

Hopping Green & Sams

Attorneys and Counselors

Writer's Direct Dial Number
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March 30, 2010

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COMMISSION
CLERK

BY HAND DELIVERY

100157-EG

Ann Cole
Director, Office of the Commission Clerk
Florida Public Service Commission
2540 Shumard Oak Boulevard
Tallahassee, FL 32399-0850

Re: Docket No. _____
Petition of JEA for Approval of Demand Side Management Plan

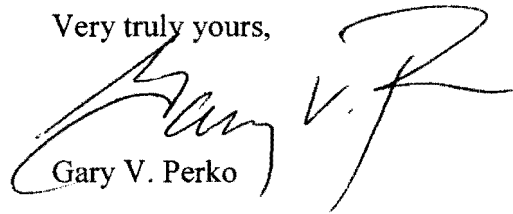
Dear Ms. Cole:

On behalf of JEA, enclosed for filing in the above docket are the original and eight copies of JEA's Petition for Approval of Demand Side Management Plan, along with a diskette containing the Petition in Word format.

*not enclosed
M. McLean*

Please stamp and return the enclosed extra copy of this filing. If you have any questions regarding this filing, please give me a call at 425-2359.

Very truly yours,



Gary V. Perko

GVP/ica
Enclosures

COM _____
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ADM _____
OPC _____
CLK _____

DOCUMENT NUMBER-DATE

02303 MAR 30 0

ORIGINAL

BEFORE THE PUBLIC SERVICE COMMISSION

In re: Petition of JEA for approval of demand
side management plan.

DOCKET NO. 100157-EG

FILED: March 30, 2010

**JEA'S PETITION FOR APPROVAL OF
DEMAND SIDE MANAGEMENT PLAN**

Pursuant to Sections 366.81 and 366.82, Florida Statutes ("F.S."), and Rule 25-17.0021, Florida Administrative Code ("F.A.C."), JEA petitions the Florida Public Service Commission to approve the demand side management plan provided as Exhibit "A" to this Petition and incorporated by reference herein. In support of this Petition, JEA states:

1. The name and address of the affected agency are: Florida Public Service Commission, 4075 Esplanade Way, Tallahassee, Florida, 32399-0850.

2. The name and address of the petitioner are: JEA, 21 West Church Street, Jacksonville, Florida, 32202.

3. The persons to whom orders, notices, pleadings, motions and other documents for JEA should be served are:

Richard J. Vento
Director of Corporate
Data Integration
21 West Church Street
Jacksonville, FL 32202
ventr@jea.com

Gary V. Perko
Hopping Green & Sams, P.A.
119 S. Monroe St., Suite 300
P.O. Box 6526 (32314)
Tallahassee, FL 32301
gperko@hgslaw.com

4. JEA is a utility within the meaning of Section 366.82(1), Florida Statutes, and is therefore subject to the Commission's jurisdiction under to the Florida Energy Efficiency and Conservation Act ("FEECA").

DOCUMENT NUMBER: 02303
DATE: MAR 30 2010
FPSC-COMMISSION CLERK

5. Pursuant to Section 366.82(6), F.S., the Commission must review the conservation goals of each utility subject to FEECA at least every five years. In accordance with that requirement, the Commission established JEA's residential and commercial/industrial numeric conservation goals for the 2010 through 2019 period in Docket No. 080413-EI. As stated in Order No. PSC-09-0855-FOF-EG issued in Docket No. 080413-EI on December 30, 2009, the Commission chose to set goals based upon JEA's current programs "so as not to unduly increase rates." The Commission reaffirmed this understanding in deciding to grant JEA's motion for reconsideration of Order No. PSC-09-0855-FOF-EG on March 16, 2010.

6. Rule 25-17.0021(4), F.A.C., requires each FEECA utility to submit a demand side management plan designed to meet the utility's approved goals within 90 days of a final order establishing the goals. The demand side management plan provided as Exhibit "A" to this Petition includes the information required in Rule 25-17.0021(4), F.A.C.

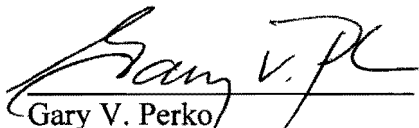
7. JEA is not aware of any disputed issues of material fact.

8. JEA is entitled to relief pursuant to Sections 366.82, F.S., and Rule 25-17.0021, F.A.C.

WHEREFORE, JEA respectfully requests that the Commission approve the demand side management plan provided as Exhibit "A" to this Petition.

RESPECTFULLY SUBMITTED this 30th day of March, 2010.

HOPPING GREEN & SAMS, P.A.

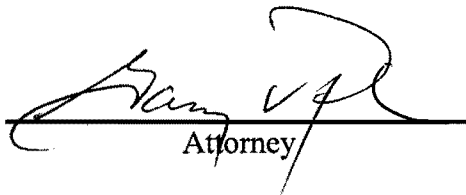
By: 
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(850) 222-7500

Attorneys for JEA

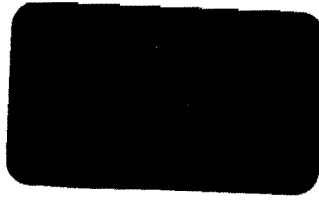
CERTIFICATE OF FILING AND SERVICE

I hereby certify that the foregoing Petition for Approval of Demand Side Management Plan was filed with the Clerk of the Florida Public Service Commission and that a true and correct copy was served upon the following by hand delivery on this 30th day of March 2010:

Katherine E. Fleming, Esq.
Senior Attorney
Office of General Counsel
Florida Public Service Commission
2540 Shumard Oak Blvd.
Tallahassee, FL 32399-0850



Attorney



March 30, 2010

JEA DEMAND SIDE MANAGEMENT PLAN

ORIGINAL

**I. PROGRAM GOALS
AND
IMPACT**

BACKGROUND: The Florida Energy Efficiency and Conservation Act (FEECA) requires the Florida Public Service Commission (PSC) to adopt appropriate goals designed to increase the conservation of expensive resources, such as petroleum fuels, to reduce and control the growth rates of electric consumption and weather-sensitive peak demand. Pursuant to Section 366.82(6), F.S., the PSC must review the conservation goals of each utility subject to FEECA at least every five years. Pursuant to that requirement, the Commission has established JEA's residential and commercial/industrial numeric conservation goals for the 2010 through 2019 period. As stated in Order No. PSC-09-0855-FOF-EG issued December 30, 2009; the PSC chose to set goals based upon JEA's current programs "so as not to unduly increase rates."

In accordance with the PSC's decision to grant JEA's motion for reconsideration of Order No. PSC-09-0855-FOF-EG, JEA's final PSC-established annual goals, along with JEA's projected annual DSM peak demand and energy reductions (corresponding to the programs discussed in subsequent sections of this document) are presented in Tables I-1, I-2 and I-3. The rate impact for a typical residential customer is shown in Table I-4.

A. GOALS & IMPACT

Table I-1

Residential Market Segment Demand and Energy Data

YEAR	WINTER PEAK MW REDUCTION			SUMMER PEAK MW REDUCTION			GWH ENERGY REDUCTION		
	PROPOSED PLAN	COMMISSION APPROVED GOAL	% VARIANCE	PROPOSED PLAN	COMMISSION APPROVED GOAL	% VARIANCE	PROPOSED PLAN	COMMISSION APPROVED GOAL	% VARIANCE
2010	2.4	1.0	138.0%	2.1	1.2	70.0%	14.8	5.4	174.3%
2011	2.4	1.0	135.0%	1.8	1.2	50.9%	11.8	5.4	118.4%
2012	2.1	1.0	106.0%	1.8	1.2	50.9%	11.8	5.4	118.4%
2013	2.1	1.0	99.5%	1.8	1.2	47.1%	11.2	5.4	107.2%
2014	2.1	1.0	99.5%	1.8	1.2	47.1%	11.2	5.4	107.2%
2015	1.9	1.0	84.5%	1.7	1.2	38.1%	9.7	5.4	81.0%
2016	1.9	1.0	84.5%	1.7	1.2	38.1%	9.7	5.4	81.0%
2017	1.9	1.0	84.5%	1.7	1.2	38.1%	9.7	5.4	81.0%
2018	1.9	1.0	84.5%	1.7	1.2	38.1%	9.7	5.4	81.0%
2019	1.9	1.0	84.5%	1.7	1.2	38.1%	9.7	5.4	81.0%
Total	20.6	10.3	100.1%	17.6	12.1	45.7%	109.3	53.8	103.1%

Note: Variance calculated utilizing the formula: (Actual -Goal) / Goal

Table I-2

Commercial Market Segment Demand and Energy Data

YEAR	WINTER PEAK MW REDUCTION			SUMMER PEAK MW REDUCTION			GWH ENERGY REDUCTION		
	PROPOSED PLAN	COMMISSION APPROVED GOAL	% VARIANCE	PROPOSED PLAN	COMMISSION APPROVED GOAL	% VARIANCE	PROPOSED PLAN	COMMISSION APPROVED GOAL	% VARIANCE
2010	1.7	0.4	311.2%	1.3	0.6	97.46%	14.9	10.1	46.9%
2011	1.6	0.4	301.2%	1.0	0.6	51.31%	11.1	10.1	9.1%
2012	1.3	0.4	225.3%	1.2	0.6	90.47%	11.9	10.1	17.8%
2013	1.1	0.4	185.6%	0.9	0.6	42.02%	10.3	10.1	1.5%
2014	1.1	0.4	185.6%	0.9	0.6	42.02%	10.3	10.1	1.5%
2015	0.9	0.4	136.6%	0.8	0.6	20.39%	8.5	10.1	-16.2%
2016	0.9	0.4	136.6%	0.8	0.6	20.39%	8.5	10.1	-16.2%
2017	0.9	0.4	136.6%	0.8	0.6	20.39%	8.5	10.1	-16.2%
2018	0.9	0.4	136.6%	0.8	0.6	20.39%	8.5	10.1	-16.2%
2019	0.9	0.4	136.6%	0.8	0.6	20.39%	8.5	10.1	-16.2%
Total	11.6	4.0	189.2%	9.1	6.4	42.52%	101.1	101.5	-0.4%

Note: Variance calculated utilizing the formula: (Actual -Goal) / Goal

**Table I-3
Total FEECA Demand and Energy Data**

YEAR	WINTER PEAK MW REDUCTION			SUMMER PEAK MW REDUCTION			GWH ENERGY REDUCTION		
	PROPOSED TARGET	COMMISSION APPROVED GOAL	% VARIANCE	PROPOSED TARGET	COMMISSION APPROVED GOAL	% VARIANCE	PROPOSED TARGET	COMMISSION APPROVED GOAL	% VARIANCE
2010	4.1	1.4	186.6%	3.3	1.8	79.50%	29.7	15.5	91.1%
2011	4.0	1.4	181.6%	2.8	1.8	51.05%	22.8	15.5	47.0%
2012	3.4	1.4	139.5%	3.0	1.8	64.57%	23.7	15.5	52.7%
2013	3.2	1.4	123.7%	2.7	1.8	45.33%	21.5	15.5	38.2%
2014	3.2	1.4	123.7%	2.7	1.8	45.33%	21.5	15.5	38.2%
2015	2.8	1.4	99.1%	2.4	1.8	32.01%	18.2	15.5	17.5%
2016	2.8	1.4	99.1%	2.4	1.8	32.01%	18.2	15.5	17.5%
2017	2.8	1.4	99.1%	2.4	1.8	32.01%	18.2	15.5	17.5%
2018	2.8	1.4	99.1%	2.4	1.8	32.01%	18.2	15.5	17.5%
2019	2.8	1.4	99.1%	2.4	1.8	32.01%	18.2	15.5	17.5%
Total	32.196	14.305	125.06%	26.728	18.487	44.58%	210.356	155.279	35.47%

Note: Variance calculated utilizing the formula: (Actual - Goal) / Goal

**Table I-4
Residential Rate Impact**

Estimated Impact for a Residential Customer Using 1,200 kWh/month	
Calendar year	2010-2019
Percent Increase	0.66%
Current Monthly Cost	\$154.80
Monthly Impact	\$1.03
Current Annual Cost	\$1,857.60
Annual Impact	\$12.34

Rule 25-17.0021, F.A.C. requires each FEECA utility to submit a demand side management plan designed to meet the utilities approved goals within 90 days of a final order establishing the utility's goals. JEA's demand side management plan is provided in the following sections.

II. PROGRAM INTRODUCTION

II. PROGRAM INTRODUCTION

JEA's proposed Demand Side Management (DSM) Portfolio consists of six (6) residential programs, four (4) commercial programs:

A. Residential Programs

- **Residential Energy Audit Program** uses auditors to examine homes, educate customers and make recommendations on low-cost or no-cost energy-saving practices and measures.
- **Residential Energy Efficient Products** promotes the use of energy efficient lighting and other energy efficient products in homes by offering a financial incentive. JEA includes messaging concerning the proper disposal of bulbs containing mercury.
- **Green Built Homes of Florida** encourages the application of energy efficient construction and products in new homes by offering a financial incentive to builders and developers.
- **Residential Solar Water Heating** pays a financial incentive to customers to encourage the use of solar water heating technology.
- **Residential Solar Net Metering** promotes the use of solar photovoltaic systems by purchasing excessive power from residential customers implementing these systems.
- **Neighborhood Efficiency Program** offers education concerning the efficient use of energy & water as well as the direct installation of an array of energy & water efficient measures at no cost to income qualified customers.

B. Commercial Programs

- **Commercial Energy Audit Program** uses auditors to examine business, educate customers and make recommendations on low-cost or no-cost energy-saving practices and measures.
- **Commercial Energy Efficient Products** promotes the use of energy efficient lighting and other energy efficient products in businesses by offering a financial incentive. JEA includes messaging concerning the proper disposal of bulbs containing mercury.
- **District Chilled Water Program** utilizes district chilled water to reduce energy costs, other operating costs as well as capital costs.
- **Commercial Solar Net Metering** promotes the use of solar photovoltaic systems by purchasing excessive power from commercial customers implementing these systems.

C. ECONOMIC PERFORMANCE OF DEMAND SIDE MANAGEMENT PROGRAMS

Table II-1
Summary of DSM Programs
Included in Proposed Plan
Period 2010-2019

DSM PROGRAM	Rate Impact Measure Test			Participant Test			Total Resource Cost Test		
	PV Total Benefits (\$000)	PV Total Costs (\$000)	B / C Ratio	PV Total Benefits (\$000)	PV Total Costs (\$000)	*B / C Ratio	PV Total Benefits (\$000)	PV Total Costs (\$000)	B / C Ratio
Residential Energy Audits	2,535	7,043	0.36	1,877	14	>99.99	2,535	2,348	1.08
Residential Energy Efficient Products	14,594	33,380	0.44	19,961	11,567	1.73	14,594	13,571	1.08
Green Built Homes of Florida	2,882	6,473	0.45	2,689	1,426	1.89	2,882	1,653	1.74
Residential Solar Water Heating	2,365	6,419	0.37	2,757	4,358	0.63	2,365	4,763	0.50
Residential Solar Net Metering	1,015	1,965	0.52	751	6,978	0.11	1,015	7,058	0.14
Neighborhood Efficiency Program	4,992	11,452	0.44	3,697	7	>99.99	4,992	2,186	2.28
Business Energy Audits	1,196	1,900	0.63	492	2	>99.99	1,196	866	1.38
Commercial Energy Efficient Products	19,946	23,268	0.86	15,537	13,249	1.17	19,946	15,674	1.27
District Chilled Water	501	688	0.73	251	0	>99.99	501	269	1.87
Commercial Solar Net Metering	432	442	0.98	178	3,188	0.06	432	3,255	0.13

* >99.99 customers do not pay for these measures

D. PROGRAM MONITORING AND EVALUATION

JEA will determine on a program-by-program basis the most cost effective evaluation method based on factors such as cost, participation levels, program performance, dollars invested, the level of uncertainty of measure performance, etc.

**III. RESIDENTIAL
CONSERVATION PROGRAMS**

III. RESIDENTIAL CONSERVATION PROGRAMS

JEA's DSM Plan includes six (6) residential programs:

- A. Residential Energy Audits**
- B. Residential Energy Efficient Products**
- C. Green Built Homes of Florida** (new residential construction)
- D. Residential Solar Water Heating**
- E. Residential Solar Net Metering**
- F. Neighborhood Efficiency Program** - (low income homes)

Each program is described in detail in the following sections.

A. RESIDENTIAL ENERGY AUDIT PROGRAM

Program Start Date: Originally started in 1978 and continuing from 2010 thru 2019

Policies and Procedures

JEA offers a home energy survey for all residential customers in the JEA service territory. This service is offered at no charge to our customers. A JEA representative will inspect the home and then offer cost-effective ideas designed to help lower energy costs. Areas of the customers home that are inspected include: attic insulation, windows and caulking, weather stripping, water heaters, water temperature, air conditioning and heating system visual inspections, supply air & return air temperature readings, and refrigerator/freezer inspection. JEA representatives also use a wide variety of tools and literature for customer education during the inspection. No cost measures such as air conditioning & heating thermostat temperature settings, proper use of ceiling fans, water heater settings, refrigeration temperature settings, management of plug (vampire) loads, management of computer, monitor & printer loads, management of lighting systems and cleaning surfaces of heat exchangers are encouraged. In addition to the energy audit, we also offer free water management evaluations. The services listed above are available to JEA customers by contacting the JEA business office by phone or email.

Participation Estimates for the Program

Year	Total Number of Customers	Total Number of Eligible Customers	Annual Number of Program Participants	Cumulative Penetration Level (%) Calculated
2010	368,784	368,784	2,800	0.8%
2011	372,471	372,471	2,800	1.5%
2012	376,196	376,196	2,800	2.2%
2013	379,958	379,958	2,800	2.9%
2014	383,758	383,758	2,800	3.6%
2015	387,595	387,595	2,800	4.3%
2016	391,471	391,471	2,800	5.0%
2017	395,386	395,386	2,800	5.7%
2018	399,340	399,340	2,800	6.3%
2019	403,333	403,333	2,800	6.9%

Savings Estimates

At the Meter						
Year	Per Customer kWh Reduction	Per Customer Winter kW Reduction	Per Customer Summer kW Reduction	Total Annual kWh Reduction	Total Annual Winter kW Reduction	Total Annual Summer kW Reduction
2010	200	0.100	0.100	560,000	280.0	280.0
2011	200	0.100	0.100	560,000	280.0	280.0
2012	200	0.100	0.100	560,000	280.0	280.0
2013	200	0.100	0.100	560,000	280.0	280.0
2014	200	0.100	0.100	560,000	280.0	280.0
2015	200	0.100	0.100	560,000	280.0	280.0
2016	200	0.100	0.100	560,000	280.0	280.0
2017	200	0.100	0.100	560,000	280.0	280.0
2018	200	0.100	0.100	560,000	280.0	280.0
2019	200	0.100	0.100	560,000	280.0	280.0

At the Generator						
Year	Per Customer kWh Reduction	Per Customer Winter kW Reduction	Per Customer Summer kW Reduction	Total Annual kWh Reduction	Total Annual Winter kW Reduction	Total Annual Summer kW Reduction
2010	208	0.104	0.104	582,960	291.5	291.5
2011	208	0.104	0.104	582,960	291.5	291.5
2012	208	0.104	0.104	582,960	291.5	291.5
2013	208	0.104	0.104	582,960	291.5	291.5
2014	208	0.104	0.104	582,960	291.5	291.5
2015	208	0.104	0.104	582,960	291.5	291.5
2016	208	0.104	0.104	582,960	291.5	291.5
2017	208	0.104	0.104	582,960	291.5	291.5
2018	208	0.104	0.104	582,960	291.5	291.5
2019	208	0.104	0.104	582,960	291.5	291.5

Impact Evaluation Plan

The home energy survey covers a wide range of cost-saving opportunities, including various behavioral and technological recommendations that may be implemented by the customer. A follow-up survey to participants would support the determination of what actions have been specifically implemented as a result of the energy audit. Using these results in conjunction with site-specific engineering estimates would likely be the most cost-effective method for evaluating program impacts. Alternatively, a statistically based analysis may be considered, depending on program participation levels actually experienced.

B. RESIDENTIAL ENERGY EFFICIENT PRODUCTS

Program Start Date: Originally started in 2007 and continuing from 2010 thru 2019

Policies and Procedures

In partnership with retail stores within the JEA service territory and manufacturers of ENERGY STAR Compact Fluorescent Light bulbs (CFL) and certain ENERGY STAR appliances, JEA offers in-store coupons and markdown prices for over 30 varieties of ENERGY STAR CFLs, energy efficient light fixtures, room air conditioning units, refrigerators, dish washers and clothes washers for JEA customers. The program is conducted by an implementation contractor. In response to customer concerns, the program has been expanded to include a used-CFL disposal program with over 40 retailers acting as Green Partner disposal sites for customer. Through locally based field representatives, JEA rebate coupons and discount price markers are displayed at participating stores and store managers provide prominent shelf displays for the products. The local field representatives also provide in-store events to promote the CFL and ENERGY STAR appliances while responding directly to customer questions and concerns and distributing JEA fact sheets on energy savings. The program is open to all JEA customers including commercial customers as well.

Participation Estimates for the Program

Year	*Total Number of Participants	*Total Number of Eligible Participants	Annual Number of Program Participants	Cumulative Penetration Level (%) Calculated
2010	1,843,918	1,843,918	13,590	0.7%
2011	1,862,357	1,862,357	10,281	1.3%
2012	1,880,981	1,880,981	10,281	1.8%
2013	1,899,791	1,899,791	10,281	2.3%
2014	1,918,789	1,918,789	10,281	2.9%
2015	1,937,977	1,937,977	10,281	3.4%
2016	1,957,356	1,957,356	10,281	3.8%
2017	1,976,930	1,976,930	10,281	4.3%
2018	1,996,699	1,996,699	10,281	4.8%
2019	2,016,666	2,016,666	10,281	5.3%

*Eligible participants are equivalent to the number of DSM measures per customer

Savings Estimates

At the Meter						
Year	Per Participant kWh Reduction	Per Participant Winter kW Reduction	Per Participant Summer kW Reduction	Total Annual kWh Reduction	Total Annual Winter kW Reduction	Total Annual Summer kW Reduction
2010	810.2	0.089	0.066	11,011,244	1,207.2	902.7
2011	789.8	0.087	0.066	8,119,982	890.3	680.5
2012	789.8	0.087	0.066	8,119,982	890.3	680.5
2013	733.2	0.080	0.062	7,538,354	826.6	635.8
2014	733.2	0.080	0.062	7,538,354	826.6	635.8
2015	601.4	0.066	0.052	6,183,428	678.1	531.6
2016	601.4	0.066	0.052	6,183,428	678.1	531.6
2017	601.4	0.066	0.052	6,183,428	678.1	531.6
2018	601.4	0.066	0.052	6,183,428	678.1	531.6
2019	601.4	0.066	0.052	6,183,428	678.1	531.6

At the Generator						
Year	Per Participant kWh Reduction	Per Participant Winter kW Reduction	Per Participant Summer kW Reduction	Total Annual kWh Reduction	Total Annual Winter kW Reduction	Total Annual Summer kW Reduction
2010	843.5	0.092	0.069	11,462,705	1,256.7	939.7
2011	822.2	0.090	0.069	8,452,901	1,225.1	708.4
2012	822.2	0.090	0.069	8,452,901	926.8	708.4
2013	763.3	0.084	0.064	7,847,427	860.5	661.8
2014	763.3	0.084	0.064	7,847,427	860.5	661.8
2015	626.1	0.069	0.054	6,436,949	705.9	553.4
2016	626.1	0.069	0.054	6,436,949	705.9	553.4
2017	626.1	0.069	0.054	6,436,949	705.9	553.4
2018	626.1	0.069	0.054	6,436,949	705.9	553.4
2019	626.1	0.069	0.054	6,436,949	705.9	553.4

Impact Evaluation Plan

Energy efficient product measures include items that have well established deemed savings. With an upstream program where utility interaction is limited to retailers, a survey approach may be the most effective method to determine overall program participation levels, including installation numbers, surveys and sales data along with deemed savings will likely be the main approach used to measure program impacts.

C. GREEN BUILT HOMES OF FLORIDA PROGRAM

Program Start Date: Originally started in 2006 and continuing from 2010 thru 2019

Policies and Procedures

Green Built Homes of Florida is an incentive-based program offered by JEA and the Northeast Florida Builders Association which promotes the use of green building practices in new single-family homes constructed in JEA's electric and water service area. The program promotes resource-efficient home construction by serving as an umbrella for six of the state's leading building standards. To be eligible for participation in the Green Built Homes of Florida program, you must build a new single-family home in the JEA electric service area that meets one or more of these certifications:

- Energy Star
- Builders Challenge
- Florida Water Star
- Florida Green Building Coalition
- LEED for Homes
- NAHB Green Home Standard

Program Components

Energy Star and Builders Challenge: The Energy Star program was launched in 1992 by the U.S. Environmental Protection Agency and the U.S. Department of Energy to promote the efficient use of energy. Common features of an Energy Star-qualified home include tight construction, improved insulation, high-performance windows, tightly sealed ducts and highly efficient, right-sized heating and cooling equipment. Third-party certification that a home meets Energy Star standards is provided by a Florida Class 1 Energy Rater. The Builders Challenge program is very similar to Energy Star; it just requires a higher level of efficiency.

Florida Water Star: The St. Johns River Water Management District created and administers the Florida Water Star program. Florida Water Star-certified homes incorporate water-efficient appliances and irrigation systems in their design and construction. Common features of a Florida Water Star-certified home include high-efficiency water-consuming appliances, such as clothes and dish washers; high efficiency or maximum performance toilets, a Florida friendly landscape; and water-conserving irrigation. Third-party certification that a home meets Florida Water Star standards is provided by a Florida Water Star certifying agent.

Florida Green Building Coalition (FGBC): Created to provide a statewide green-building program, the Florida Green Building Coalition is a nonprofit Florida corporation seeking to establish clear and meaningful principles for qualifying structures as green. Common features of the Florida Green Building Coalition-certified home include those listed under Energy Star and Florida Water Star as well as other features unique to the FGBC standards. Third-party certification that a home meets FGBC standards is provided by a Florida Green Building Coalition certified inspector. The Florida Green Building Coalition is a fully green home

certification program endorsed by the Florida Association of Home Builders as comparable to its own national green building program.

LEED-H and NAHB Green Home Certifications: The U.S. Green Building Council Leadership in Energy and Environmental Design for Homes (LEED-H) and NAHB Green Home Standard are voluntary rating systems that promote the design and construction of high performance green homes. They are nationally recognized certifications for green building. LEED-H and NAHB certification recognizes and rewards builders for meeting the highest performance standards, and gives homeowners confidence that their home is durable, healthy and environmentally friendly. A LEED-H or NAHB green home uses less energy, water, and natural resources; creates less waste; and is healthier and more comfortable for the occupants. Benefits include lower energy and water bills; reduced greenhouse gas emissions; and less exposure to mold, mildew and other indoor toxins. The net cost of owning the home is comparable or less than that of owning a conventional home.

Incentives

Energy Star – The base rebate for an Energy Star home is \$300. This rebate corresponds to a HERS Index of 77. For each HERS Index point below 77, add \$20. So the formula is $\$300 + \$20 \times (77 - \text{HERS Index})$

Example: An Energy Star home with a HERS index of 73 would receive a rebate of \$380 ($\$300 + \20×4).

Builders Challenge - The base rebate for a Builders Challenge home is \$440. This rebate corresponds to an E-Scale of 70. For each E-Scale point below 70, add \$40. So the formula is $\$440 + \$40 \times (70 - \text{E-Scale})$. Note: the E-Scale is the same as the HERS Index.

Example: A Builders Challenge home with an E-Scale of 67 would receive a rebate of \$560 ($\$440 + \40×3).

Florida Water Star Home – Add \$100 for a Florida Water Star certification

FGBC, LEED-H and NAHB – Add \$200 for one or more of these full green certifications. Rebate is \$200 max, no matter how many certifications you receive.

Example: A Builders Challenge home with an E-Scale of 67 and certified as FGBC, LEED-H and Florida Water Star would receive a rebate of:

$[\$440 + (\$40 \times (70 - 67))] = [\$440 + (\$40 \times 3)] = \$560 + \$200(\text{green certifications}) + \$100(\text{water star}) = \860

*****There is a maximum rebate of \$1500 per home. All rebates are available to homes within JEA's electric service territory. Florida Water Star rebate is available to homes outside JEA's electric service territory but are in JEA's water service territory*****

Participation Estimates for the Program

Year	Total Number of Customers	Total Number of Eligible Customers	Annual Number of Program Participants	*Penetration Level (%) Calculated
2010	368,784	3,688	350	9.49%
2011	372,471	3,725	350	9.40%
2012	376,196	3,762	350	9.30%
2013	379,958	3,800	350	9.21%
2014	383,758	3,838	350	9.12%
2015	387,595	3,876	350	9.03%
2016	391,471	3,915	350	8.94%
2017	395,386	3,954	350	8.85%
2018	399,340	3,993	350	8.76%
2019	403,333	4,033	350	8.68%

*Cumulative penetration values are not applicable where the target refreshes annually

Savings Estimates

At the Meter						
Year	Per Customer kWh Reduction	Per Customer Winter kW Reduction	Per Customer Summer kW Reduction	Total Annual kWh Reduction	Total Annual Winter kW Reduction	Total Annual Summer kW Reduction
2010	2,021	0.750	0.510	707,350	262.5	178.5
2011	2,021	0.750	0.510	707,350	262.5	178.5
2012	2,021	0.750	0.510	707,350	262.5	178.5
2013	2,021	0.750	0.510	707,350	262.5	178.5
2014	2,021	0.750	0.510	707,350	262.5	178.5
2015	2,021	0.750	0.510	707,350	262.5	178.5
2016	2,021	0.750	0.510	707,350	262.5	178.5
2017	2,021	0.750	0.510	707,350	262.5	178.5
2018	2,021	0.750	0.510	707,350	262.5	178.5
2019	2,021	0.750	0.510	707,350	262.5	178.5

At the Generator						
Year	Per Customer kWh Reduction	Per Customer Winter kW Reduction	Per Customer Summer kW Reduction	Total Annual kWh Reduction	Total Annual Winter kW Reduction	Total Annual Summer kW Reduction
2010	2,104	0.781	0.531	736,351	273.3	185.8
2011	2,104	0.781	0.531	736,351	273.3	185.8
2012	2,104	0.781	0.531	736,351	273.3	185.8
2013	2,104	0.781	0.531	736,351	273.3	185.8
2014	2,104	0.781	0.531	736,351	273.3	185.8
2015	2,104	0.781	0.531	736,351	273.3	185.8
2016	2,104	0.781	0.531	736,351	273.3	185.8
2017	2,104	0.781	0.531	736,351	273.3	185.8
2018	2,104	0.781	0.531	736,351	273.3	185.8
2019	2,104	0.781	0.531	736,351	273.3	185.8

Impact Evaluation Plan

The Residential New Construction program includes various state and national certifications to achieve the Green Built Homes of Florida standard. As such, the impact evaluation plan will address the various mixes of certifications and aggregate impacts to the program level. JEA will reference existing engineering data where appropriate to establish the energy and capacity impacts of each standard used to qualify the participants.

D. RESIDENTIAL SOLAR WATER HEATING

Program Start Date: Originally started in 2002 and continuing from 2010 thru 2019

Policies and Procedures

For the purposes of these procedures, "Participant" means any person or company that installs, fabricates, designs, constructs or otherwise supplies products and services to JEA customers under the Solar Incentive Program.

- All Participants must be pre-qualified by JEA. There is no provision for "retro-active" qualification. Completely fill-out the "Incentive Payment Request Form" and fax to 665-7386 for pre-approval. Approval or denial will be faxed back as soon as possible.
- JEA considers customer satisfaction of its customers to be of paramount importance. JEA will monitor the performance of all Participants for quality customer service and workmanship. If it is deemed that a Participant is not performing at a level JEA judges to be in its best interest, the Participant may be disqualified from participation in the program.
- JEA will only provide incentive payments for systems accepted by the customer as complete, in accordance with what they purchased from Participant, and in compliance with the requirements of the incentive program. JEA only provides incentives for customers who are switching from JEA electric water heating to solar water heating.
- The program will operate on a trust basis, so far as determining the percentage of local value in a project. JEA will trust that the Participants will honestly assess this parameter when submitting jobs for JEA acceptance. JEA will perform random audits of the percentage local value on all projects. Any Participant not accurately assessing local value may be disqualified from the solar incentive program.
- JEA must be notified by the Participant when a proposal is submitted to a customer for any Commercial project. JEA is to receive a copy of the technical aspects of the proposal. JEA must receive the commercial proposal within 5 business days of the customer placing an order.
- All customer proposals must clearly show the Full price of the system, the JEA Incentive and the Net price to the customer. The customer pays the Net price of the system to the Participant.
- The Participant is responsible to maintain any licenses, permits, inspections, and insurance required to perform work under this program. Licensed solar installers under Florida Statue 489.105 (3) (o) must install any solar energy system under this program¹. It is the Participant's responsibility to ensure they adhere to all laws, rules, and regulations that apply to the promotion, purchase, and installation of their solar energy systems.
- JEA does not warrant or guarantee any system sold by Participant under this program. JEA is not liable for any representation or warranty made by Participant to customers concerning quality of materials, workmanship or any projected energy savings. Partici-

¹ See "Exception for Installation of Solar Systems"

Participant further understands that JEA makes no warranties concerning materials and installation, expressed or implied, including warranties of merchantability or fitness for a particular purpose. Participant shall make no statements, representations or claims to customers inconsistent with this paragraph.

- Participant's representation of the program shall conform to this document. Participant shall have no right to use any JEA trademark, Service Mark or logo for advertising, marketing, or identification purposes except as JEA may provide on documents and materials JEA develops to support this program. All communication materials using or referring to JEA or the JEA Solar Incentive Program must be reviewed prior to use to ensure consistency of the JEA Brand. (Please allow 5 business days for review and approval of any submitted materials.)
- Participants may identify themselves as: "JEA Authorized Solar Participant"
This language may only be used when accompanied by the clear identification of Participant's business name, in type at least as large as the language above.
- All medium temperature solar hot water systems/equipment must:
 - Be FSEC approved
 - Comply with all local building and electrical codes
 - Be installed by properly licensed and qualified personnel under Florida Statute 489.105 (3) (o).
 - Operate at not less than 700 BTU/ft²
 - Operate with a solar fraction not to exceed 80%
- JEA retains all Green Attributes associated with projects installed under this program.
- Complete paperwork must be submitted for timely incentive payments. Incomplete incentive forms and/or incomplete or missing supporting documentation may result in payment delays.

Documentation requirements are:

- Solar Hot Water Systems
 - Invoice to JEA
 - Copy of customer invoice
 - Completed Solar Certificate
 - Photographs of installation (collector and water heater)
 - Copy of approved Incentive Fund Request form
- It is the Participant's responsibility to ensure they adhere to all laws, rules, and regulations that apply to the promotion, purchase, and installation of their solar energy systems. Requirements for incentive payments do not supersede any of these laws, rules, or regulations.

Incentives

JEA Solar Power Incentives	Local Vendor	Non-local Vendor
New Solar Residential Water Heating System (medium temp collector)	\$800 per install	\$800 per install
Restoration of Existing Solar Water Heating System to Working Order ¹	30% of total installed cost up to \$500	15% of total installed cost up to \$250
Notes: 1. For systems installed before April 22, 1997; Retrofits apply to solar hot water systems and exclude the hot water heater tank. 2. There is a \$5,000 maximum incentive per project. This maximum may be waived by JEA based on business conditions, availability of funds, and projected residual funds required to fund the Program for the balance of the year. This potential waiver does not guarantee that 100% of the incentive will be available. 3. If other incentives (rebates, grants, etc.) are used to fund a solar system, these funds combined with JEA funds cannot exceed the cost of the system. JEA requires the disclosure of other incentives at the time the Incentive Fund Request form and Solar Certificate are submitted. 4. If a solar system is moved from its installed location JEA is to be notified prior to relocation. These systems are not eligible for additional solar incentive dollars. 5. JEA does not provide incentives for gas water heaters.		

Exception for Installation of Solar Systems

The Solar Incentive Program Participant Guidelines indicated a solar license, under Florida Statute 489.105 (3) (o), as required for installing solar thermal systems. JEA will also accept installations by a licensed plumbing contractor, provided the contractor:

1. Obtain 3 continuing education units for the installation of solar thermal systems during each biennium. Or
2. Complete a training program through a manufacturer of solar thermal systems. Or
3. Complete a training program from a licensed solar contractor to install solar thermal systems.

JEA would prefer that the contractor be licensed under Florida Statute 489.105 (3) (o) and reserve the right to remove this provisional exception upon reasonable notice.

Incentives to Third Parties

Effective immediately, all Solar Certificates must be signed by the JEA electric customer receiving the incentive.

For example:

If a JEA electric customer is installing a solar water heating system that is purchased as part of a package through a 3rd party, the incentive form must be signed by the JEA electric customer and NOT the 3rd party offering the package. As always, ALL INFORMATION must be on the incentive form prior to customer signature. All customer proposals must clearly show the Full price of the system, the JEA Incentive and the Net price to the customer. The customer pays the Net price of the system to the Participant (or 3rd party in this case). The customer receives the pink certificate copy.

For situations where the final JEA electric customer is unknown (builder spec houses for example), the 3rd party may be considered the customer for purpose of paying incentives.

Participation Estimates for the Program

Year	Total Number of Customers	Total Number of Eligible Customers	Annual Number of Program Participants	Cumulative Penetration Level (%) Calculated
2010	368,784	368,784	250	0.1%
2011	372,471	372,471	250	0.1%
2012	376,196	376,196	250	0.2%
2013	379,958	379,958	250	0.3%
2014	383,758	383,758	250	0.3%
2015	387,595	387,595	250	0.4%
2016	391,471	391,471	250	0.4%
2017	395,386	395,386	250	0.5%
2018	399,340	399,340	250	0.6%
2019	403,333	403,333	250	0.6%

Savings Estimates

At the Meter						
Year	Per Customer kWh Reduction	Per Customer Winter kW Reduction	Per Customer Summer kW Reduction	Total Annual kWh Reduction	Total Annual Winter kW Reduction	Total Annual Summer kW Reduction
2010	2,322.3	0.475	0.420	580,563	118.8	105.0
2011	2,322.3	0.475	0.420	580,563	118.8	105.0
2012	2,322.3	0.475	0.420	580,563	118.8	105.0
2013	2,322.3	0.475	0.420	580,563	118.8	105.0
2014	2,322.3	0.475	0.420	580,563	118.8	105.0
2015	2,322.3	0.475	0.420	580,563	118.8	105.0
2016	2,322.3	0.475	0.420	580,563	118.8	105.0
2017	2,322.3	0.475	0.420	580,563	118.8	105.0
2018	2,322.3	0.475	0.420	580,563	118.8	105.0
2019	2,322.3	0.475	0.420	580,563	118.8	105.0

At the Generator						
Year	Per Customer kWh Reduction	Per Customer Winter kW Reduction	Per Customer Summer kW Reduction	Total Annual kWh Reduction	Total Annual Winter kW Reduction	Total Annual Summer kW Reduction
2010	2,417	0.494	0.437	604,366	123.6	109.3
2011	2,417	0.494	0.437	604,366	123.6	109.3
2012	2,417	0.494	0.437	604,366	123.6	109.3
2013	2,417	0.494	0.437	604,366	123.6	109.3
2014	2,417	0.494	0.437	604,366	123.6	109.3
2015	2,417	0.494	0.437	604,366	123.6	109.3
2016	2,417	0.494	0.437	604,366	123.6	109.3
2017	2,417	0.494	0.437	604,366	123.6	109.3
2018	2,417	0.494	0.437	604,366	123.6	109.3
2019	2,417	0.494	0.437	604,366	123.6	109.3

Impact Evaluation Plan

Utilizing participant pre-project and post-installation energy consumption data to conduct a statistical analysis to assess the program impacts will be the most cost effective evaluation method. Additional data such as weather data, building occupancy, operating hours, major equipment purchases and other data would be used with this methodology. Site specific engineering estimates will be considered as an alternative to statistical analysis if it is cost effective to develop them.

E. RESIDENTIAL SOLAR NET METERING PROGRAM

Program Start Date: Originally started in 2009 and continuing from 2010 thru 2019

Policies and Procedures

JEA will allow customer-owned renewable generation up to 100 kW under this Net Metering Policy. Proposed installations which are greater than 100 kW in capacity will be outside of this policy and would need a specific Purchased Power Agreement with JEA which will be based on avoided cost principles. The JEA net metering policy is primarily intended to facilitate generation from renewable energy sources to offset part or all of the customer's energy requirements.

Net metering customers will be charged for the metered kWh received from JEA during each month and credited for the metered kWh sent to JEA each month. The monetary credit to the customer will be calculated using the customer's retail energy rate, demand, fuel, environmental and conservation charges ("Retail Rate") per kWh. While JEA does not distribute a monthly payment for net energy delivered to JEA by a customer during each billing cycle, JEA will carry over a credit balance each month through the end of each calendar year. If at the end of the calendar year, the customer's electric account has a credit balance, then JEA will pay the customer the amount of any such balance greater than \$0.00 through a manual review process. JEA will apply any credit balance to the final bill at the time the service agreement, or account, is closed and final billed. A 1099-MISC tax form will be issued to each customer totalizing all monthly credits at the end of each calendar year through a manual review process.

JEA reserves the right to monitor the aggregate load of all renewable energy installations connected to the JEA grid and at management's sole discretion institute aggregate load limits in the future that will limit the net metering customers by total MW's connected, date or other aggregate characteristics. JEA also reserves the right to develop specific rate classifications in the future that may have different cost recovery based rate structures than implied through net metering practices under this JEA Net Metering Policy. Before service begins, customer will be required to fill out IRS Form W-9 and execute JEA's Renewable Generation Interconnection. In order to qualify for interconnection the customer's renewable generation must have a gross power rating that:

1. Does not exceed 90% of the customer's utility distribution service rating; and
2. Falls into one of the following ranges:
 - o Tier 1 - 10 kW or less;
 - o Tier 2 – greater than 10 kW and less than or equal to 100 kW;
 - o Tier 3 – greater than 100 kW and less than or equal to 2 MW.

For the Tier 1 and Tier 2 net metering customers which qualify under this JEA Net Metering Policy, the customer retains any Renewable Energy Credits. The customer will be required to install the system in accordance with JEA Rules and Regulations section 2.16 and Engineering & Construction Services Procedure ECS20202 902, as appropriate. The system must pass a JEA inspection prior to connection and operation. JEA will furnish, install, own and maintain metering equipment at the installation point capable of monitoring the flow of power from JEA to the customer and from the customer to JEA. Bills will be developed by JEA at the close of each billing cycle based upon meter reads for that billing period. The billed kWh consumption for each

billing period will be the amount of kWh received from JEA measured at the meter each month. Net metering customers will be charged for the metered kWh delivered by JEA during each month. The customer always pays the monthly customer charge and the Retail Rate plus taxes and fees based on the kWh customer receives from JEA even if there is net zero consumption or net excess kWh exported to the grid during the billing cycle. In the net metering arrangement, excess kWh generated by the customer and sent to the grid will be credited at the prevailing applicable Retail Rate per kWh that is delivered to JEA during each billing cycle. Excess energy "generated" is the amount of energy generated by the renewable system over and above what the customer used and is sent back into the grid. This is not the total amount generated by the renewable system since some energy will be used by the customer. Currently an aggregate of load limit of 10 MW (10,000 kW) is in place. Approximately 200kW of renewable generation (all photovoltaic) is connected as of January 2009. Additional costs including, but not limited to, the following may be applicable:

Customer	Application Fee	Design Review Fee	Interconnection Study Fee	Liability Ins.
Tier 1	N/A	Not if lab certified	N/A	Recommended
Tier 2	N/A	Not if lab certified	N/A	Recommended
Tier 3	TBD	As Determined upon JEA Review	As Determined upon JEA Review	As Determined upon JEA Review

Participation Estimates for the Program

Year	Total Number of Customers	Total Number of Eligible Customers	Annual Number of Program Participants	Cumulative Penetration Level (%) Calculated
2010	368,784	368,784	38	0.01%
2011	372,471	372,471	38	0.02%
2012	376,196	376,196	38	0.03%
2013	379,958	379,958	38	0.04%
2014	383,758	383,758	38	0.05%
2015	387,595	387,595	38	0.06%
2016	391,471	391,471	38	0.07%
2017	395,386	395,386	38	0.08%
2018	399,340	399,340	38	0.09%
2019	403,333	403,333	38	0.09%

Savings Estimates

At the Meter						
Year	Per Customer kWh Reduction	Per Customer Winter kW Reduction	Per Customer Summer kW Reduction	Total Annual kWh Reduction	Total Annual Winter kW Reduction	Total Annual Summer kW Reduction
2010	5,900	0.00	0.70	224,200	0.0	26.6
2011	5,900	0.00	0.70	224,200	0.0	26.6
2012	5,900	0.00	0.70	224,200	0.0	26.6
2013	5,900	0.00	0.70	224,200	0.0	26.6
2014	5,900	0.00	0.70	224,200	0.0	26.6
2015	5,900	0.00	0.70	224,200	0.0	26.6
2016	5,900	0.00	0.70	224,200	0.0	26.6
2017	5,900	0.00	0.70	224,200	0.0	26.6
2018	5,900	0.00	0.70	224,200	0.0	26.6
2019	5,900	0.00	0.70	224,200	0.0	26.6

At the Generator						
Year	Per Customer kWh Reduction	Per Customer Winter kW Reduction	Per Customer Summer kW Reduction	Total Annual kWh Reduction	Total Annual Winter kW Reduction	Total Annual Summer kW Reduction
2010	6,142	0.00	0.73	233,392	0.0	27.7
2011	6,142	0.00	0.73	233,392	0.0	27.7
2012	6,142	0.00	0.73	233,392	0.0	27.7
2013	6,142	0.00	0.73	233,392	0.0	27.7
2014	6,142	0.00	0.73	233,392	0.0	27.7
2015	6,142	0.00	0.73	233,392	0.0	27.7
2016	6,142	0.00	0.73	233,392	0.0	27.7
2017	6,142	0.00	0.73	233,392	0.0	27.7
2018	6,142	0.00	0.73	233,392	0.0	27.7
2019	6,142	0.00	0.73	233,392	0.0	27.7

Impact Evaluation Plan

Because the metering set-up determines net effects it is difficult to determine exact contributions from customer installed systems. As a result, utilizing solar net metering participant pre-project and post-installation energy consumption data to conduct a statistical analysis to assess the program impacts may be the most cost effective evaluation method. Additional data such as weather data, building occupancy, operating hours, major equipment purchases and other data would be used with this methodology. Site specific engineering estimates will be considered as an alternative to statistical analysis if it is cost effective to develop them.

F. NEIGHBORHOOD ENERGY EFFICIENCY PROGRAM

Program Start Date: Originally started in 2008 and continuing from 2010 thru 2019

Policies and Procedures

In partnership with the City of Jacksonville, JEA offers a three-phase program for low income customers. Phase 1 provides installation of 10-12 electric and water conservation products as well as an energy education package of printed information material and consultation with an energy auditor for those customers already participating in the City of Jacksonville's Rehab program for low to moderate income eligible households. Completed units equal from 60 to 200 households per year depending on City Rehab funding availability. Beginning in 2010, approximately 60 homes will also receive up to a \$500 subsidy towards attic insulation.

Phase 2 provides installation of 15 electric and water conservation products as well as the energy education package of printed material and consultation with an energy audit on a door-to-door basis in targeted neighborhoods identified by the City as having more than 50% of the neighborhood population at 150% of the Federal Poverty Guidelines, and further identified by JEA as having high winter peak consumption. Approximately 800 homes are completed per year.

Phase 3 provides an Energy Efficient Home Maintenance kit of 12 electric and water conservation products for participants in a Housing Counseling workshop required for first time home buyers involved in the City's loan assistance programs for low to moderate income residents. Approximately 600 kits are provided annually.

Participation Estimates for the Program

Year	Total Number of Customers	Total Number of Eligible Customers	Annual Number of Program Participants	Cumulative Penetration Level (%) Calculated
2010	368,784	110,635	1,350	1.2%
2011	372,471	111,741	1,350	2.4%
2012	376,196	112,859	1,350	3.6%
2013	379,958	113,987	1,350	4.7%
2014	383,758	115,127	1,350	5.9%
2015	387,595	116,279	1,350	7.0%
2016	391,471	117,441	1,350	8.0%
2017	395,386	118,616	1,350	9.1%
2018	399,340	119,802	1,350	10.1%
2019	403,333	121,000	1,350	11.2%

Savings Estimates

At the Meter						
Year	Per Customer kWh Reduction	Per Customer Winter kW Reduction	Per Customer Summer kW Reduction	Total Annual kWh Reduction	Total Annual Winter kW Reduction	Total Annual Summer kW Reduction
2010	817	0.359	0.359	1,102,950	484.7	484.7
2011	817	0.359	0.359	1,102,950	484.7	484.7
2012	817	0.359	0.359	1,102,950	484.7	484.7
2013	817	0.359	0.359	1,102,950	484.7	484.7
2014	817	0.359	0.359	1,102,950	484.7	484.7
2015	817	0.359	0.359	1,102,950	484.7	484.7
2016	817	0.359	0.359	1,102,950	484.7	484.7
2017	817	0.359	0.359	1,102,950	484.7	484.7
2018	817	0.359	0.359	1,102,950	484.7	484.7
2019	817	0.359	0.359	1,102,950	484.7	484.7

At the Generator						
Year	Per Customer kWh Reduction	Per Customer Winter kW Reduction	Per Customer Summer kW Reduction	Total Annual kWh Reduction	Total Annual Winter kW Reduction	Total Annual Summer kW Reduction
2010	850	0.374	0.374	1,148,171	504.5	504.5
2011	850	0.374	0.374	1,148,171	504.5	504.5
2012	850	0.374	0.374	1,148,171	504.5	504.5
2013	850	0.374	0.374	1,148,171	504.5	504.5
2014	850	0.374	0.374	1,148,171	504.5	504.5
2015	850	0.374	0.374	1,148,171	504.5	504.5
2016	850	0.374	0.374	1,148,171	504.5	504.5
2017	850	0.374	0.374	1,148,171	504.5	504.5
2018	850	0.374	0.374	1,148,171	504.5	504.5
2019	850	0.374	0.374	1,148,171	504.5	504.5

Impact Evaluation Plan

The neighborhood energy efficiency program includes a wide range of cost-saving measures, including various behavioral and technological recommendations that may be implemented by the customer. Using readily available direct installation data in conjunction with site-specific engineering estimates would likely be the most cost-effective method for evaluating program impacts.

**IV. COMMERCIAL
CONSERVATION PROGRAMS**

IV. COMMERCIAL CONSERVATION PROGRAMS

JEA's DSM Plan includes four (4) commercial programs:

- A. Commercial Energy Audits**
- B. Commercial Energy Efficient Products**
- C. District Chilled Water**
- D. Commercial Solar Net Metering**

Each program is described in detail in the following sections.

A. COMMERCIAL ENERGY AUDITS

Program Start Date: Originally started in 1978 and continuing from 2010 thru 2019

Policies and Procedures

JEA offers a business energy audit for all commercial customers located in the JEA service territory. This service is offered at no charge to our customers and is available for all rate classifications. As a part of this service a JEA representative will perform a rate evaluation, discuss demand strategies if relevant, and inspect the customers business and then offer cost-effective ideas designed to help lower energy costs. Areas of the customers business that are inspected include: insulation, windows, tinting, and caulking, weather stripping, water heating systems and water temperature, HVAC visual inspections, equipment and their controls, and refrigeration. JEA representatives also use a wide variety of tools and literature for customer education during the inspection. No cost measures such as air conditioning & heating thermostat temperature settings, water heater settings, refrigeration temperature settings, management of plug (vampire) loads, management of computer, monitor & printer loads, management of lighting systems and cleaning surfaces of heat exchangers are encouraged. In addition to the energy audit, we also offer free water management evaluations. The services listed above are available to JEA customers by contacting the JEA business office by phone or email. Online business energy audit services are also available online at <http://www.jea.com>

Participation Estimates for the Program

Year	Total Number of Customers	Total Number of Eligible Customers	Annual Number of Program Participants	Cumulative Penetration Level (%) Calculated
2010	45,925	45,925	410	0.9%
2011	46,384	46,384	410	1.8%
2012	46,848	46,848	410	2.6%
2013	47,316	47,316	410	3.5%
2014	47,789	47,789	410	4.3%
2015	48,267	48,267	410	5.1%
2016	48,750	48,750	410	5.9%
2017	49,237	49,237	410	6.7%
2018	49,730	49,730	410	7.4%
2019	50,227	50,227	410	8.2%

Savings Estimates

At the Meter						
Year	Per Customer kWh Reduction	Per Customer Winter kW Reduction	Per Customer Summer kW Reduction	Total Annual kWh Reduction	Total Annual Winter kW Reduction	Total Annual Summer kW Reduction
2010	540	0.120	0.120	221,400	49.2	49.2
2011	540	0.120	0.120	221,400	49.2	49.2
2012	540	0.120	0.120	221,400	49.2	49.2
2013	540	0.120	0.120	221,400	49.2	49.2
2014	540	0.120	0.120	221,400	49.2	49.2
2015	540	0.120	0.120	221,400	49.2	49.2
2016	540	0.120	0.120	221,400	49.2	49.2
2017	540	0.120	0.120	221,400	49.2	49.2
2018	540	0.120	0.120	221,400	49.2	49.2
2019	540	0.120	0.120	221,400	49.2	49.2

At the Generator						
Year	Per Customer kWh Reduction	Per Customer Winter kW Reduction	Per Customer Summer kW Reduction	Total Annual kWh Reduction	Total Annual Winter kW Reduction	Total Annual Summer kW Reduction
2010	562	0.125	0.125	230,477	51.2	51.2
2011	562	0.125	0.125	230,477	51.2	51.2
2012	562	0.125	0.125	230,477	51.2	51.2
2013	562	0.125	0.125	230,477	51.2	51.2
2014	562	0.125	0.125	230,477	51.2	51.2
2015	562	0.125	0.125	230,477	51.2	51.2
2016	562	0.125	0.125	230,477	51.2	51.2
2017	562	0.125	0.125	230,477	51.2	51.2
2018	562	0.125	0.125	230,477	51.2	51.2
2019	562	0.125	0.125	230,477	51.2	51.2

Impact Evaluation Plan

The commercial energy audit program covers a wide range of cost-saving opportunities, including various behavioral and technological recommendations that may be implemented by the customer. A follow-up survey to participants would support the determination of what actions have been specifically implemented as a result of the energy audit. JEA anticipates combining these results in conjunction with deemed savings estimates as the most cost effective methodology. Site-specific engineering estimates will be considered if its cost effectiveness is warranted.

B. COMMERCIAL ENERGY EFFICIENT PRODUCTS

Program Start Date: Originally started in 2007 and continuing from 2010 thru 2019

Policies and Procedures

In partnership with local vendors within the JEA service territory and manufacturers of energy efficient lighting products and appliances, JEA offers coupons and markdown prices for over 30 varieties of efficient products for its customers. In response to customer concerns, the program has also been expanded to include a used-CFL disposal program with over 40 retailers acting as Green Partner disposal sites for customer. Through locally based field representatives, JEA rebate coupons and discount price markers are displayed at participating stores and store managers provide prominent displays for the products. The local field representatives also provide in-store events to promote the CFL and ENERGY STAR appliances while responding directly to customer questions and concerns and distributing JEA fact sheets on energy savings. The program is open to all JEA customers.

Participation Estimates for the Program

Year	*Total Number of Participants	*Total Number of Eligible Participants	Annual Number of Program Participants	Cumulative Penetration Level (%) Calculated
2010	229,623	229,623	17,297	7.5%
2011	231,919	231,919	13,085	13.1%
2012	234,238	234,238	13,085	18.6%
2013	236,580	236,580	13,085	23.9%
2014	238,946	238,946	13,085	29.1%
2015	241,336	241,336	13,085	34.3%
2016	243,749	243,749	13,085	39.3%
2017	246,187	246,187	13,085	44.2%
2018	248,648	248,648	13,085	49.1%
2019	251,135	251,135	13,085	53.8%

*Eligible participants are equivalent to the number of DSM measures per customer

Savings Estimates

At the Meter						
Year	Per Customer kWh Reduction	Per Customer Winter kW Reduction	Per Customer Summer kW Reduction	Total Annual kWh Reduction	Total Annual Winter kW Reduction	Total Annual Summer kW Reduction
2010	810.2	0.089	0.066	14,014,311	1,536.4	1,148.9
2011	789.8	0.087	0.066	10,334,522	1,133.1	866.1
2012	789.8	0.087	0.066	10,334,522	1,133.1	866.1
2013	733.2	0.080	0.062	9,594,269	1,052.0	809.2
2014	733.2	0.080	0.062	9,594,269	1,052.0	809.2
2015	601.4	0.066	0.052	7,869,817	863.0	676.6
2016	601.4	0.066	0.052	7,869,817	863.0	676.6
2017	601.4	0.066	0.052	7,869,817	863.0	676.6
2018	601.4	0.066	0.052	7,869,817	863.0	676.6
2019	601.4	0.066	0.052	7,869,817	863.0	676.6

At the Generator						
Year	Per Customer kWh Reduction	Per Customer Winter kW Reduction	Per Customer Summer kW Reduction	Total Annual kWh Reduction	Total Annual Winter kW Reduction	Total Annual Summer kW Reduction
2010	843	0.092	0.069	14,588,897	1,599.4	1,196.0
2011	822	0.090	0.069	10,758,237	1,559.2	901.6
2012	822	0.090	0.069	10,758,237	1,179.6	901.6
2013	763	0.084	0.064	9,987,634	1,095.1	842.3
2014	763	0.084	0.064	9,987,634	1,095.1	842.3
2015	626	0.069	0.054	8,192,480	898.4	704.4
2016	626	0.069	0.054	8,192,480	898.4	704.4
2017	626	0.069	0.054	8,192,480	898.4	704.4
2018	626	0.069	0.054	8,192,480	898.4	704.4
2019	626	0.069	0.054	8,192,480	898.4	704.4

Impact Evaluation Plan

Energy efficient product measures include items that have well established deemed savings. With an upstream program where utility interaction is limited to retailers, a survey approach may be the most effective method to determine overall program participation levels, including installation numbers, surveys, and sales data along with deemed savings will likely be the main approach used to measure program impacts.

C. DISTRICT CHILLED WATER

Program Start Date: Originally started in 2006 and continuing from 2010 thru 2019

Policies and Procedures

Conditions for Chilled Water Service - Customer Responsibilities:

- Provide JEA with a satisfactory indoor site for installing JEA's Energy Station with free access to that station at all times.
- If customer does not meet JEA ΔT requirements then JEA may charge customer differential temperature adjustment (DTA). The ΔT requirements and DTA are based on multiple factors, including but not limited to, chilled water district (loop) design, incremental pumping costs, and reduction of system capacity.
- The customer is responsible for maintaining building piping in good condition. The customer is also responsible for the cost of replacing water due to leaks at the normal rates charged for water consumption.
- JEA may consider a reduced rate for customers who provide capital or other value to JEA's chilled water service. JEA and the customer may also negotiate a higher rate if there are extraordinary customer requirements.

Variable Consumption Charge Policy: The variable consumption charge for each District Energy Services (DES) rate class shall be rounded to the nearest 0.00001 cents per ton-hour of sales to reflect recovery of costs due to changes in the electric rate charged to DES. The adjustment will take effect when changes in the electric rate schedule take effect, using a method approved by the Board.

- Contract Demands in excess of 200 tons
 - Demand Charge: \$ 20.00 per ton
 - Variable Consumption Charge: At the effective date of the tariff, the total Variable Consumption Charges is:
 - \$0.11239 per ton-hour for EFLH less than or equal to 2,400
 - \$0.09539 per ton-hour for EFLH greater than 2,400
 - ❖ Demand is calculated as the higher of either the contract demand or the actual demand.
 - ❖ If the actual demand exceeds the contract demand by more than 10 % for two months in a twelve month period, the highest actual demand in the previous twelve months will become the new contract demand.
 - ❖ If the actual demand in any month exceeds the contract demand by more than 25% a surcharge of \$5.00 per ton will apply to all excess demand.
 - ❖ If the actual demand is less than 80% of the contract demand in any month within a twelve month period the contract demand may be reduced by up to 10% at the option of JEA.
 - ❖ A customer with more than one location on the same chilled water system grid will be allowed to aggregate its contract demand on the same system grid.

❖ A customer with a contract demand of 2,000 tons and greater than 2,000 EFLH in annual consumption will receive a demand discount of \$0.50 per ton.

- Contract Demands less than 200 tons
 - Demand Charge: None
 - Variable Consumption Charge: At the effective date of the tariff, the total Variable Consumption Charge is:
 - \$0.20239 per ton-hour for EFLH less than 2,400
 - \$0.09539 per ton-hour for EFLH greater than 2,400

Chilled Water Service Definitions

- Temperature rise – The difference in temperature between the chilled water supplied by JEA at the Energy Station and the warmed water returned to the JEA Energy Station. (Also referred to as ΔT)
- Ton – One ton of cooling equals 12,000 BTU/hr.
- Contract Demand – The maximum quantity of service, in Tons, contracted to be delivered during any consecutive sixty (60) minute period for each building.
- Consumption – The ton-hours used by the facility during the billing period.
- EFLH – Equivalent Full Load Hours – If all of a customer’s consumption occurred at the maximum load, this is how many hours per year they would use chilled water. The formula used to calculate EFLH is: $EFLH = (Annual\ Consumption\ in\ ton-hrs) / (Contract\ Demand\ in\ tons + Excess\ Demand\ in\ tons)$.
- Actual Demand – The maximum quantity of Service, in Tons, actually provided to Customer during any consecutive sixty (60) minute period during the billing cycle.
- Excess Demand – The quantity of service, in Tons, provided by JEA in excess of the Contract Demand.

Participation Estimates for the Program

Year	Total Number of Customers	Total Number of Eligible Customers	Annual Number of Program Participants	Cumulative Penetration Level (%) Calculated
2010	45,925	455	0	0.0%
2011	40,400	400	0	0.0%
2012	40,800	404	1	0.2%
2013	41,200	408	0	0.2%
2014	41,600	412	0	0.2%
2015	42,000	416	0	0.2%
2016	42,400	420	0	0.2%
2017	42,800	424	0	0.2%
2018	43,200	428	0	0.2%
2019	43,600	432	0	0.2%

Savings Estimates

At the Meter						
Year	Per Customer kWh Reduction	Per Customer Winter kW Reduction	Per Customer Summer kW Reduction	Total Annual kWh Reduction	Total Annual Winter kW Reduction	Total Annual Summer kW Reduction
2010	840,000	72.0	240.0	0	0.0	0.0
2011	840,000	72.0	240.0	0	0.0	0.0
2012	840,000	72.0	240.0	840,000	72.0	240.0
2013	840,000	72.0	240.0	0	0.0	0.0
2014	840,000	72.0	240.0	0	0.0	0.0
2015	840,000	72.0	240.0	0	0.0	0.0
2016	840,000	72.0	240.0	0	0.0	0.0
2017	840,000	72.0	240.0	0	0.0	0.0
2018	840,000	72.0	240.0	0	0.0	0.0
2019	840,000	72.0	240.0	0	0.0	0.0

At the Generator						
Year	Per Customer kWh Reduction	Per Customer Winter kW Reduction	Per Customer Summer kW Reduction	Total Annual kWh Reduction	Total Annual Winter kW Reduction	Total Annual Summer kW Reduction
2010	874,440	75.0	249.8	0	0.0	0.0
2011	874,440	75.0	249.8	0	0.0	0.0
2012	874,440	75.0	249.8	874,440	75.0	249.8
2013	874,440	75.0	249.8	0	0.0	0.0
2014	874,440	75.0	249.8	0	0.0	0.0
2015	874,440	75.0	249.8	0	0.0	0.0
2016	874,440	75.0	249.8	0	0.0	0.0
2017	874,440	75.0	249.8	0	0.0	0.0
2018	874,440	75.0	249.8	0	0.0	0.0
2019	874,440	75.0	249.8	0	0.0	0.0

Impact Evaluation Plan

Electric and energy (BTU/h) metering data, along with temperature data will be used to determine thermal loads and related energy and peak impacts. If additional customers should sign-up for the service similar analysis will be utilized. The use of site-specific engineering estimates is likely to be the most cost-effective method of estimating program impacts.

D. COMMERCIAL SOLAR NET METERING PROGRAM

Program Start Date: Originally started in 2009 and continuing from 2010 thru 2019

Policies and Procedures

JEA will allow customer-owned renewable generation up to 100 kW under this Net Metering Policy. Proposed installations which are greater than 100 kW in capacity will be outside of this policy and would need a specific Purchased Power Agreement with JEA which will be based on avoided cost principles. The JEA net metering policy is primarily intended to facilitate generation from renewable energy sources to offset part or all of the customer's energy requirements.

Net metering customers will be charged for the metered kWh received from JEA during each month and credited for the metered kWh sent to JEA each month. The monetary credit to the customer will be calculated using the customer's retail energy rate, demand, fuel, environmental and conservation charges ("Retail Rate") per kWh. While JEA does not distribute a monthly payment for net energy delivered to JEA by a customer during each billing cycle, JEA will carry over a credit balance each month through the end of each calendar year. If at the end of the calendar year, the customer's electric account has a credit balance, then JEA will pay the customer the amount of any such balance greater than \$0.00 through a manual review process. JEA will apply any credit balance to the final bill at the time the service agreement, or account, is closed and final billed. A 1099-MISC tax form will be issued to each customer totalizing all monthly credits at the end of each calendar year through a manual review process.

JEA reserves the right to monitor the aggregate load of all renewable energy installations connected to the JEA grid and at management's sole discretion institute aggregate load limits in the future that will limit the net metering customers by total MW's connected, date or other aggregate characteristics. JEA also reserves the right to develop specific rate classifications in the future that may have different cost recovery based rate structures than implied through net metering practices under this JEA Net Metering Policy. Before service begins, customer will be required to fill out IRS Form W-9 and execute JEA's Renewable Generation Interconnection. In order to qualify for interconnection the customer's renewable generation must have a gross power rating that:

- Does not exceed 90% of the customer's utility distribution service rating; and
- Falls into one of the following ranges:
 - Tier 1 - 10 kW or less;
 - Tier 2 – greater than 10 kW and less than or equal to 100 kW;
 - Tier 3 – greater than 100 kW and less than or equal to 2 MW.

For the Tier 1 and Tier 2 net metering customers which qualify under this JEA Net Metering Policy, the customer retains any Renewable Energy Credits. The customer will be required to install the system in accordance with JEA Rules and Regulations section 2.16 and Engineering & Construction Services Procedure ECS20202 902, as appropriate. The system must pass a JEA inspection prior to connection and operation. JEA will furnish, install, own and maintain metering equipment at the installation point capable of monitoring the flow of power from JEA to

the customer and from the customer to JEA. Bills will be developed by JEA at the close of each billing cycle based upon meter reads for that billing period. The billed kWh consumption for each billing period will be the amount of kWh received from JEA measured at the meter each month. Net metering customers will be charged for the metered kWh delivered by JEA during each month. The customer always pays the monthly customer charge and the Retail Rate plus taxes and fees based on the kWh customer receives from JEA even if there is net zero consumption or net excess kWh exported to the grid during the billing cycle. In the net metering arrangement, excess kWh generated by the customer and sent to the grid will be credited at the prevailing applicable Retail Rate per kWh that is delivered to JEA during each billing cycle. Excess energy "generated" is the amount of energy generated by the renewable system over and above what the customer used and is sent back into the grid. This is not the total amount generated by the renewable system since some energy will be used by the customer. Currently an aggregate of load limit of 10 MW (10,000 kW) is in place. Approximately 200kW of renewable generation (all photovoltaic) is connected as of January 2009. Additional costs including, but not limited to, the following may be applicable:

Customer	Application Fee	Design Review Fee	Interconnection Study Fee	Liability Ins.
Tier 1	N/A	Not if lab certified	N/A	Recommended
Tier 2	N/A	Not if lab certified	N/A	Recommended
Tier 3	TBD	As Determined upon JEA Review	As Determined upon JEA Review	As Determined upon JEA Review

Participation Estimates for the Program

Year	Total Number of Customers	Total Number of Eligible Customers	Annual Number of Program Participants	Cumulative Penetration Level (%) Calculated
2010	45,925	45,925	8	0.0%
2011	46,384	46,384	8	0.0%
2012	46,848	46,848	8	0.1%
2013	47,316	47,316	8	0.1%
2014	47,789	47,789	8	0.1%
2015	48,267	48,267	8	0.1%
2016	48,750	48,750	8	0.1%
2017	49,237	49,237	8	0.1%
2018	49,730	49,730	8	0.1%
2019	50,227	50,227	8	0.2%

Savings Estimates

At the Meter						
Year	Per Customer kWh Reduction	Per Customer Winter kW Reduction	Per Customer Summer kW Reduction	Total Annual kWh Reduction	Total Annual Winter kW Reduction	Total Annual Summer kW Reduction
2010	10,000	0.0	1.5	80,000	0.0	12.0
2011	10,000	0.0	1.5	80,000	0.0	12.0
2012	10,000	0.0	1.5	80,000	0.0	12.0
2013	10,000	0.0	1.5	80,000	0.0	12.0
2014	10,000	0.0	1.5	80,000	0.0	12.0
2015	10,000	0.0	1.5	80,000	0.0	12.0
2016	10,000	0.0	1.5	80,000	0.0	12.0
2017	10,000	0.0	1.5	80,000	0.0	12.0
2018	10,000	0.0	1.5	80,000	0.0	12.0
2019	10,000	0.0	1.5	80,000	0.0	12.0

At the Generator						
Year	Per Customer kWh Reduction	Per Customer Winter kW Reduction	Per Customer Summer kW Reduction	Total Annual kWh Reduction	Total Annual Winter kW Reduction	Total Annual Summer kW Reduction
2010	10,410	0.000	1.562	83,280	0.0	12.5
2011	10,410	0.000	1.562	83,280	0.0	12.5
2012	10,410	0.000	1.562	83,280	0.0	12.5
2013	10,410	0.000	1.562	83,280	0.0	12.5
2014	10,410	0.000	1.562	83,280	0.0	12.5
2015	10,410	0.000	1.562	83,280	0.0	12.5
2016	10,410	0.000	1.562	83,280	0.0	12.5
2017	10,410	0.000	1.562	83,280	0.0	12.5
2018	10,410	0.000	1.562	83,280	0.0	12.5
2019	10,410	0.000	1.562	83,280	0.0	12.5

Impact Evaluation Plan

Because the metering set-up determines net effects it is difficult to determine exact contributions from customer installed systems. As a result, utilizing solar net metering participant pre-project and post-installation energy consumption data to conduct a statistical analysis to assess the program impacts may be the most cost effective evaluation method. Additional data such as weather data, building occupancy, operating hours, major equipment purchases or construction during the pre/post period would be used with this methodology. Site specific engineering estimates will be considered as an alternative method to statistical analysis if it is cost effective to develop them.