1   BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

2   DIRECT TESTIMONY OF

3   RICHARD J. VENTO and DONALD P. WUCKER

4   ON BEHALF OF

5   JEA

6   DOCKET NO. 130203-EM

7   APRIL 2, 2014

8   **REVISED – MAY 23, 2014**

9 **Q.   Mr. Vento, please state your name and business address.**

10 A.   My name is Richard J. Vento. My business address is 21 West Church Street,

11   Jacksonville, Florida 32202.

12

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

14 A.   I am employed by JEA. My current position is Director of Customer Solutions and

15   Market Development.

16

17 **Q.   Please summarize your educational background and professional experience.**

18 A.   I hold a Bachelor of Science in Business Administration from the University of

19   Florida.   With more than 30 years in the utility industry, my experience includes

20   electric production operations and maintenance, water and wastewater operations

21   and maintenance, technology integration, load research and demand-side

22   management (DSM).

COM 5
AFD 1
APA
ECO 1
ENG 4
GCL 2
IDM 1
TEL
CLK 1-Court Reporter

1

1   **Q.**   **Mr. Wucker, please state your name and business address.**

2   A.   My name is Donald P. Wucker. My business address is 21 West Church Street,

3   Jacksonville, Florida 32202.

4

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

6   A.   I am employed by JEA. My current responsibility is DSM Portfolio Management.

7

8   **Q.**   **Please summarize your educational background and professional experience.**

9   A.   I hold a Bachelor of Science in Mechanical Engineering from the University of

10   Florida. I am an actively licensed Professional Engineer (PE) in the State of

11   Florida. I have also held a PE license in the states of Louisiana and Alabama, which

12   are currently inactive. With more than 30 years in the energy industry, my

13   experience includes the design of building mechanical systems such as heating,

14   ventilation, air conditioning, refrigeration and plumbing systems for domestic,

15   commercial and industrial applications. I have also been involved with a wide

16   variety of energy retrofits including both as an engineer and as a contractor. My

17   last 10 years of experience has been involved with the development and

18   implementation of JEA's DSM programs.

19

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

21   A.   The purpose of our testimony is to discuss: (1) how JEA is governed: (2) recent

22   trends in JEA's system load growth: (3) JEA's proposed DSM goals and the

23   process used to develop them; and (4) other issues identified in the Order

1		Consolidating Dockets and Establishing Procedure (OEP), Order No. PSC-13-
2		0386-PCO-EU.
3		
4	**Q.**	**Are you sponsoring any exhibits to your testimony?**
5	A.	Yes. Exhibit No. __ [RJV-1] is a copy of Richard Vento's resumé. Exhibit No. __
6		[DPW-1] is a copy of Donald Wucker's resumé. Exhibit No. __ [JEA-1] presents
7		JEA's existing Florida Energy Efficiency and Conservation Act (FEECA) goals.
8		Exhibit No.__[JEA-2] presents a list of the DSM and conservation programs
9		included in JEA's existing DSM Plan as approved in Order No. PSC-10-0647-CO-
10		EG. Exhibit No. ___[JEA-3] presents the fuel price projections considered in the
11		cost-effectiveness evaluations. Exhibit No. ___[JEA-4] presents the economic and
12		achievable potential for the base case evaluations as requested in the OEP. Exhibit
13		No. __ [JEA-5] presents analysis of estimated bill impact to as required in the OEP.
14		Exhibit No. ___[JEA-6] presents the economic potential for the sensitivity
15		evaluations as requested in the OEP.
16		
17	**Q.**	**How is JEA governed?**
18	A.	JEA is a municipal electric utility governed by a Board of Directors consisting of
19		seven members appointed by the Mayor of the City of Jacksonville and approved
20		by the City Council. The Board of Directors sets the rates and policies governing
21		JEA's operations. The JEA operating budget requires City Council approval.
22		JEA's board meetings are open to the general public and ratepayers are permitted to
23		participate in board meetings. JEA's Board of Directors sets policies consistent
24		with the best interests of JEA's customers and community.

1   **Q.**   **Please describe JEA's service territory.**

2   A.   JEA's service territory includes the City of Jacksonville and portions of St. Johns

3   and Nassau Counties.

4

5   **Q.**   **Please describe the demographics of JEA's customer base.**

6   A.   JEA serves approximately 425,000 customers. JEA's customers are approximately

7   88 percent residential. Approximately 36 percent of Jacksonville's population lives

8   in households whose income is less than twice the Federal Poverty Level ($31,460

9   for a family of two). For this reason, any impacts on rates resulting from

10   implementation of DSM measures would have a disproportionate impact on low

11   income customers. Furthermore, rental customers have less control over energy

12   conservation efforts than homeowners.

13

14   **Q.**   **Please discuss how JEA's loads have changed since the last goal setting in**

15   **2009.**

16   A.   JEA's load growth has reduced significantly over the last 5 year period. JEA

17   experienced a decline of approximately 6.6 percent in net energy for load (NEL)

18   and approximately 16.5 percent in winter peak demand over the 2009 through 2013

19   period. JEA's average annual growth rates over the next 10 years are projected to

20   be low at approximately 0.5 percent (NEL) and approximately 1.0 percent (winter

21   peak demand).

22

1	Q.	**What are JEA's existing FEECA goals based on?**
2	A.	JEA's existing FFECA goals are based on continuation of the DSM and
3		conservation programs that had been approved by JEA's Board at the time of the
4		last goal-setting proceeding. JEA proposed goals of zero, but committed to
5		continue current DSM program offerings. The Commission set goals for JEA
6		based on its then-existing programs so as not to unduly increase rates. *See* Order
7		No. PSC-10-0647-CO-EG. JEA's existing FEECA goals are presented in Exhibit
8		No. __ [JEA-1]. The current program offerings in JEA's Commission-approved
9		DSM Plan are summarized in Exhibit No. __ [JEA-2].
10		
11	Q.	**What cost-effectiveness test or tests are appropriate for setting JEA's goals**
12		**under FEECA?**
13	A.	Section 366.82, Florida Statutes, requires the Commission to consider, among other
14		things, the costs and benefits to the participating ratepayers as well as the general
15		body of ratepayers as a whole, including utility incentives and participant
16		contributions. However, Section 366.82 does not dictate which cost-effectiveness
17		test must be used to establish DSM goals. JEA believes the Commission should
18		use both the Rate Impact Measure (RIM) and Participant test in setting DSM
19		goals. When used in conjunction with each other, these tests fulfill the
20		Commission's statutory obligations. Specifically, the Participant test includes all
21		of the relevant benefits and costs that a customer who is considering participating
22		in a DSM measure would consider; whereas the RIM test includes all of the
23		relevant benefits and costs that all of the utility's customers as a whole would incur
24		if the utility implements a particular measure.

1   Because the RIM test ensures no impact to customers' rates, it is particularly

2   appropriate in establishing DSM goals for municipal utilities, such as JEA. Local

3   governing is a fundamental aspect of public power. It provides the necessary

4   latitude to make local decisions regarding the community's investment in energy

5   efficiency that best suit our local needs and values. Local decisions are based on

6   input from citizens who can speak out on electric power issues at governing board

7   meetings. Accordingly, as the Commission has recognized in prior proceedings, it

8   is appropriate to set goals based on RIM, but to defer to the municipal utilities'

9   governing bodies to determine the level of investment in any non-RIM based

10   measures. *See, In re: Adoption of Numeric Conservation Goals and Consideration*

11   *of National Energy Policy Act Standards (Section 111)*, Order No. PSC-95-0461-

12   FOF-EG (April 10, 1995).

13

14   **Q.   How did JEA evaluate DSM measures for this proceeding?**

15   A.   JEA evaluated DSM measures for this proceeding in accordance with the direction

16   provided in the Commission Staff's June 17, 2013 workshop on the 2014

17   Conservation Goals and the minimum testimony requirements set forth in the OEP.

18

19   **Q.   Based on the results of the evaluation, what is JEA proposing as its FEECA**

20   **goals?**

21   A.   As further discussed later in this testimony, the evaluations demonstrated that no

22   residential DSM measures passed the RIM test. Although some commercial/

23   industrial measures passed the RIM test, the potential energy savings are so small

24   (0.7 to 0.9 MW) and spread over so many measures (49) that it would be

1		impractical from a design standpoint to develop a DSM plan to cost-effectively
2		achieve such *de minimus* levels of potential. Accordingly, JEA is proposing goals
3		of 0 MW (summer and winter) and 0 MWh (annual energy) for both the residential
4		and commercial/industrial classes.
5		
6	Q.	**Would it be appropriate to establish goals in this proceeding based on JEA's**
7		**current conservation programs?**
8	A.	No. For the 2009 goals, the rate impact associated with JEA's then-existing
9		conservation programs was acceptable to JEA's Board of Directors. Since that
10		time, however, several market factors have changed, including much lower load
11		growth as discussed above, as well as other factors that influence the cost-
12		effectiveness of DSM measures (such as codes and standards). Taken together,
13		these market factors have placed continued upward pressure on rates. Accordingly,
14		JEA is in the process of revising its conservation programs based upon JEA Board
15		policy. Because that effort is ongoing, it would not be appropriate to establish
16		goals based on JEA's current conservation programs.
17		
18	Q.	**Please explain the process used to update the 2009 Technical Potential Study.**
19	A.	The 2009 Technical Potential Study (TPS) was updated using the following three
20		step process:
21		
22		Step 1: Adjust existing measures by removing from the 2009 TPS those baseline
23		measures rendered obsolete by changes to codes and standards, establishing new

1		baseline measures to replace those that became obsolete, and reducing the demand
2		and energy of all dependent measures related to the new baseline measure.
3		
4		Step 2: Add new measures that are commercially-viable competing and
5		complimentary measures that were not included in the 2009 TPS, and calculate the
6		respective demand and energy impacts of those new measures relative to the
7		appropriate baseline measure.
8		
9		Step 3: Adjust for marketplace changes by incorporating the effect of overall
10		service area growth for 2007 (the last year of actual data reflected in the 2009 TPS)
11		through 2012, and reducing overall demand and energy potential to reflect the
12		impact of JEA's DSM programs from 2007 through 2012.
13		
14	**Q.**	**Ultimately, how many DSM measures were identified for analysis?**
15	A.	The study considered 275 unique energy efficiency (EE) measures (including 60
16		residential measures, 91 commercial measures, and 124 industrial measures), seven
17		(7) unique DR measures (five (5) residential measures and two (2)
18		commercial/industrial measures), and three (3) unique PV measures (two (2)
19		residential and one (1) commercial).
20		
21	**Q.**	**How was the timing of avoidable capacity additions determined?**
22	A.	The timing of avoidable capacity additions was determined by analyzing the
23		balance of JEA's existing generating resources (including owned generating units
24		as well as power purchases) and JEA's firm peak demand projections to determine

8

1		when additional capacity is required to maintain a 15 percent reserve margin. The
2		balance of loads and resources was analyzed over the 2014 through 2043 period
3		and indicated additional capacity will initially be required to maintain reserve
4		margins in the year 2036. All avoided capacity additions were modeled as simple
5		cycle combustion turbines. Avoided capacity additions were projected to occur in
6		the years 2036, 2038, 2040, and 2043.
7		
8	**Q.**	**Please discuss how the total avoided costs per kW were calculated.**
9	A.	Total avoided costs per kW were calculated by adding the avoided capital costs per
10		kW to the avoided fixed O&M costs per kW for each unit addition. The total
11		annual avoided costs were calculated by multiplying the costs per kW by the kW
12		output of the combustion turbines, and the resulting total costs for each unit
13		addition were aggregated for all unit additions. The resulting total annual avoided
14		costs were then divided by the total annual avoided capacity, and the annual total
15		avoided costs per kW for all avoided units were used to develop economic potential
16		and achievable potential estimates.
17		
18	**Q.**	**Please discuss the base case fuel price forecast.**
19	A.	Exhibit No. ___ [JEA-3] provides a summary of JEA's current fuel price projections
20		for natural gas, coal (including a blend of petroleum coke for JEA's Northside solid
21		fuel units), uranium, residual fuel oil and diesel fuel. These projections were
22		developed utilizing information obtained from a variety of sources routinely
23		utilized in the utility industry, including U.S. Energy Information Administration

1		(natural gas, residual oil, and diesel fuel), PIRA Energy Group (coal and
2		petroleum coke), and the IntercontinentalExchange (coal).
3		
4	Q.	**Did JEA consider high and low fuel price sensitivities?**
5	A.	Yes. In addition to the base case fuel price forecasts, JEA considered the high and
6		low fuel price sensitivities. The high and low fuel price projections provide a band
7		of plus/minus 25 percent around the base case fuel price projections. Exhibit No.
8		__ [JEA-3] includes the base, high, and low fuel price projections.
9		
10	Q.	**How were marginal energy costs developed?**
11	A.	JEA performed detailed production cost modeling using the PROSYM production
12		cost model, which is recognized as an industry standard production model and was
13		used in JEA's 2009 FEECA goal setting docket. Marginal energy costs were
14		extracted from the model for each year for the base, high, and low fuel price
15		sensitivities. These costs were used in developing the economic and achievable
16		DSM potential.
17		
18	Q.	**How was economic potential defined and estimated for this study?**
19	A.	We utilized the same methodology used for the 2009 conservation goals to
20		determine economic potential for this proceeding. Economic potential was defined
21		as the technical potential of all measures determined to be cost-effective according
22		to two different cost-effectiveness tests, the RIM test and the TRC test. In the RIM
23		"portfolio" case, measures were defined as being cost-effective if the calculated
24		RIM value was greater than or equal to 1.01. Measures with RIM values less than

10

1	1.01 were excluded from the RIM "portfolio" and screened from the achievable
2	potential analysis. Likewise, in the TRC "portfolio" case, measures were defined as
3	being cost-effective if the calculated TRC value was greater than or equal to 1.01.
4	Measures with TRC values less than 1.01 were excluded from the TRC "portfolio"
5	and screened from the achievable potential analysis.
6	
7	It is important to note that for the purpose of evaluating cost-effectiveness to
8	estimate economic potential, the measure-specific RIM values were calculated
9	without administrative costs or incentive costs in the denominator. Similarly, the
10	measure-specific TRC values were calculated without administrative costs in the
11	denominator. Incentives are not considered in the TRC test.
12	
13	**Q.** **How did the analysis account for free-riders?**
14	A. In addition to the economic screening based on the RIM and TRC tests, measures
15	that demonstrated simple payback periods of less than 2 years with no incentive
16	applications were excluded from the RIM and TRC "portfolios" and screened from
17	the achievable potential analyses. Sensitivity evaluations were performed in order
18	to evaluate the impact of shorter (1 year payback) and longer (3 year payback) free-
19	ridership exclusion periods in accordance with the minimum testimony
20	requirements set forth in the OEP.
21	
22	**Q.** **What incentive scenarios were defined for this study?**
23	A. Three measure incentive scenarios were considered – low (up to 33 percent), mid
24	(up to 50 percent), and high (up to 100 percent), but not to the extent that incentives

1   resulted in less than a 2 year payback period – for the TRC and RIM portfolios,

2   respectively.

3

4   For the RIM portfolio, the measure incentives in the high incentive cases were

5   defined as the lesser of the incentive level that produces a simple payback period to

6   the customer of two years or the maximum incentive allowable that produces a

7   RIM ratio of 1.01 (max RIM). The measure incentives in the mid case were defined

8   as the lesser of 50 percent of incremental measure cost, max RIM, or the incentive

9   level that produces a simple payback period to the customer of two years. The

10   measure incentives in the low case were defined as the lesser of 33 percent of

11   incremental measure cost, max RIM, or the incentive level that produces a simple

12   payback period to the customer of two years..

13

14   For the TRC portfolio, the measure incentives in the high case were defined as the

15   lesser of the incentive level that produces a simple payback period to the customer

16   of two years or 100 percent incremental measure cost (max TRC). The measure

17   incentives in the mid case were defined as the lesser of 50 percent of incremental

18   cost or the incentive level that produces a simple payback period to the customer of

19   two years. The measure incentives in the low case were defined as the lesser of 33

20   percent of incremental cost or the incentive level that produces a simple payback

21   period to the customer of two years.

22

1   **Q.**   **What was the next step in the development of achievable potential?**

2   **A.**   After cost-effectiveness screenings and incentive level estimation was complete,

3   the next step in the study was to forecast customer adoption of all passing measures

4   and estimate the energy and peak demand savings impacts of utility-funded

5   incentive programs for the period 2015-2024.

6

7   **Q.**   **How was achievable potential estimated for the cost-effective measures?**

8   **A.**   JEA contracted with Itron to estimate achievable potential using the same model

9   (DSM ASSYST) and methodology as was utilized in JEA's 2009 goals docket

10   (Docket No. 080413). The DSM ASSYST model was developed in the mid-1990s

11   and has been used on a wide variety of EE potential and goals-setting related

12   projects over the past decade. The model has a number of important features and

13   characteristics that make it one of the leading, if not the leading, model of this type

14   in the industry. These features include:

15   • Incorporation of both program information and incentive effects on measure

16   adoption;

17   • Stock accounting of both physical stock and the fraction of the remaining

18   market that is aware and knowledgeable of each measure;

19   • Measure adoption curves that reflect both direct and indirect economic factors;

20   • Internal methodological consistency between forecasts of program adoptions

21   and naturally-occurring adoptions; and

22   • The ability to assign and calibrate adoption curves to individual measures.

23

1	Itron used a method of estimating adoption of EE measures that applies to both
2	program and naturally-occurring analyses. The naturally occurring analysis
3	includes "free riders" and is an estimate of the amount of efficiency adoptions
4	predicted to occur without further program interventions. Whether as a result of
5	natural market forces or aided by a program intervention, the rate at which
6	measures are adopted is modeled in the method as a function of the following
7	factors:

8 • The availability of the adoption opportunity as a function of capital equipment

9   turnover rates and changes in building stock over time;

10 • Customer awareness and knowledge of the efficiency measure;

11 • The cost-effectiveness of the efficiency measure; and

12 • The relative importance of indirect costs and benefits associated with the

13   efficiency measure.

14

15 Only measures that pass the measure screening criteria were put into the

16 penetration model for estimation of customer adoption.

17

18 **Q.** **Are the methodology and models used to develop achievable potential**

19 **estimates analytically sound?**

20 **A.** Yes. The methods and models used have a history of success because they

21 appropriately blend theory and practice. The models use advanced stock and

22 awareness accounting along with measure-specific adoption curves that reflect real-

23 world differences in end user adoption of efficiency measures as a function of

24 direct and indirect measure attributes.

1   Q.   **Have these methodologies and models been relied upon by other commissions**

2   **or governmental agencies?**

3   A.   Yes, these methods and models have been used to develop potential estimates and

4   goals in a variety of jurisdictions in addition to being used in Florida's FEECA goal

5   setting process in 2009. For example, the methods and models were used to

6   conduct the potential studies in California that were used by the California Public

7   Utilities Commission (CPUC) to set energy efficiency goals for 2004-2011. The

8   methods and models were also used to complete a report on energy efficiency goals

9   for the Texas Legislature pursuant to a contract with the PUCT. The methods and

10   models have been used for many other related projects including those for Xcel

11   Energy (Colorado), PNM, Idaho Power, Los Angeles Department of Water &

12   Power, and Northwestern Energy.

13

14 Q.   **Do JEA's proposed goals adequately reflect the costs and benefits to customers**

15   **participating in the measure, pursuant to Section 366.82(3)(a), F.S?**

16 A.   Yes. JEA's proposed goals are based on forecasts of achievable potential that are

17   driven primarily by measure-level assessments of cost-effectiveness to customers.

18   Specifically, customer cost-effectiveness is assessed using the Participant Test,

19   where benefits are calculated based on customer bill savings and costs are based on

20   participant costs of acquiring and installing the energy efficiency measure (net of

21   utility program incentives). Both the participant benefits and participant costs are

22   assessed on present value basis over the life of the measure.

23

1   Q.   **Do the Company's proposed goals adequately reflect the costs and benefits to**

2   **the general body of ratepayers as a whole, including utility incentives and**

3   **participant contributions, pursuant to Section 366.82(3)(b), F.S.?**

4   A.   Yes. JEA's proposed goals are based on achievable potential that included

5   consideration of the costs and benefits to the general body of ratepayers as a whole,

6   including utility incentives and participant contributions, through use of the RIM

7   and Participant tests.

8

9   Q.   **Do JEA's proposed goals adequately reflect the need for incentives to promote**

10   **both customer-owned and utility-owned energy efficiency and demand-side**

11   **renewable energy systems, pursuant to Section 366.82, F.S.?**

12   A.   Yes. We have comprehensively analyzed customer-owned energy efficiency

13   measures and none were found to be cost-effective. JEA's load forecast reflects the

14   impacts of net metering associated with customer-owned rooftop solar photovoltaic

15   (PV) systems, and this load forecast was used as the basis for the cost-effectiveness

16   analysis performed for this Docket. As such, incentives to promote customer-

17   owned demand-side renewable energy systems are adequately reflected in JEA's

18   proposed goals. Utility-owned energy efficiency and renewable energy systems are

19   supply-side issues.

20

21   Q.   **Do JEA's proposed goals adequately reflect the costs imposed by State and**

22   **Federal regulations on the emission of greenhouse gases, pursuant to Section**

23   **366.82(3)(d), F.S.?**

1   A.   There currently are no costs imposed by State and Federal regulations on the

2   emissions of greenhouse gases (GHG). Although the US Environmental Protection

3   Agency (EPA) is expected to propose GHG emissions guidelines for existing

4   power plants later this year, there is no clear indication of what those guidelines

5   may ultimately require or associated costs. EPA has proposed GHG new source

6   performance standards for new units, but JEA does not forecast any new units until

7   well beyond the 2015 through 2024 goal setting period. While there is much

8   speculation on the potential for greenhouse gas emissions regulation, it would be

9   inappropriate to establish DSM goals that would increase customer rates based on

10   speculation related to yet-to-be defined potential regulations of emissions of

11   greenhouse gases.

12

13   Q.   **Do the Company's proposed goals use an appropriate methodology in the**

14   **consideration of free riders?**

15   A.   Yes. The screening criteria based on simple payback to the customer (2 years or

16   less) were designed to remove measures from the achievable potential forecasts that

17   exhibit the key characteristic most associated with high levels of free-ridership in

18   utility rebate programs, i.e. measures with naturally high levels of cost-

19   effectiveness to the customer. The sensitivity of total achievable potential to this

20   particular screening criterion was tested using alternative simple payback screening

21   values (1 year and 3 years). In addition to this screening step, the naturally

22   occurring analysis performed in estimating achievable potential represents an

23   estimate of the amount of "free riders" that are reasonably expected to participate in

24   the particular program offerings simulated.   In this sense, the payback-based

1		screening criteria were implemented to develop portfolios with necessarily low
2		free-ridership levels, and within the achievable potential forecasts for those
3		portfolios, the forecasting methodology produces explicit estimates of the expected
4		level of free-ridership within those programs.
5		
6	**Q.**	**Please discuss the economic and achievable potential for residential and**
7		**commercial/industrial demand and energy reductions for the base fuel**
8		**forecast, including the effects of free-ridership, for both RIM-based and TRC-**
9		**based evaluations.**
10	A.	Exhibit No. __ [JEA-4] summarizes the mathematical results of the cost effective
11		analysis. The analysis results indicate no achievable potential for the residential and
12		commercial classes when utilizing the RIM test while indicating minimal
13		achievable potential for the industrial class. A review of the measures that make
14		up the industrial class's RIM test based achievable potential reveals the following:

15   •   The 0.1 MW (summer), 0.1 MW (winter), and 1.2 GWh (annual energy)

16   values represent the sum of potential across 49 measures, resulting in an

17   average potential of 0.02 GWh and 0.002 MW savings per measure.

18   •   The incentive levels available to these measures average less than 2% of the

19   incremental cost of the measure.

20   Given these characteristics, the minimal achievable results for the industrial class

21   represent the cost effectiveness model's mathematical result. While correct, they

22   are impractical from both a goal-setting and a program design point of view. It is

23   impractical to establish programs to acquire *di minimus* levels of potential. It is

24   doubtful that customer would respond significantly to incentives equivalent to two

1	(2) percent of incremental cost and such minor rebate levels would be difficult to
2	market effectively. Together, these characteristics would result in programs with
3	high implementation costs relative to the size of efficiency resource being acquired.
4	Furthermore, it is reasonable to expect high levels of participant free ridership in
5	such industrial programs (compared to residential or commercial programs), as has
6	been the history of such programs administered by utilities across North America.
7	
8	**Q.** **Please provide an estimate of the average residential customer bill impact for**
9	**the RIM-based and TRC-based achievable portfolios.**
10	A. There is no incremental impact based on the RIM achievable portfolio, as there are
11	no DSM measures that pass the RIM test for JEA. However, Exhibit No. __ [JEA-
12	5] presents analysis of the estimated bill impacts on residential customers for the
13	TRC achievable portfolio. As shown in Exhibit No. __ [JEA-5], the estimated bill
14	impact of the TRC achievable portfolio would be approximately 18.5 percent by
15	2024.
16	
17	**Q.** **Please provide the economic potential for residential and**
18	**commercial/industrial winter and summer demand and annual energy savings**
19	**for the following sensitivities, for both a RIM-based evaluation and a TRC-**
20	**based evaluation: (1) higher fuel prices, (2) lower fuel prices, (3) shorter free-**
21	**ridership exclusion period, and (4) longer free-ridership exclusion periods.**
22	A. That information is presented in Exhibit No. __ [JEA-6].
23	

1   **Q.**   **How are supply-side efficiencies incorporated into JEA's planning process and**

2   **how do they impact DSM programs?**

3   A.   JEA continually monitors the operation of its generating units and determines

4   methods to utilize the system in the most efficient manner. Improvements to the

5   efficiency of supply-side resources (i.e. lower operating costs) should reduce the

6   cost-effectiveness of DSM programs, all else being equal.

7

8   **Q.**   **What goals should be established for increasing the development of demand-**

9   **side renewable energy systems, pursuant to Section 366.82(2), F.S.?**

10   A.   The cost-effectiveness analysis of demand-side renewable energy systems shows

11   that they are not cost-effective. Therefore, no goals should be established.

12

13   **Q.**   **Should the Company's existing Solar Pilot Programs be extended and, if so,**

14   **should any modifications be made to them?**

15   A.   JEA was not required under the 2009 FEECA goals to offer Solar Pilot Programs.

16

17   **Q.**   **Does this conclude your testimony?**

18   A.   Yes it does.

19

	RIM Evaluation			TRC Evaluation		
Economic Potential - Base Fuel	**Summer MW**	**Winter MW**	**Annual GWh**	**Summer MW**	**Winter MW**	**Annual GWh**
Residential	0	0	0	42.2	12.2	199.1
Commercial/Industrial	11.5	7.3	84.6	58.2	16.0	278.3
Achievable Potential - Base Fuel	**Summer MW**	**Winter MW**	**Annual GWh**	**Summer MW**	**Winter MW**	**Annual GWh**
Residential	0	0	0	14.0	2.8	49.8
Commercial/Industrial	0.1	0.1	1.2	10.1	2.5	50.9

	RIM Evaluation			TRC Evaluation		
Economic Potential - High Fuel	**Summer MW**	**Winter MW**	**Annual GWh**	**Summer MW**	**Winter MW**	**Annual GWh**
Residential	0	0	0	51.76	20.59	320.57
Commercial/Industrial	11.43	7.23	83.75	60.70	16.43	290.23
Economic Potential - Low Fuel	**Summer MW**	**Winter MW**	**Annual GWh**	**Summer MW**	**Winter MW**	**Annual GWh**
Residential	0	0	0	25.28	6.28	126.85
Commercial/Industrial	0	0	0	46.88	13.05	225.10
Economic Potential - 1-Year Free-Ridership Exclusion	**Summer MW**	**Winter MW**	**Annual GWh**	**Summer MW**	**Winter MW**	**Annual GWh**
Residential	0	0	0	74.83	52.22	388.57
Commercial/Industrial	24.68	18.23	185.95	90.51	37.94	487.3
Economic Potential - 3-Year Free-Ridership Exclusion	**Summer MW**	**Winter MW**	**Annual GWh**	**Summer MW**	**Winter MW**	**Annual GWh**
Residential	0	0	0	7.61	6.73	55.21
Commercial/Industrial	11.07	7.01	80.65	43.91	12.62	195.86