisting of measures applying to the
10 residential, commercial, and industrial sectors, were evaluated for cost-
11 effectiveness using the FIRE model. The multitude of measures evaluated
12 ensures that potentially cost-effective measures have been considered. Various
13 sources were relied upon in determining the demand-side management measures
14 carried forward to the cost-effective analysis. Sources used to determine which
15 DSM measures should be evaluated included the FPSC suggested measures for
16 evaluation (Document No. 12017-97 in Docket Nos. 971004, 971005, 971006,
17 971007), existing JEA conservation measures, FPSC filings from other Florida
18 utilities, and various other sources. For each measure analyzed, measure-specific
19 assumptions and characteristics were developed as well.

20
21 **Q Please describe the DSM measures tested for cost-effectiveness.**

22 A Approximately 200 measures were evaluated for cost-effectiveness across various
23 JEA rate classes. Due to the multitude of measures analyzed, I would request that
24 you refer to Section 4 and Appendices D and E of Exhibit JEA-1, which is the
25 JEA 2004 Numeric Conservation Goals: Demand-Side Management Measure

1 Evaluation, for a description of the DSM measures.

2
3 **Q Please describe the results of the analysis undertaken to evaluate the cost-**
4 **effectiveness of potential DSM measures.**

5 A Based on the Rate Impact Test, which is JEA's test for determining the cost-
6 effectiveness of a DSM measure, two of the DSM measures tested appeared to be
7 cost-effective. However, closer analysis of these measures reveals that it is
8 unlikely that either of these measures has the potential for sufficient participation.
9 Therefore, JEA is of the opinion that neither of these measures should have
10 numeric conservation goals associated with them.

11
12 **Q Please describe the development of JEA's proposed numeric goals for 2005**
13 **through 2014.**

14 A Although two of the measures passed the Rate Impact Test, JEA's proposed
15 numeric conservation goals are zero for 2005 through 2014. The proposed
16 numeric goals are presented in Exhibit JJY-1, Proposed Numeric Conservation
17 Goals. JEA believes that no numeric conservation goals should be associated
18 with the two measures that passed the Rate Impact Test.

19
20 **Q Which of the measures tested for cost-effectiveness passed the Rate Impact**
21 **Test, and why does JEA consider it prudent to not associate numeric**
22 **conservation goals with these measures?**

23 A Of the measures tested by JEA, Off-Peak Battery Charging and Constructing an
24 Energy Efficient Home – Professionals passed the Rate Impact Test. As
25 described in Section 5 of Exhibit JEA-1, Off-Peak Battery Charging involves

1 installing equipment and providing incentives to golf courses to encourage them
2 to charge their golf carts during the off-peak hours. A survey taken of golf
3 courses in the JEA service territory indicated that the courses were already
4 charging their carts during off-peak hours, which indicates that there would not be
5 sufficient participants for a new Off-Peak Battery Charging program when free
6 riders are taken into account. Furthermore, JEA Account Executives have
7 proactively addressed battery charging with warehouses where electric forklifts
8 are used. These customers have been educated to stagger battery charging during
9 off-peak hours to minimize peak demand impacts.

10
11 Constructing an Energy Efficient Home – Professionals is an educational seminar
12 for construction professionals which addresses all aspects of constructing an
13 energy efficient home. In its initial years, participation in this seminar exceeded
14 expectations. Attendance has since declined to a level that the program is no
15 longer offered by JEA.

16
17 **Q Given JEA's proposed numeric goals of zero for 2005 through 2014, does**
18 **JEA plan on offering any of the DSM programs evaluated?**

19 **A** Yes. JEA plans to continue to voluntarily offer its existing conservation programs
20 that have shown high customer interest and participation. Descriptions of these
21 programs are presented in Exhibit JEA-2, the JEA 2004 Numeric Conservation
22 Goals: Demand-Side Management Plan.

23
24 **Q Does this conclude your testimony?**

25 **A** Yes.

Proposed Numeric Conservation Goals – JEA						
Year	Residential Reduction			Commercial/Industrial Reduction		
	Summer kW	Winter kW	MWh	Summer kW	Winter kW	MWh
2005	0	0	0	0	0	0
2006	0	0	0	0	0	0
2007	0	0	0	0	0	0
2008	0	0	0	0	0	0
2009	0	0	0	0	0	0
2010	0	0	0	0	0	0
2011	0	0	0	0	0	0
2012	0	0	0	0	0	0
2013	0	0	0	0	0	0
2014	0	0	0	0	0	0