

STEEL
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& DAVIS

REGISTERED LIMITED LIABILITY PARTNERSHIP

Steel Hector & Davis LLP
215 South Monroe, Suite 601
Tallahassee, Florida 32301-1804
850.222.2300
850.222.8410 Fax
www.steelhector.com

February 1, 1999

Charles A. Guyton
850.222.3423

Blanca S. Bayó, Director
Records and Reporting
Florida Public Service Commission
4075 Esplanade Way, Room 110
Tallahassee, Florida 32399-0850

By Hand Delivery

Re: Docket No. 971004-EG

Dear Ms. Bayó:

Enclosed for filing on behalf of Florida Power & Light Company ("FPL") in Docket No. 971004-EG are the original and fifteen (15) copies of the following documents:

Testimony & Exhibits of: C. Dennis Brandt 01271 99
Testimony & Exhibits of: S. R. Sim 01271 99

Please note that Mr. Brandt's Testimony includes the conservation goals FPL proposes for the period 2000 through 2009 as well as FPL's quantification of the reasonably achievable, cost-effective conservation potential on FPL's system during that period.

If you or your staff have any questions regarding this transmittal, please contact me at 222-

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Respectfully,
[Signature]
Charles A. Guyton
Attorney for Florida Power
& Light Company

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a true and correct copy of Florida Power & Light Company's Testimony & Exhibits of C.Dennis Brandt and S.R. Sim were served by Hand Delivery (when indicated with an *) or Overnight Express (when indicated with an **) mail or mailed this 1st day of February, 1999 to the following:

Leslie Paugh, Esquire *
Division of Legal Services
Florida Public Service Commission
2540 Shumard Oak Boulevard
Gunter Building, Room 370
Tallahassee, Florida 32399-0850

Kenneth Hoffman, Esquire
Rutledge, Ecenia, Underwood,
Purnell & Hoffman
215 South Monroe, Suite 420
Tallahassee, Florida 32301

McWhirter Law Firm
Vicki Kaufman, Esquire
117 South Gadsden Street
Tallahassee, Florida 32301

Legal Environmental Assistance
Foundation
Gail Kamaras
1114 Thomasville Road, Suite E
Tallahassee, Florida 32301

McWhirter Law Firm
John McWhirter, Esquire
Post Office Box 3350
Tampa, Florida 33601-3350

Jeffrey A. Stone, Esquire
Beggs & Lane
Post Office Box 12950
Pensacola, Florida 32576-2950

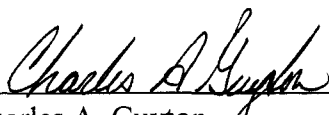
Lee L. Willis, Esquire
James D. Beasley, Esquire
Ausley & McMullen
227 South Calhoun Street
Tallahassee, Florida 32301

James A. McGee, Esquire
Florida Power Corporation
Post Office Box 14042
St. Petersburg, Florida 33733

Jack Shreve, Esquire
Office of Public Counsel
111 West Madison Street
Tallahassee, Florida 32399

Jon Wallach **
Resource Insight
347 Broadway
Cambridge, MA 02139-1715

Department of Community Affairs
Legal Services
2555 Shumard Oak Boulevard
Tallahassee, Florida 32399-2100


Charles A. Guyton

ORIGINAL



**BEFORE THE
FLORIDA PUBLIC SERVICE COMMISSION**

DOCKET NO. 971004-EG

ADOPTION OF NUMERIC CONSERVATION GOALS

FEBRUARY 1, 1999

TESTIMONY & EXHIBITS OF:

C. DENNIS BRANDT

DOCUMENT NUMBER-DATE

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FLORIDA PUBLIC SERVICE COMMISSION

BEFORE THE PUBLIC SERVICE COMMISSION

FLORIDA POWER & LIGHT COMPANY

TESTIMONY OF C. DENNIS BRANDT

DOCKET NO. 971004-EG

FEBRUARY 1, 1999

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

2 A. My name is C. Dennis Brandt and my business address is:
3 9250 West Flagler Street, Miami, Florida 33174.

4

5 **Q. Who is your employer and what position do you hold?**

6 A. I am employed by Florida Power & Light Company (FPL) as
7 Manager of Sales & Marketing Product Support.

8

9 **Q. What are your responsibilities and duties as Manager of**
10 **Sales & Marketing Product Support related to the**
11 **development of FPL's Demand Side Management (DSM)**
12 **goals and the corresponding programs to support them?**

13 A. I am responsible for managing and supporting products and
14 services for FPL's residential and business customers. This
15 includes overseeing the implementation, development of
16 systems, training, and tracking of the various Demand Side
17 Management (DSM) programs offered to residential and

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business customers. I am also the Sales & Marketing business unit liaison for regulatory issues.

Q. Please describe your education and professional experience.

A. I received a Bachelor of Science Degree in Industrial Engineering from the University of Miami in 1978. I also received my Masters Degree in Industrial Engineering from the University of Miami in 1984. I am a certified Professional Engineer in the State of Florida. I was hired by FPL in 1979 in the Materials Management department and have worked in positions of increasing responsibility in the areas of Load Management, Commercial and Industrial Marketing, Residential and General Business Marketing, and Sales & Marketing Product Support.

In 1991, I was promoted to the position of Manager of Residential and General Business Marketing Support. I held this position until 1993, when I became the Manager of Commercial/Industrial Marketing Support. In late 1996, I became the Manager of Sales & Marketing Product Support.

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Q. What is the purpose of your direct testimony?

A. The purpose of my testimony is to present FPL's proposed numerical demand side management (DSM) goals for the period 2000-2009. FPL's goals proposal is based upon the requirements of Rule F.A.C. 25-17.0021 and the analytical work performed by FPL pursuant to the procedural order in this case, so my testimony will discuss the methodology used to arrive at goals that are reasonably achievable for the time period required. In my discussion, I will summarize the methodologies and data used in developing our proposed DSM goals.

Q. Please describe how your direct testimony is organized.

A. I have organized my testimony into seven (7) sections.

Section I of my testimony presents FPL's proposed numerical DSM goals for the period 2000-2009 as well as FPL's underlying projections of DSM potential from its effort.

Section II discusses the methodology used by FPL in developing the measures that were selected for evaluation.

Section III discusses the methodology used by FPL in developing its achievable potential projections of DSM based on

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the cost-effective measures selected and evaluated.

Section IV examines FPL's analyses of the Code/Utility (CUE) measures.

Section V discusses why the natural gas measures were categorized as Research & Development. It also explains the current status of FPL's natural gas measures R&D efforts and why FPL proposes that no natural gas potential be used to establish overall goals.

Section VI discusses renewable measures and high thermal efficiency self-service cogeneration, and why FPL proposes no renewable potential or high thermal efficiency self-service cogeneration be used to establish overall goals.

Section VII presents my conclusions based on the results of this goal setting process.

Q. Are you sponsoring an exhibit in this case?

A. Yes, it consists of the following documents:

- Document No. 1 presents the overall kW and kWh DSM goals for both the Residential and the Commercial/Industrial

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market segments proposed by FPL for the period 2000-2009.

- Document No. 2 shows FPL's DSM goals for the years 1994 through 2003 and FPL's actual DSM implementation results as of 1998.
- Document No. 3 presents FPL's 2000-2009 projections of achievable potential within major end-uses for the Residential and Commercial/Industrial markets. These projections are separated into the new construction and retrofit market segments.
- Document No. 4 is a measure-by-measure breakdown into both the new construction and the retrofit markets of the achievable potential results developed in FPL's Integrated Resource Plan.
- Document No. 5 is an overview of the four-step measure selection process used to determine which measures were evaluated.
- Document No. 6 is a summary of the first step of the measure selection process and the resulting measures.
- Document No. 7 is a summary of the second step of the measure selection process and the resulting measures.
- Document No. 8 is a summary of the measures combined, including the rationale for each grouping.
- Document No. 9 is a summary of the third step of the

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measure selection process and the resulting measures.

- Document No. 10 is a summary of the fourth step of the measure selection process and the resulting measures.
- Document No. 11 is a summary of the administrative and participant costs associated with each measure, their associated demand and energy savings, and the source of the information.
- Document No. 12 shows the results of the cost-effectiveness analysis for each measure.
- Document No. 13 shows the pre-screening for the CUE measures.
- Document No. 14 shows the CUE measures that were screened for cost-effectiveness and the results of the cost-effectiveness analysis.
- Document No. 15 is a summary of the administrative and participant costs associated with each CUE measure, their associated demand and energy savings, and the source of the information.

SECTION I: FPL'S PROPOSED NUMERICAL DSM GOALS

Q. What overall kW and kWh DSM goals are being proposed by FPL in this proceeding?

1 A. The DSM goals proposed by FPL for the period 2000-2009 are
2 shown on my Document No.1. These goals are based upon the
3 achievable potential of DSM measures analyzed by FPL as
4 being cost-effective under the RIM and Participant tests.

5
6 **Q. What are the cumulative demand and energy goals FPL
7 proposes through 2009?**

8 A. FPL proposes a cumulative total summer demand reduction goal
9 from DSM of 765 MW's for the period 2000 through 2009 and a
10 cumulative reduction of GWH over the same period of 1,287
11 GWH. This represents the achievable potential for cost-effective
12 DSM under the RIM and Participant tests over this ten-year
13 period as determined in FPL's planning process. Broken down
14 by Residential and Commercial/Industrial classes, this
15 represents summer demand and energy reductions of 486 MW's
16 and 943 GWH for the Residential market segment and 279 MW's
17 and 343 GWH for the Commercial/Industrial market segment.

18
19 **Q. How has FPL's performed relative to the goals set as part of
20 the last goals docket for the 1994 through 2003 time period?**

21 A. As originally stated by FPL in the last goals setting process and
22 as is evident from Document No. 2, the goals set for the time
23 period 1994 through 2000 were reasonably achievable.

1 However, the FPSC increased FPL's goals for the years 2001
2 through 2003 by 256 MW's above the achievable potential
3 identified by FPL. As of 1998, FPL has met the summer MW,
4 winter MW and annual energy goals for both the Residential and
5 Commercial/Industrial market segments. It is important to point
6 out that it has been increasingly difficult to meet the annual goals
7 in the last several years due to the program revisions required in
8 order to continue to offer cost-effective programs.

9
10 **Q. How effective has FPL been in implementing cost-effective**
11 **DSM?**

12 A. FPL has a long and successful history of offering DSM programs
13 that are cost-effective and meet the energy-conservation related
14 needs of our customers. FPL began its DSM efforts in the late
15 1970's with programs such as the "Watt-Wise Living" and
16 commercial audit programs. In the 1980's, FPL intensified its
17 efforts by implementing a broad portfolio of DSM programs.
18 From 1981 to 1989 FPL implemented 833 MW's of DSM. During
19 the 1990's, this success has continued. For the time period
20 1990 to 1998, an additional 1,830 MW's of DSM has been
21 implemented. In summary, FPL has successfully implemented
22 over 2,663 MW's of DSM since 1981. This 2,663 MW's, which
23 has resulted in the avoidance of more than six 400 MW power

1 plants, consists of 1,516 MW's of conservation and 1,147 MW's
2 of load management.

3
4 Another important indication of the success of DSM in Florida
5 and FPL's service territory was the results of a benchmarking
6 study conducted by the State of Florida Energy Office in 1992.
7 The "Electricity Conservation and Energy Efficiency in Florida"
8 study found that since the early 1980's, FPL had been actively
9 involved in DSM programs and had been an industry leader in
10 DSM application. It further found that: "The Florida utilities have
11 been extremely successful in reducing peak capacity
12 requirements. The Florida utility peak capacity savings are
13 generally higher than those obtained by other utilities. While the
14 Florida utilities have been focusing their efforts on load
15 management, they have been among the leaders in achieving
16 energy savings".

- 17
18 **Q. How were FPL's proposed new DSM goals developed?**
19 **A.** FPL's proposed goals are based on DSM projections developed
20 in FPL's most recent planning process of the total cost-effective
21 demand and annual energy savings reasonably achievable in
22 both the Residential and Commercial/Industrial classes. These
23 achievable savings are cost-effective under the RIM and

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Participants test.

In developing these projections, FPL used a multi-step process. The first step was to determine which measures should be evaluated for cost-effectiveness. The process used to select measures is described in detail in Section II. All selected measures were then screened for cost-effectiveness with an assumption of no incentives, and those having both RIM and Participant Test cost-effectiveness ratios greater than 1.0 were used to develop the 2000 through 2009 achievable potential. This process is described in Section III. FPL's achievable potential results are an integral part of FPL's Integrated Resource Planning (IRP) process. The results obtained in this phase of the process were further analyzed to identify the most cost-effective DSM portfolio for FPL's customers. The results of this comparison are further discussed in Dr. Sim's testimony.

The goals FPL has proposed reflect the cost-effective achievable potential projected by FPL for utility program measures analyzed under the RIM and Participant tests as well as the proper consideration of high thermal efficiency self-service cogeneration, renewable resources, CUE measures, and the gas measures.

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Q. Should goals be established in this docket for any specific end-uses?

A. No. The establishment of end-use goals versus overall goals was a topic of spirited debate in the last Goals Proceeding. After months of argument, the Commission followed their rule that calls for the establishment of overall goals for two market segments: Residential and Commercial/Industrial. The Commission had previously declined to adopt a rule with more specific goals. This was re-confirmed in Procedural Order PSC-98-0384-PCO-EG, entered on March 10, 1998, in this docket. It is my understanding that the purpose of this case is to implement the rule adopted and not revisit whether something other than overall goals are appropriate.

It has not yet been determined how the goals adopted will be employed. Given that uncertainty, the flexibility a utility has under overall goals to achieve the goals is highly desirable. A shortfall in one end-use can be compensated for with more than anticipated success in another without consequence under overall goals.

While FPL strongly opposes any attempt to establish goals in this proceeding other than the overall kW and kWh goals called

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for by Rule 25-17.0021, F.A.C., I have prepared Document No. 3 that provides FPL's projections of reasonably achievable, cost-effective DSM for: the Residential New Construction major end-uses, the Residential Existing Construction major end-uses, the Commercial/Industrial New Construction major end uses, and the Commercial/Industrial Existing Construction major end-uses. As with FPL's proposed goals, these projections are premised upon cost-effective DSM under the RIM and Participant tests.

To further document the specific measures that comprise each of the end-use values in Document No. 3, I have prepared Document No. 4, which provides by measure for the years 2000 through 2009, the cost-effective, achievable potential summer and winter demand savings, and energy savings.

- Q. How would you characterize FPL's proposed DSM goals?**
- A. FPL's proposed goals are reasonably achievable and based on FPL's IRP process. FPL has proposed as its goals a 765 MW DSM portfolio that is cost-effective under the RIM and Participant tests.
- Q. Is the process you have outlined appropriate for developing DSM projections and establishing DSM goals for FPL?**

1 A. Yes. The process, as I have outlined it and as is more fully
2 explained in the remainder of my testimony and Dr. Sim's
3 testimony, is a sound analytical process. That process has been
4 properly employed by FPL, and it has employed the best data
5 available to FPL. Thus, FPL's proposed DSM goals are the fruits
6 of a reasonable process and analysis.

7
8 **Q. Has FPL addressed the energy conservation needs of lower**
9 **income customers as part of the goal setting process?**

10 A. Yes. While the process used to establish the reasonably
11 achievable cost effective DSM goals does not specifically
12 address lower income customers, these customer segments
13 benefit in several ways as a result of this process.

14
15 First, by basing goals on only RIM passing measures, all
16 customers receive the benefit of minimizing the rate impact of
17 continuing to meet the growing demand for electricity of our
18 customers in the most cost-effective manner. Even if a customer
19 chooses not to participate in any of FPL's DSM programs, use of
20 the RIM test ensures that nonparticipants still receive direct
21 benefits through reduced rates.

22
23 Second, the measures used to develop our proposed goals all

1 pass the Participant test. This test ensures that each measure
2 makes economic sense for customers who elect to participate in
3 an FPL DSM program which include these measures.

4
5 Third, while FPL has not yet developed its DSM plan and the
6 corresponding programs based on these measures to meet our
7 proposed goals, our past experience show that lower income
8 customers do, in fact, participate in significant numbers in our
9 programs. Lower income (less than \$25,000 of annual family
10 income) segments comprises about 14% of FPL's residential
11 customer base, but these customers comprise 25% of the
12 participants in FPL's residential DSM programs. This data is
13 taken from a 1998 Participant/Nonparticipant Survey conducted
14 for FPL by an independent contractor. The breakdown of
15 program participation by income category for each of FPL's
16 residential programs is as follows:

17
18 **Program Participation by Income Category**

	HVAC	Duct Repair	Ceiling Insulation	On Call
\$0 - \$10,000	5%	4%	3%	3%
\$10,000 - \$25,000	20%	14%	14%	34%
\$25,001 - \$50,000	37%	32%	43%	32%
\$50,001 - \$75,000	19%	23%	26%	18%
\$75,001 - \$100,000	11%	15%	8%	8%
\$100,001 +	8%	12%	6%	5%

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Applying the percentages from this sample data to 1997 participants for each of FPL's programs shows that, overall, 24% of participants in these programs are lower income customers.

1997 Participants by Program

	Participants	% Lower Income	# Lower Income
HVAC	81,701	25%	19,751
Duct	57,103	18%	10,278
Ceiling Insulation	45,862	17%	7,796
On-Call	49,874	37%	18,453
Total	234,540	24%	56,278

This data shows that FPL's efforts to promote DSM among its lower income customers have been effective.

Fourth, FPL also works with housing authorities and social service agencies to facilitate the accessibility of DSM to lower income customers. The following are a few examples of activities that have occurred over the past 24 months.

Energy conservation seminars and workshops for families qualifying for Habitat for Humanity Homes were conducted in the Sarasota area. The classes were held at area community centers and fill the requirement that consumers are required to take in order to qualify for low interest loans.

1 FPL energy auditors conducted energy evaluations of 400
2 apartment homes for the Sarasota Housing Authority, which
3 fulfilled their requirement by law to have energy evaluations
4 every five years. Many of these dwellings do not have central
5 air-conditioning, and installing insulation is not possible due to
6 the flat roof construction. Our representatives provided low- or
7 no-cost DSM practices.

8
9 Representatives in Bradenton worked with the Manatee Bankers
10 Association and are providing three hour energy conservation
11 workshops each month for lower income and first-time buyers.

12
13 FPL participated with the Consumer Credit Counseling Services
14 of the Florida Gold Coast, Inc. This group provides assistance
15 for first time home buyers. FPL conducted energy conservation
16 workshops.

17
18 West Palm Beach FPL employees are working with Gold Coast
19 Builder's Association to help establish a remodeler's council to
20 help lower income customers make needed repairs/renovations
21 to their homes. The FPL seminar consists of a 14 hour class for
22 contractors from an eight county area. Topics covered include
23 an overview of FPL DSM programs and duct repair techniques.

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Energy surveys and duct tests were conducted for lower income customers in the following areas of Ft. Myers:

- Michigan Links - Ft. Myers Housing Authority - Ceiling insulation installed in 338 units,
- Royal Manor Apartment Complex - Ceiling insulation and duct repair in 72 units,
- Michigan Links Elderly Section - Ft Myers Housing Authority - Ceiling insulation and high efficiency air conditioners in 120 units.

For the past two years, FPL representatives in Dade County have participated in "Christmas in April". This project identifies homes in lower income neighborhoods for energy conservation surveys and general "fix-up" needs. FPL representatives plant trees and install various energy DSM measures. This year 30 homes were selected in the West Little River area for this effort.

In summary, even if lower income customers do not participate in any of FPL's DSM programs, those customers will receive direct benefits through minimizing rate impacts of meeting the growing electricity needs of all of FPL's customers. However, as FPL's program survey data shows, lower income customers not only receive the benefits associated with being a nonparticipant, but

1 also a significant number receive the benefits associated with
2 being DSM program participants.

3

4 **SECTION II: IDENTIFICATION OF MEASURES FOR EVALUATION**

5

6 **Q. What was the process used to determine which measures**
7 **should be included for evaluation in determining reasonably**
8 **achievable DSM goals for 2000 - 2009?**

9 A. FPL used a four (4) step process to develop the list of DSM
10 measures to be analyzed in this proceeding. This process,
11 which is attached as Document No. 5, builds upon the analyses
12 performed in the last DSM Goals proceeding and the
13 determinations made by the Prehearing Officer in this
14 proceeding.

15

16 **Step One. The first step of FPL's process is the**
17 **development of a list of measures which the Commission**
18 **found in the last DSM Goals proceeding to be an**
19 **appropriate list of measures properly characterized as**
20 **"Utility Program" or "UP" measures. This list consists of 162**
21 **measures and was circulated by the Commission Staff as part of**
22 **the materials provided at the workshops for this proceeding.**
23 This list of measures is included as Document No. 6. It is taken

1 from the Commission's Fourth Order On Procedure in the last
2 DSM Goals Proceeding. It is helpful to review the process of how
3 these UP measures were identified in the last goals proceeding.
4 In its Order Establishing Procedure in the last Goals docket,
5 Order No. PSC-93-0953-PCO-EG, the Commission required the
6 utilities to evaluate the DSM measures analyzed in a statewide
7 study performed for the Department of Community Affairs by the
8 consulting firm Synergic Resources Corporation (SRC). One of
9 the requirements of the Commission was for each utility to
10 characterize each of the measures in one of five categories: (1)
11 better implemented by building codes (Code), (2) better left to
12 self-adoption due to lifestyle (Behavioral), (3) better implemented
13 in a different service territory (Climate or Demographic), (4)
14 requires research (R&D), or (5) measures for utility
15 implementation (UP).

16
17 The utilities performed that analysis, and there was considerable
18 disagreement among the parties as to the proper
19 characterization of measures. In addition, the Legal
20 Environmental Assistance Foundation (LEAF) asked the
21 Commission to add another approximately 70 measures to the
22 utilities' lists for analysis. This controversy underwent several
23 permutations with several different lists of measures evolving.

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The major change in the lists was a refinement by the Commission Staff of Code measures into one of five categories: C1 - currently in the prescriptive code; C2 - should be added to prescriptive code; C3 - currently an option in Code; C4 - should be an option in Code; and C5 - currently an option in Code but should be prescriptive.

Ultimately, Commissioner Deason, in the Fourth Order On Procedure, PSC-93-1679-PCO-EG, resolved the issue of which measures would be analyzed by publishing a list of measures with various labels. He found that the measures listed as UP should be analyzed by utilities and included in their assessment of achievable potential. He found that measures listed as R&D should not be analyzed as part of the utility's achievable potential. He found that measures listed as Behavioral should not be listed as part of the utilities assessment of achievable potential. He found that as to Code measures, measures currently in the Code, whether prescriptive (C1) or optional (C3), should not be analyzed as part of the utilities achievable potential, but that measures which were not currently in either the prescriptive or option parts of the Code, measures categorized as C2, C4 or C5, should be evaluated by the utilities for their cost-effectiveness.

1 It is the list of measures designated by Commissioner Deason as
2 UP measures in the Fourth Order on Procedure which Staff
3 circulated during the workshops and which FPL believes is the
4 appropriate starting point for analysis in this proceeding.
5 Beginning with this list builds upon the considerable analysis
6 performed in the last proceeding as well as the Commission's
7 resolution of the dispute about the proper categorization of
8 measures in the last proceeding.

9
10 **Step Two.** The second step in FPL's process calls for
11 **restating the list of UP measures for three reasons. (A) The**
12 **list was expanded to accommodate FPL's analytical**
13 **practices.** For instance, FPL analyzes Commercial/Industrial
14 DSM measures by rate class. So FPL expanded the number of
15 analyses to be performed to accommodate the analysis of the
16 C/I measures by rate class. **(B) The list was expanded to**
17 **reflect the measures which FPL analyzed in the last case on**
18 **its own initiative.** In the last case each utility added some
19 measures to be analyzed. FPL added to the list of measures to
20 be analyzed the same additional measures that it (not other
21 utilities) added last time. **(C) The list was consolidated to**
22 **reflect measures that are properly combined given FPL's**
23 **program experience.** FPL has two examples of this. FPL's

1 experience with our C/I Lighting Program and our Residential
2 Load Control Program provided the experience required to
3 validate the consolidation of measures. Document No. 7 is a
4 summary of all combined measures. Document No. 8 provides
5 the basis for combining measures. Thus, the net effect of Step 2
6 was to expand the list of measures from 162 measures to 230
7 measures.

8
9 **Step Three. The third step was a screening step designed**
10 **to screen away measures which have no realistic**
11 **opportunity of passing a cost-effectiveness test.** In the last
12 Goals proceeding, and in subsequent analyses performed by
13 FPL, there were a number of UP measures analyzed which were
14 not cost-effective. Since the last Goals proceeding, the cost of
15 new generating units, a major source of benefits of DSM in either
16 the RIM or TRC tests, has declined significantly. FPL's avoided
17 cost has declined approximately 35% as discussed in Dr. Sim's
18 testimony. All other things being equal, measure costs would
19 have to decline more than 35% for a measure that was not cost-
20 effective in the last analysis to become cost-effective under
21 current conditions (or savings from the DSM measure would
22 have to increase more than 35% for the measure to become
23 cost-effective; this is addressed in the next step of the process).

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FPL knows from its most recent round of program modifications approved in November 1997 that a 35% decrease in costs is not possible, particularly when the cost-effectiveness in the last case was performed with zero incentives. If it did not pass last time, it will not pass this time.

Even though FPL felt confident that measures which failed last time would fail under current assumptions, FPL took the more conservative approach and analyzed all measures which had a RIM cost-effectiveness ratio of .9 or greater. **So, step three was a screen to drop from the UP list developed in steps one and two all measures which were not cost-effective under the Participants test and had a RIM ratio less than .9 in their most recent analysis.** This step reduced the total measures from 230 measures to 126 measures. Document No. 9 is a summary of this step in the process.

Step Four. The fourth step in FPL's process is to add back measures to the list which were screened in step three. The measures added are measures for which FPL has updated monitoring data showing a change in the measure's savings. Since an increase in savings could potentially offset the decline in avoided costs, this step of adding back measures

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is appropriate. In this step FPL also added other measures for analysis which it deemed appropriate. These additional measures could come from several sources: the utility's research and development programs, measures which appear to have worked for other Florida utilities, or suggestions from third parties.

At the workshop each of the utilities expressed a willingness to consider suggestions by third parties, and this is the logical step for that in FPL's process. In order for FPL to add a measure suggested by an outside party, the following information was required:

1. A clear definition of the measure was needed.
2. The baseline must be defined.
3. The measure must have Florida specific verifiable demand and energy savings, including load shapes, for winter and summer peak days as well as for winter, summer, spring, and fall typical days.
4. The measure must be market ready, with identifiable costs in 1998 dollars and operating characteristics.

Without this information, FPL could not perform the required cost-effectiveness and achievable potential analyses.

1 **Q. How many new measures were added back as a result of**
2 **this step?**

3 A. FPL added back 43 measures to the final list of measures in this
4 step. All of the measures except one (Blower Door Infiltration
5 Reduction) were based on FPL's ongoing R&D efforts.
6 Numerous other measures were suggested for evaluation but
7 either: 1) FPL already was evaluating the measure or 2) the data
8 required to perform a complete analysis was not available. In
9 fact, the Blower Door Infiltration Reduction measure data was
10 not provided by the party that recommended we evaluate it. It
11 was based on using prior FPL end-use evaluation data.

12
13 **Q. How many DSM measures were ultimately analyzed for cost-**
14 **effectiveness as a result of the four-step process?**

15 A. One hundred and sixty nine measures were analyzed.
16 Document No. 10 is a final listing of the resulting measures from
17 this four-step process.

18
19 **Q. What sources did you use for your data?**

20 A. Data sources used for each measure varied by sector and end-
21 use, but for the most part, it was consistent for the measures
22 within an end-use. For the most part FPL, utilized the data and
23 assumptions based on its actual experience for measures that

1 are part of FPL's existing programs. This included the latest
2 findings from FPL's ongoing end-use evaluation efforts and
3 actual measure administration costs. For measures which FPL
4 did not have sufficient data, outside sources such as the Florida
5 Solar Energy Center (FSEC) and the SRC Study were used.

6
7 **Q. Does the implementation of multiple DSM measures affect**
8 **the savings potential assumed for each measure if**
9 **implemented individually?**

10 **A.** Yes, it can. Measures can be classified as either competing or
11 complementary. In determining the net impact of each measure
12 on demand and energy usage, these effects must be considered.
13 For example, the savings provided by adding ceiling insulation
14 will be less when calculated with a high-efficiency air
15 conditioning system than with a standard efficiency system.
16 Ceiling insulation is an example of a complementary measure.
17 Complementary measures are options that can be installed
18 alone or jointly regardless of what other options are installed.
19 Competing measures, such as two different types of high-
20 efficiency central air conditioners, on the other hand, force the
21 customer to choose only one of the measures to install. As a
22 part of FPL's extensive end-use evaluation efforts, these effects
23 are part of the evaluation process, and the resulting demand and

1 energy impacts account for these interactive effects as they
2 occur in the FPL customer population.

3

4 **Q. In developing the demand and energy impacts of each**
5 **measure, did FPL consider overlapping measures?**

6 A. Yes, the statistical and engineering analyses conducted to
7 estimate FPL measure impacts are based upon primary end-use
8 metered (EUM), billing, and customer survey data that reflect the
9 energy usage characteristics of FPL's entire customer
10 population. As such, EUM and billing data are analyzed for a
11 representative sample of the population, including participants
12 who participate in more than one program. The resulting
13 impacts, therefore, include the effects of overlapping measures
14 on program impacts.

15

16 **Q. In developing the demand and energy impacts of each**
17 **measure, did FPL address rebound effects?**

18 A. Yes, as part of the end-use evaluation efforts, a statistical
19 analysis is performed which explicitly accounts for rebound. This
20 analysis, which considers both pre- and post-participation
21 electricity usage, captures changes in behavior (for example,
22 lowering the thermostat setpoint as a result of the purchase of a
23 new air conditioner). Rebound, if present, would result in a

1 higher than expected (from an engineering model perspective)
2 post-participation level of energy usage, and, therefore, lower
3 than expected actual impacts.
4

5 **Q. In developing the demand and energy impacts of each**
6 **measure, did FPL consider free ridership?**

7 A. Yes, measure net benefits—which encompass both free
8 ridership (free riders are program participants who would have
9 installed the identical efficiency measure at the same time even if
10 the utility program did not exist) and free drivership (free drivers
11 are nonparticipating customers who install the identical efficiency
12 measure which program participants installed because the utility
13 program increased the prevalence and awareness of the
14 efficiency measure in the marketplace) -- are analyzed in
15 comprehensive assessments of the effects of FPL's measures
16 on the targeted energy-efficient technologies by both participants
17 and nonparticipants. A key feature of these assessments is
18 substantial annual nonparticipant and baseline surveys which
19 form the basis for addressing these effects.
20

21 **Q. In developing measure impacts, how were the interactions**
22 **with building codes and appliance standards addressed?**

23 A. Current and expected building codes and appliance efficiency

1 standards are a key input to the baseline efficiency levels
2 established for each of FPL's measures. In addition, the effects
3 of these codes and standards on nonparticipant and baseline
4 energy efficiency actions are captured in the large nonparticipant
5 and baseline surveys mentioned above.

6

7 **Q. How were the administrative and participant costs**
8 **developed?**

9 A. These costs were based on either FPL's experience with the
10 same or similar measures that are part of existing DSM
11 programs or estimates developed by other parties such as FSEC
12 or updated values from the SRC study. See Document No. 11
13 for a measure-by-measure detailed summary of the costs used
14 and the source of the information.

15

16 **Q. Is it appropriate to include administrative costs in the**
17 **economic screening?**

18 A. Yes. This is consistent with cost-effectiveness methodology
19 prescribed by the Commission. For the RIM test, the
20 methodology properly requires all measure related costs such as
21 lost revenues, measure incentives and administrative costs to be
22 compared to the total benefits associated with the measure.
23 Excluding a cost component would not result in a correct

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evaluation.

Q Please describe the preliminary screening used?

A. The preliminary cost-effectiveness tests were performed to determine incentive amounts FPL could cost-effectively pay participants under the RIM and Participant tests.

Document No. 12 shows the results of the preliminary screening. The maximum incentive dollars under this scenario were determined by calculating the measure cost which would result in a cost-effectiveness (benefit/cost) ratio close to 1.01-to-1 for the 2005 avoided unit and which continued to allow the measure to be cost-effective when compared to all other subsequent avoided units. The benefit amount or the avoided cost was assumed to be equal to an equivalent sized part of a single avoided unit (adjusted for reserve margins and line losses), system fuel impacts, plus transmission and distribution facilities. The costs consisted of the administrative costs, revenue losses and incentives. Since utility program costs (administrative costs) were identified prior to the screening, and revenue losses could be determined from the measure's kW and kWh impacts, the maximum incentive level could be determined by subtracting the utility program cost from the maximum available program dollars

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which already included revenue losses.

Simple participant payback **without** incentive was calculated, and if it was determined to be less than 2 years, the measure was also dropped from further analysis.

Simple payback with maximum incentive was determined. If it was greater than two (2) years, the maximum incentive was used. If the payback with maximum incentive was less than two (2) years, the incentive was adjusted downward to ensure a payback period of no less than 2 years.

Q. Why did you use the two (2) year payback criteria?

A. Incentives were calculated based on providing a two year payback to encourage the customer to implement the DSM measure. If a customer investment in a DSM measure will naturally pay for itself in less than two years, that was thought to be sufficient motivation and no additional cash incentive is offered. Without such a program design, free ridership, the phenomenon of paying incentives to participants who would participate anyway, would be higher. Simply stated, it is thought that FPL's DSM programs should not pay people to do what they would do anyway.

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This two year payback methodology is the same methodology that was successfully used by FPL in the last goals proceeding to minimize free ridership.

Q. Which measures did you screen out of your portfolio that required no utility incentive to achieve less than a two year payback?

A. As shown in Document No. 12, the following measures passed the RIM and Participants tests but were screened out of the portfolio based on having less than a two year payback with \$0 incentive:

- SC-D-6 GSLD Heat Pipe DX New and Existing Construction
- SC-D-26A GSD & GSLD Light Colored Roof Chiller Air Cooled - New Construction
- SC-D-26W GSD & GSLD Light Colored Roof Chiller Water Cooled - New Construction
- SC-D-27 GS, GSD & GSLD Light Colored Roof DX - New Construction
- INC8LP GSD & GSLD Incandescent 8 Hour Low Permanence Existing Construction
- W-D-16 GSLD Low Flow / Variable Flow Shower Head

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Q. How was the expected life of the DSM measure used in screening?

A. If after applying the maximum available incentive for a measure its payback period exceeded the life of the measure, then the measure was deemed not cost-effective for customers and was dropped from further analysis.

Q. How do you treat DSM measures which have a life expectancy shorter than the planning horizon?

A. Measures whose life are shorter than the planning period have to be replaced in order to continue to contribute to the energy and demand reductions. A residential high-efficiency air conditioner, for example, has a life expectancy of fifteen years. At that time, the DSM program must count the cost of resigning the same participant or signing a new one to the program. This approach is most appropriate in determining achievable potential for goal setting. By designing "programs" around individual measures, FPL can comply with the Commission directive to evaluate measures individually while maintaining a realistic expectation that long-term savings will result. These recurring costs are included in the cost-effectiveness calculations and are part of the screening analysis performed. The recurring costs include administrative and incentive costs.

1 **Q. In Step 3 of the process, FPL included measures with a**
2 **latest RIM ratio between .9 and 1.0. Based on the analysis**
3 **done for this proceeding, do any of these measures now**
4 **have a RIM ratio greater than 1.0?**

5 **A. No. The following are the measures that were not cost-effective**
6 **last time, but still had a RIM ratio between .9 and 1.0. The**
7 **current RIM ratio is provided. None of these measures had a**
8 **RIM ratio greater than 1.0.**

- 9 • FR-1 Best Freezer FF - 0.95
- 10 • RSC-16A Window Film & Reflective Glass – 0.99
- 11 • RSC-22A 2 Speed Central AC – 0.99
- 12 • PP-1 High Efficiency Pool Pump – 0.81
- 13 • V-D-9 GSLD High Efficiency Motors DX – 0.73
- 14 • V-D-10 GSLD Separate Makeup Air / Exhaust Hoods Chiller
- 15 – 0.57
- 16 • V-D-11 GSD Separate Makeup Air / Exhaust Hoods DX –
- 17 0.62
- 18 • V-D-11 GSLD Separate Makeup Air / Exhaust Hoods DX –
- 19 1.00
- 20 • R-D-4 GSD Multiplex: Air Cooled Ambient & Mechanical
- 21 Subcooling – 0.82
- 22 • R-D-6 GSD Open Drive Refrigeration System – 0.81
- 23 • W-D-13 GSD HRU – 0.87

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- W-D-13 GSLD HRU – 0.92
- W-D-15 GSD DWH Heat Trap – 0.74
- W-D-15 GSLD DWH Heat Trap – 0.79
- W-D-17 DWH Recirculation Pump – Payback less than two years
- FPLM-1 GSD Motors – 0.66
- FPLM-1 GSLD Motors – 0.68

All of these measure's RIM ratios were calculated with \$0 incentives. The RIM ratio will decline further if a non-zero incentive is assumed.

SECTION III: DETERMINATION OF THE 2000-2009 ACHIEVABLE POTENTIAL

Q. How was the achievable market potential estimate determined?

A. Depending on the time period and the measure, several different methods were used. From FPL's IRP process, avoided units to screen measure were identified in 2005 and 2008.

Q. How was the achievable market potential for the year 2000 determined?

A. In determining the reasonably achievable potential for the year

1 2000, the timing of this proceeding is critical. FPL will file its
2 proposed goals on February 1, 1999. The hearing for this
3 proceeding is scheduled for May 10, 1999 through May 14, 1999
4 with the final order becoming effective September 8, 1999.
5 (Although, at the time this testimony is being prepared, LEAF
6 has proposed at least a four month delay in this proceeding and
7 the schedule set forth above). After the final order in this case,
8 FPL will have 90 days "or such longer period as approved by the
9 Commission" to submit for Commission approval a demand side
10 management plan designed to meet the utility's approved goals.
11 This would result in FPL submitting its DSM Plan in December
12 1999 at the earliest. Assuming a reasonable schedule and
13 review process, FPL's new DSM plan would not be approved
14 until June or July 2000. Allowing time for program
15 implementation, the new DSM programs that support the 2000 -
16 2009 goals will not be completely implemented until the Fall of
17 2000. For this reason, FPL's achievable potential for 2000 is
18 based entirely on FPL's currently offered DSM programs.

19
20 **Q. How was the achievable market potential estimate for the**
21 **years 2001 through 2009 determined?**

22 **A.** Achievable potential estimates were calculated in a two-part,
23 iterative process. First, base-year (1999) eligible market

1 estimates were made using data from FPL's Customer
2 Information System (CIS), Marketing Information System (MIS),
3 Home Energy Survey (HES), C/I Sector Survey (CISS) and
4 Nonparticipant Canvass Survey data. Customer decisions
5 regarding measure purchase and measure participation were
6 then modeled by analyzing either stated preference or revealed
7 preference data on customer response to program and measure
8 features, as well as program awareness estimates obtained from
9 Nonparticipant Canvass Surveys. The resulting estimates of the
10 percentage of the eligible market installing a measure in a given
11 year were then multiplied by the number of customers in the
12 eligible market to obtain estimates of measure participation in a
13 given year. Participation estimates were calibrated to actual
14 participant and nonparticipant purchase data for 1997, to provide
15 the best possible estimates of base year (1999) participation
16 levels. 1999 participation and nonparticipant purchase estimates,
17 as well as estimates of the growth and demolition of residences
18 and facilities in FPL's service territory, were then combined with
19 the 1999 eligible market data to estimate the eligible market in
20 the next year (2000). Updated measure feature (primarily
21 incentive level), technology cost and savings, and awareness
22 data were entered into the stated and/or revealed preference-
23 based choice algorithms, and measure participation for the year

1 2000 was estimated. This procedure was repeated to estimate
2 measure levels for each year in the planning period. The
3 estimates of the number of measure participants was combined
4 with end-use evaluation based demand and energy impacts to
5 develop the achievable potential estimates.

6
7 For the peak load shaving or load management measures, a
8 different methodology is more appropriate. For these types of
9 measures, it is critical to determine how much load management
10 is actually "usable" for an individual utility. Consideration must
11 be given to the system load shapes and characteristics of load
12 management measures including control strategies (cycling
13 loads vs continuous interruptions), length of the control periods
14 and the payback effects once load control is released. FPL has
15 developed a technique, which is described in Dr. Sim's
16 testimony, that outlines this process in detail. Performing this
17 analysis for the various years in the goal setting time frame
18 provides the upper annual limit of the amount of incremental load
19 management FPL can use. The achievable potential for the load
20 management measures were set using this technique.

21
22 Lastly, the achievable potential for the thermal energy storage
23 and off-peak battery charging measures was determined based

1 upon historical program participation. These measures have
2 cost-effective incentive levels similar to our existing programs.
3 This allows us to confidently forecast future acceptance of these
4 rather uncommon measures by customers.

5
6 **Q. Can you provide an example of the process used to**
7 **calculate achievable potential?**

8 **A.** Yes. Details of each step for the residential central air
9 conditioner and heat pump measures are provided below.

10
11 The four components for the residential HVAC model (and of all
12 the models used to estimate achievable potential) are estimating
13 the: eligible market, likelihood of purchases, product choice, and
14 annual purchases.

15
16 The model begins with an estimation of the eligible market.
17 Eligibility is determined by applying measure eligibility
18 requirements to information contained in FPL's Customer
19 Information System (CIS) and FPL's Home Energy Survey
20 (HES). FPL's residential Marketing Information System (MIS) is
21 used to identify customers who have installed the measure via
22 FPL's program in the past, and therefore may be ineligible for the
23 program in future years. The eligible market is defined for 25

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segments - 3 house types, 5 geographic regions, and 3 usage segments.

Extensive research into the factors affecting the likelihood of HVAC purchase revealed that the vintage of existing HVAC equipment is the key factor affecting HVAC purchases. That is, the FPL rebate, while possibly accelerating the HVAC purchase decision slightly, primarily affects the efficiency of system chosen, rather than the time of purchase. As a consequence, the HVAC likelihood of purchase function in the HVAC model represents HVAC purchase as a function of existing equipment vintage, with different replacement rates for the different vintage equipment. Total replacements increase over time, as the existing stock of HVAC equipment ages.

The product choice module predicts the probability of a customer installing the measure through an FPL DSM program, as well as the efficiency (i.e., SEER) level chosen, for all HVAC purchasers (both participants and nonparticipants) in FPL's service territory in a given year. Stated preference data from over 2,000 customers is used in estimating these probabilities. The stated preference exercise determines the probabilities of purchasing different efficiency HVAC units, both within and outside an FPL

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DSM program based on actual rebate level, HVAC system cost, SEER rating, electricity savings and electricity price estimates.

Estimates of program awareness (obtained primarily from Nonparticipant Canvas Survey responses) are then combined with the estimates of eligible market, likelihood of purchase and product choice to estimate the number of purchases within and outside the program at different SEER levels (for example, 10, 11, 12, 13, 14-plus SEER) in a given year. The model is calibrated to actual purchase and participation data. Nonparticipant purchases and SEER levels are estimated using Nonparticipant Canvass Survey data.

In subsequent years, the eligible market and equipment vintages are adjusted to reflect the previous year's purchase activity, new construction and housing demolitions. Electricity prices and capital costs are changed to reflect FPL price forecasts and estimated changes in capital costs. Program awareness levels are adjusted to reflect likely changes in awareness. Purchase and participation is estimated by entering these new data into the Residential HVAC model. This procedure is repeated for each year of the desired forecast period.

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Q. What is FPL's achievable market potential estimate?

A. FPL's estimated achievable market potential estimate for the years 2000 through 2009 is 765 MW's of summer demand reduction.

Q. What is the impact of FPL's achievable potential?

A. FPL's achievable potential results are an integral part of FPL's Integrated Resource Planning process. The results obtained in this phase of the process are subsequently used to determine how large a role DSM should play in FPL's resource plan.

SECTION IV: CODE/UTILITY EVALUATION (CUE) MEASURES

Q. What type of analysis was done to determine the achievable potential for the CUE measures?

A. Although not required by the Procedural Order for this proceeding, FPL has analyzed the cost-effectiveness of twenty-eight (28) measures labeled as CUE. FPL used the same four-step process as was used for the UP measures to determine which measures should be screened for cost-effectiveness. Consistent with this methodology, FPL did not re-evaluate those CUE measures which had a RIM ratio of less than .9. Document No. 13 shows the pre-screening for the CUE measures;

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Document No. 14 shows the CUE measures that were screened for cost-effectiveness with the results of the cost-effectiveness analysis; and Document No. 15 is a summary of the administrative and participant costs associated with each CUE measure and the source of the information.

Q. What was the result of the CUE measure cost effectiveness screening?

A. Only one measure SC-D-23 Window Film DX AC (for all three Commercial/Industrial rate classes), passed both the RIM and Participant tests.

Q. What should the Commission do with the CUE measures that passed the RIM and Participant tests?

A. CUE measures that passed the cost-effectiveness tests are candidates for inclusion in the Energy Efficiency Code. The Commission should work with the utilities it regulates to encourage DCA to include these measures in the Energy Efficiency Code. Code implementation, particularly inclusion in the mandatory portion of the code, should achieve far higher market penetrations than utility programs. FPL volunteers to work with the DCA to incorporate these measures into the code.

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Q. Should the savings associated with these measures be considered in the goals process?

A. No. The Energy Efficiency Code is the more efficient means to implement efficiency measures. Mandatory code measures should be extremely effective in achieving market penetration in relation to a utility program. The Energy Efficiency Code is reviewed and updated on a periodic basis; thus, it does not seem reasonable to incur implementation costs in measures that have the potential to become part of the code in the near future.

SECTION V: NATURAL GAS

Q. How did FPL evaluate natural gas measures?

A. As part of the last goal setting process, FPL classified the natural gas measures as R&D. Pursuant to Florida Public Service Commission Order Number PSC-94-1313-FOF-EG, FPL submitted a Natural Gas Demand-Side Management Research & Development Plan to the Commission for approval. The Commission's order approving that plan requires FPL to conduct research and development projects in the functional areas of heating, cooling, dehumidification and water heating and to develop Florida-specific information on performance and cost-effectiveness of those technologies. An expressed Commission

1 concern in Order No. PSC-94-1313-FOF-EG was the absence of
2 Florida-specific data for the noted technologies.

3
4 A primary focus of FPL's natural gas research and development
5 effort has been to determine the appropriate inputs to the cost-
6 effectiveness tests. The development of both lab and actual field
7 data specific to FPL's service territory will allow FPL to more
8 accurately determine the cost-effectiveness of each natural gas
9 end-use technology under the Commissions' approved cost-
10 effectiveness tests. FPL's proposed research efforts and their
11 scheduled completion dates for the final reports are: 1)
12 Residential Gas Heat Pump – June 1999, 2) Residential Gas
13 Water Heating – June 1999, 3) C/I Gas Engine Chiller – June
14 1999, 4) C/I Gas Desiccant Cooling – December 1998, and 5)
15 C/I Gas DX Air Conditioning – June 1999.

16
17 In February 1997, FPL filed, and the Commission approved, a
18 petition to terminate the C/I Gas DX Air Conditioning research
19 project based on the joint findings of Peoples Gas and FPL.
20 Peoples' representatives raised concerns as to why FPL was
21 researching this technology because they did not believe it to be
22 applicable in Florida except with customers with very unique
23 circumstances. The only use of the technology in Peoples'

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service territory of which Peoples was aware was a site in St. Petersburg where there was not electrical service available. Based upon Peoples' reservations about whether the technology was feasible for Florida, FPL and Peoples performed a joint study of the feasibility of the technology using manufacturers' performance data. The conclusion reached in the joint feasibility study regarding the use of gas engine-driven DX air conditioning solely for cooling was unless a customer has a specific interest in gas DX, or unusual circumstances that greatly offset the higher installation costs for the gas equipment, a customer will typically not choose gas DX for straight cooling applications. The feasibility study also examined the use on the gas engine-driven DX air conditioning in conjunction with a heat recovery application. The conclusion reached in the feasibility study regarding the use of this technology with heat recovery was both the operational scenario and the amount of recovered heat utilized are critical to the economics of the gas DX technology. That is why, for heat recovery, a customer-specific analysis is always necessary. Based on these findings there is no identifiable achievable potential for this technology.

The results of the C/I Gas Desiccant Cooling research project were filed with the Commission in December 1998.

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Q. What are your conclusions in the area of natural gas substitution?

A. Based on the research findings to-date, FPL sees no cost-effective potential for the natural gas end-uses examined at this time. FPL does not recommend the inclusion of natural gas measures as part of the goal's process.

SECTION VI: RENEWABLE AND HIGH THERMAL EFFICIENCY COGENERATION

Renewables

Q. Which renewable measures did FPL evaluate?

A. From FPL's perspective, renewable measures include the following energy options: geothermal, wind, hydro, bio-mass, and solar.

Geothermal energy options do not exist in the State of Florida.

Wind options are available in other parts of the country; however, in Florida there are simply not enough sustainable winds to make wind power a viable alternative. FPL tested windmills during the 1980's and confirmed they were not cost-effective because of the lack of sustainable winds.

1 Hydro power options are not available within FPL's service
2 territory because of our flat terrain.

3
4 Bio-mass options are one of the few renewable options available
5 to Florida, although in a limited fashion. Already, there are
6 several municipal solid waste facilities in our service territory
7 where FPL has agreements to purchase the power output on a
8 consistent basis, but even these applications are limited.

9
10 Therefore, FPL concludes that in our service territory the only
11 renewable option that is feasible for development as a DSM
12 option is solar.

13
14 **Q. Did FPL's effort analyze solar measures?**

15 **A.** Yes, solar measures were analyzed like other potential utility
16 program measures. However, since none of the solar energy
17 measures passed both the RIM and Participant tests, they were
18 rejected for further evaluation.

19
20 **Q. What is FPL's conclusion regarding renewable resources?**

21 **A.** As discussed earlier, FPL has found the only technically viable
22 resource was solar. But, based on the failure of solar measures
23 to pass the required cost-effectiveness tests, FPL does not

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recommend the inclusion of solar measures in the goals process.

Q. Has FPL performed any other activities to promote renewable/solar energy?

A. Yes, FPL has been the leading Florida utility in regard to examining ways to utilize renewable energy technologies to meet its customers' current and future needs. FPL has been involved since 1976 in renewable energy research and development and in facilitating the implementation of various renewable technologies.

In terms of renewable technology research and development, FPL assisted the Florida Solar Energy Center (FSEC) in the late 1970's in demonstrating the first residential solar photovoltaic (PV) system east of the Mississippi. This PV installation at FSEC's Brevard County location was in operation for over 15 years and provided valuable information about PV performance capabilities on both a daily and annual basis in Florida. FPL later installed a second PV system at the FPL Flagami substation in Miami. This 10 kilowatt (kW) system was placed into operation in 1984. The testing of this PV installation was completed and the system was removed in 1990 to make room for substation expansion.

FPL's PV R&D project is a thin-film PV test facility located at the

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FPL Martin Plant site. The FPL PV test facility is used to test new thin-film PV technologies (and others as they become available for demonstration) and identifies design, equipment, or procedure changes necessary to accommodate direct current PV facilities into the FPL system. The site has a potential generating capacity of up to 100 kW.

In terms of utilizing renewable energy sources to meet its customers' needs, FPL initiated the first utility-sponsored conservation program in Florida designed to facilitate the implementation of solar technologies by its customers. FPL's Conservation Water Heating Program, first implemented in 1982, offered incentive payments to customers choosing solar water heaters. Before the program was recently ended (due to the fact that it was not cost-effective), FPL paid incentives to approximately 48,000 customers who installed solar water heaters.

In the mid-1980's, FPL introduced another renewable energy program. FPL's Passive Home Program was created in order to broadly disseminate information about passive solar building design techniques which are most applicable in Florida's climate. Complete designs and construction blueprints for 6 passive

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homes were created by 3 Florida architectural firms with the assistance of the FSEC and FPL. These designs and blueprints were available to customers at a low cost. During its existence, this program was popular and received a U.S. Department of Energy award for innovation. The program was eventually phased out due to a revision of the Florida Model Energy Building Code. This revision was brought about in part by FPL's Passive Home Program and the revision incorporated into the Code one of the most significant passive design techniques highlighted in the program: radiant barrier insulation.

In early 1991, FPL received approval from the Florida Public Service Commission to conduct a research project to evaluate the feasibility of using small PV systems to directly power residential swimming pool pumps. This research project was completed with mixed results. Some of the performance problems identified in the test may be solvable, particularly when new pools are constructed. However, the high cost of PV, the significant percentage of sites with unacceptable shading, as well as customer satisfaction issues remain as significant barriers to wide acceptance and use of this particular solar application.

1 **Q. Is FPL currently performing any other activities to promote**
2 **renewable/solar energy?**

3 A. Yes, FPL is currently conducting a Green Pricing R&D project
4 which is one of the R&D efforts submitted as part of FPL's 1995
5 DSM Program filing. This project is being done to test the
6 willingness of FPL's customers to support the installation of
7 photovoltaic panels in a grid connected facility at FPL's Martin
8 power plant. The program concept allows customers to
9 voluntarily contribute towards the purchase of renewable
10 resources by FPL that would otherwise not be cost-effective for
11 FPL to acquire. FPL planned to build at least a 10 kW facility.
12 The revenues collected from these customers is put into a
13 separate account (the Green Fund) and are being used to
14 purchase photovoltaic modules. This project was approved by
15 the FPSC in June of 1997 and is scheduled to be completed
16 (including construction) by June 1999. The project is split into a
17 phase for marketing and solicitation of contributions, and a
18 construction phase of the photovoltaic facility.

19
20 **Q. What is the current status of the Green Pricing R&D project?**

21 A. The marketing phase of this project was completed in the third
22 quarter of 1998. Solicitations for the project were sent to both
23 Residential and Commercial/Industrial customers. The total

1 solicitations received were in excess of \$89,000, which was
2 above our goal of \$70,000. This level of contribution will allow
3 FPL to construct an 11 kW facility.

4
5 FPL is currently performing follow-up research with project
6 participants to gain an understanding of the reasons for
7 participation and ways to improve the number of participants in
8 green pricing initiatives. This research will also examine
9 alternatives for green pricing product offerings which may be
10 considered in the future.

11
12 The construction phase is well underway. The design bidding
13 package has been developed and requests for proposals were to
14 be submitted in January 1999 to construct the photovoltaic
15 facility at FPL's Martin power plant and a photovoltaic display at
16 FPL's Energy Encounter, which is located at the St. Lucie power
17 plant site. The construction project will be awarded in February
18 1999, and project completion is scheduled for June 1999.

19
20 **High Thermal Efficiency Self-Service Cogeneration**

21 **Q. How did FPL categorize the High Thermal Efficiency Self-**
22 **Service Cogeneration option?**

23 A. The goals rule requires an assessment of this option in the

1 Commercial/Industrial market sector, but the rule is not clear on
2 the definition of this topic. Since FPL's experience shows that
3 self-service cogeneration can only be meaningfully examined on
4 a case-by-case basis, FPL has classified it as a research option.

5
6 **Q. What are the key factors for screening cogeneration**
7 **options?**

8 A. Two primary screening factors that should be evaluated with self-
9 service cogeneration are: 1) to be feasible, the cogeneration
10 option must have a relatively low priced fuel available for the
11 customer. For example, a paper and pulp company may have
12 wood chips and "black liquor" available from their industrial
13 processes to be used as fuel. The sugar industries may have
14 bagasse (the waste products of their sugar cane production)
15 available as low cost fuel source for cogeneration options. 2)
16 The thermal loads of the host facility must be relatively large and
17 constant in order to make the output of the cogeneration facility
18 effective. With sizable thermal loads of long duration, the
19 cogeneration facility can operate many more hours throughout
20 the year and take advantage of overall fuel efficiencies. If the
21 thermal load is small, the operational feasibility of the project
22 diminishes considerably. In FPL's service territory, there are
23 relatively few known applications where the most effective

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thermal loads, steam and hot water, are large enough and of long enough duration to make the high thermal efficient self-service cogeneration option viable.

Q. What are the results of your analysis?

A. There has been a limited amount of self-service cogeneration implemented within FPL's service territory. Seven customers have self-service cogeneration in our service territory, representing approximately 234 megawatts of load that traditionally has not been served by FPL. These facilities are sugar and paper and pulp locations, where inexpensive fuel sources exist; thus, it makes sense for those customers to utilize those fuel sources to supply the thermal loads required by their industrial operations.

In addition, there are seven customers with self-service cogeneration facilities on some basis to displace their load within our service territory. This load represents approximately 412 megawatts. Each project has been implemented on a case-by-case basis.

In the past, there have been some Commercial/Industrial customers who have considered cogeneration as an alternative

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and abandoned those options. FPL is aware of 31 situations of this nature representing a total of about 422 megawatts of load. These customers utilized FPL's assistance to evaluate the various cogeneration alternatives and found that it was not feasible and/or economical. Presently, ten customers are considering cogeneration as an energy alternative and are being assisted by FPL in the evaluation process to ensure that they get accurate results. It is uncertain how much activity will result from these specific evaluations, but these site specific, case-by-case evaluations do not lend themselves to the goals setting process.

Q. What is your conclusion regarding High Thermal Efficiency Self-Service Cogeneration?

A. High thermal efficiency self-service cogeneration was classified as research because case-by-case analysis is the appropriate manner to evaluate this option due to the unique nature of each building or facility. These are very site-specific, case-by-case determinations. Therefore, FPL reflects no value for this end-use in the development of its overall goals.

1 **SECTION VII: CONCLUSIONS**

2

3 **Q. How much DSM have you concluded is reasonably**
4 **achievable for FPL?**

5 A. Based on the analysis performed for this goals proceeding, FPL
6 can successfully implement 765 MW's of cost-effective DSM
7 between 2000 and 2009. Document No. 1 is a summary of the
8 2000 through 2009 reasonably achievable goals.

9

10 FPL believes that DSM is a tool not only to increase energy
11 efficiency, but also to lower electric rates and customer bills for
12 all customers. FPL has ample incentive to promote DSM where
13 appropriate. FPL is keenly aware from years of regulatory efforts
14 to keep rates low and from the increasingly competitive market
15 place that the rates of all customers should be minimized. FPL
16 firmly believes that implementing the proposed goals and the
17 resulting resource plan is the best choice for FPL customers.

18

19 **Q. Has FPL used a reasonable and sound process to arrive at**
20 **its goals?**

21 A. Yes. The last goals proceeding required significant analysis that
22 were not ultimately used in setting DSM goals. FPL has used its
23 experience and analysis from the last proceeding to implement a

1 goal setting methodology that allows it to focus its efforts on
2 using the best available data to arrive at reasonably achievable
3 goals which are both cost-effective and provide direct benefits to
4 both DSM program participants and nonparticipants.

5
6 **Q. Does the methodology used by FPL address the**
7 **requirements of Rule 25-17.0021?**

8 A. Yes. FPL's has properly evaluated the UP measures that was
9 circulated by the Commission Staff as part of the materials
10 provided at the workshops for this proceeding. FPL
11 supplemented this list with additional measures that resulted in
12 increasing the achievable potential. FPL also evaluated the
13 feasibility of natural gas measures, CUE measures, renewable
14 measures and high thermal efficiency cogeneration being
15 included as part of its goals. In addition, FPL has developed
16 goals using its most current assumptions applied to its IRP
17 process to arrive at annual summer demand, winter demand and
18 energy goals for both the Residential and Commercial/Industrial
19 segments for the ten year horizon of 2000 through 2009.

20
21 **Q. Are the proposed goals effective in avoiding or deferring the**
22 **addition of new generation capacity?**

23 A. Yes. FPL's proposed goals of 765 MW's for the period of 2000

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through 2009 avoids the need for two 400 MW combined cycle units that would otherwise need to come in service during this time period.

Q. Does FPL proposed goals adequately address the needs of lower income customers?

A. Yes. The results of the process used by FPL to establish the reasonably achievable cost effective DSM goals ensures that these customers benefit by using a RIM screen which minimizes the rate impact of continuing to meet the growing demand for electricity of our all customers. The RIM test ensures that nonparticipants still receive direct benefits through reduced rates. Secondly, many lower income customer do participate in FPL's DSM programs. Data from 1997 shows that, overall, 24% of participants in FPL's DSM programs were lower income customers.

Q. Do the proposed goals provide a cost-effective plan for meeting the need for additional capacity through 2009?

A. Yes. As Dr. Sim discusses, FPL's Integrated Resource Plan considers the cost-effectiveness of the various resources available to meet future capacity needs. By basing the DSM component of this plan on only measures that pass the RIM test

1 and are achievable, FPL is assured that its ratepayers are
2 provided the most cost-effective portfolio of resources to meet
3 future capacity needs.

4
5 **Q. Should FPL's proposed goals of 765 MW's be approved for**
6 **the time period 2000 through 2009?**

7 A. Yes. FPL's proposed goals are based on a sound and prudent
8 methodology that uses the best available data to arrive at goals
9 that: 1) meet the requirements of Rule 25-17.0021, 2) address
10 the needs of our customers, 3) provides 765 MW's of summer
11 demand reduction, 4) minimizes the rate impact of meeting the
12 future need for capacity, 5) are cost-effective to both participants
13 and nonparticipants and 6) are reasonably achievable.

14
15 **Q. Does this conclude your testimony?**

16 A. Yes it does.

Document No. 1

Goals by Market Sector

Summer MW @ Meter

Year	Residential		Commercial		Total	
	Annual	Cum	Annual	Cum	Annual	Cum
2000	75.5	75.5	46.2	46.2	121.7	121.7
2001	51.0	126.5	27.1	73.3	78.1	199.8
2002	42.9	169.4	26.3	99.6	69.2	269.0
2003	43.3	212.8	27.0	126.6	70.3	339.4
2004	43.8	256.6	27.3	153.8	71.0	410.4
2005	45.4	302.0	27.8	181.6	73.2	483.6
2006	45.0	347.0	25.6	207.2	70.6	554.2
2007	45.6	392.6	25.2	232.4	70.8	625.0
2008	46.7	439.4	24.8	257.2	71.5	696.5
2009	46.6	485.9	21.7	278.8	68.2	764.8

Winter MW @ Meter

Year	Residential		Commercial		Total	
	Annual	Cum	Annual	Cum	Annual	Cum
2000	91.6	91.6	20.5	20.5	112.1	112.1
2001	47.4	139.0	11.6	32.2	59.1	171.2
2002	31.0	170.0	11.9	44.1	42.9	214.1
2003	30.3	200.4	12.7	56.8	43.1	257.2
2004	29.8	230.1	13.3	70.1	43.0	300.2
2005	30.5	260.6	14.1	84.2	44.6	344.8
2006	28.5	289.0	12.9	97.1	41.4	386.1
2007	28.2	317.2	12.7	109.8	40.9	427.0
2008	28.4	345.7	12.4	122.2	40.9	467.9
2009	26.8	372.4	10.8	133.0	37.6	505.5

Energy (GWH) @ Meter

Year	Residential		Commercial		Total	
	Annual	Cum	Annual	Cum	Annual	Cum
2000	91.9	91.9	68.5	68.5	160.5	160.5
2001	86.4	178.3	29.1	97.6	115.5	276.0
2002	88.8	267.1	28.8	126.4	117.6	393.6
2003	90.2	357.3	30.7	157.1	120.9	514.4
2004	91.6	448.9	31.7	188.8	123.3	637.7
2005	95.2	544.2	33.8	222.6	129.1	766.8
2006	96.7	640.9	32.2	254.9	129.0	895.8
2007	98.4	739.3	30.9	285.7	129.2	1025.0
2008	101.0	840.3	29.6	315.3	130.6	1155.6
2009	102.9	943.2	28.1	343.4	131.0	1286.6

**Comparison of Achieved kW and kWh Reductions
with Annual Target Included in Public Service Commission Approved Goals
December 31, 1998**

Residential

Year	Winter Peak mW Reduction			Summer Peak mW Reduction			gWh Energy Reduction		
	Cumulative Total Achieved	Cumulative Commission Approved Goal	% Variance	Cumulative Total Achieved	Cumulative Commission Approved Goal	% Variance	Cumulative Total Achieved	Cumulative Commission Approved Goal	% Variance
1994	101	77	31%	107	88	22%	102	66	55%
1995	191	157	22%	206	181	14%	213	150	42%
1996	285	236	21%	333	272	23%	396	239	65%
1997	411	315	30%	483	362	34%	623	337	85%
1998	502	394	27%	607	455	33%	774	453	71%
1999		468			543			568	
2000		542			631			684	
2001		617			719			799	
2002		691			807			914	
2003		765			895			1,030	

Commercial/Industrial

Year	Winter Peak mW Reduction			Summer Peak mW Reduction			gWh Energy Reduction		
	Cumulative Total Achieved	Cumulative Commission Approved Goal	% Variance	Cumulative Total Achieved	Cumulative Commission Approved Goal	% Variance	Cumulative Total Achieved	Cumulative Commission Approved Goal	% Variance
1994	17	9	91%	44	23	90%	144	67	114%
1995	100	69	44%	165	111	48%	352	139	154%
1996	156	93	68%	271	167	63%	690	212	225%
1997	174	114	53%	325	223	46%	816	292	179%
1998	206	136	51%	385	285	35%	915	383	139%
1999		158			353			473	
2000		180			420			563	
2001		202			487			652	
2002		223			554			742	
2003		245			622			832	

Achievable Potential by End Use

Residential Summer Incremental MW

End Use	2000		2001		2002		2003		2004		2005		2006		2007		2008		2009	
	New	Exist	New	Exist	New	Exist	New	Exist	New	Exist	New	Exist	New	Exist	New	Exist	New	Exist	New	Exist
HVAC	0.00	24.29	0.00	22.58	0.00	23.56	0.00	24.46	0.00	25.31	0.00	26.12	0.00	26.90	0.00	27.67	0.00	28.44	0.00	29.22
Building Envelope	0.00	8.49	0.00	11.30	0.00	10.83	0.00	10.41	0.00	10.06	0.00	9.75	0.00	9.49	0.00	9.27	0.00	9.08	0.00	8.93
Peak Load Shaving	4.15	35.61	1.53	13.14	0.57	4.93	0.57	4.93	0.57	4.93	0.57	4.93	0.48	4.11	0.48	4.11	0.48	4.11	0.38	3.29
Water Heating	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Appliances	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Solar & Renewables	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Natural Gas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other	2.98	0.00	2.44	0.00	3.02	0.00	2.97	0.00	2.92	0.00	4.06	0.00	4.06	0.00	4.10	0.00	4.61	0.00	4.74	0.00
Total	7.13	68.39	3.97	47.03	3.59	39.32	3.54	39.81	3.49	40.29	4.63	40.79	4.54	40.49	4.58	41.05	5.09	41.63	5.12	41.43

Residential Summer Cumulative MW

End Use	2000		2001		2002		2003		2004		2005		2006		2007		2008		2009	
	New	Exist	New	Exist	New	Exist	New	Exist	New	Exist	New	Exist	New	Exist	New	Exist	New	Exist	New	Exist
HVAC	0.00	24.29	0.00	46.87	0.00	70.43	0.00	94.90	0.00	120.21	0.00	146.32	0.00	173.22	0.00	200.89	0.00	229.34	0.00	258.56
Building Envelope	0.00	8.49	0.00	19.79	0.00	30.62	0.00	41.04	0.00	51.09	0.00	60.84	0.00	70.33	0.00	79.60	0.00	88.68	0.00	97.61
Peak Load Shaving	4.15	35.61	5.68	48.75	6.25	53.68	6.82	58.60	7.40	63.53	7.97	68.46	8.45	72.57	8.93	76.67	9.41	80.78	9.79	84.07
Water Heating	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Appliances	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Solar & Renewables	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Natural Gas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other	2.98	0.00	5.42	0.00	8.44	0.00	11.40	0.00	14.32	0.00	18.38	0.00	22.44	0.00	26.54	0.00	31.15	0.00	35.89	0.00
Total	7.13	68.39	11.10	115.42	14.69	154.73	18.23	194.54	21.72	234.83	26.35	275.62	30.89	316.12	35.47	357.16	40.56	398.80	45.68	440.23

Residential Winter Incremental MW

End Use	2000		2001		2002		2003		2004		2005		2006		2007		2008		2009	
	New	Exist	New	Exist	New	Exist	New	Exist	New	Exist	New	Exist	New	Exist	New	Exist	New	Exist	New	Exist
HVAC	0.00	7.43	0.00	3.30	0.00	3.44	0.00	3.57	0.00	3.69	0.00	3.81	0.00	3.92	0.00	4.04	0.00	4.15	0.00	4.26
Building Envelope	0.00	10.47	0.00	15.58	0.00	14.72	0.00	13.98	0.00	13.32	0.00	12.76	0.00	12.26	0.00	11.84	0.00	11.47	0.00	11.16
Peak Load Shaving	7.37	63.30	2.72	23.36	1.02	8.76	1.02	8.76	1.02	8.76	1.02	8.76	0.85	7.30	0.85	7.30	0.85	7.30	0.68	5.84
Water Heating	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Appliances	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Solar & Renewables	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Natural Gas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other	3.02	0.00	2.47	0.00	3.06	0.00	3.01	0.00	2.96	0.00	4.11	0.00	4.12	0.00	4.16	0.00	4.68	0.00	4.81	0.00
Total	10.39	81.20	5.20	42.24	4.08	26.92	4.03	26.31	3.98	25.78	5.13	25.33	4.97	23.49	5.01	23.17	5.53	22.92	5.49	21.27

Residential Winter Cumulative MW

End Use	2000		2001		2002		2003		2004		2005		2006		2007		2008		2009	
	New	Exist	New	Exist	New	Exist	New	Exist	New	Exist	New	Exist	New	Exist	New	Exist	New	Exist	New	Exist
HVAC	0.00	7.43	0.00	10.73	0.00	14.17	0.00	17.74	0.00	21.43	0.00	25.24	0.00	29.16	0.00	33.20	0.00	37.35	0.00	41.61
Building Envelope	0.00	10.47	0.00	26.04	0.00	40.77	0.00	54.74	0.00	68.07	0.00	80.82	0.00	93.09	0.00	104.92	0.00	116.40	0.00	127.56
Peak Load Shaving	7.37	63.30	10.09	86.66	11.11	95.42	12.13	104.19	13.15	112.95	14.17	121.71	15.02	129.01	15.87	136.31	16.72	143.61	17.40	149.45
Water Heating	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Appliances	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Solar & Renewables	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Natural Gas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other	3.02	0.00	5.50	0.00	8.56	0.00	11.57	0.00	14.53	0.00	18.64	0.00	22.76	0.00	26.92	0.00	31.59	0.00	36.40	0.00
Total	10.39	81.20	15.59	123.44	19.67	150.36	23.70	176.67	27.68	202.44	32.81	227.77	37.78	251.25	42.79	274.43	48.32	297.35	53.80	318.62

Residential Incremental GWH

End Use	2000		2001		2002		2003		2004		2005		2006		2007		2008		2009	
	New	Exist	New	Exist	New	Exist	New	Exist	New	Exist	New	Exist	New	Exist	New	Exist	New	Exist	New	Exist
HVAC	0.00	66.04	0.00	57.23	0.00	59.71	0.00	61.99	0.00	64.14	0.00	66.18	0.00	68.17	0.00	70.13	0.00	72.08	0.00	74.05
Building Envelope	0.00	18.79	0.00	24.03	0.00	23.15	0.00	22.39	0.00	21.74	0.00	21.19	0.00	20.72	0.00	20.34	0.00	20.02	0.00	19.77
Peak Load Shaving	0.15	1.32	0.06	0.49	0.02	0.18	0.02	0.18	0.02	0.18	0.02	0.18	0.02	0.15	0.02	0.15	0.02	0.15	0.01	0.12
Water Heating	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Appliances	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Solar & Renewables	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Natural Gas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other	5.63	0.00	4.61	0.00	5.70	0.00	5.61	0.00	5.52	0.00	7.67	0.00	7.67	0.00	7.75	0.00	8.72	0.00	8.96	0.00
Total	5.78	86.15	4.67	81.74	5.72	83.04	5.63	84.57	5.54	86.06	7.69	87.55	7.69	89.05	7.77	90.62	8.73	92.26	8.98	93.94

Residential Cumulative GWH

End Use	2000		2001		2002		2003		2004		2005		2006		2007		2008		2009	
	New	Exist	New	Exist	New	Exist	New	Exist	New	Exist	New	Exist	New	Exist	New	Exist	New	Exist	New	Exist
HVAC	0.00	66.04	0.00	123.26	0.00	182.97	0.00	244.96	0.00	309.10	0.00	375.28	0.00	443.45	0.00	513.58	0.00	585.66	0.00	659.71
Building Envelope	0.00	18.79	0.00	42.82	0.00	65.97	0.00	88.37	0.00	110.11	0.00	131.30	0.00	152.02	0.00	172.36	0.00	192.38	0.00	212.15
Peak Load Shaving	0.15	1.32	0.21	1.81	0.23	1.99	0.25	2.17	0.27	2.36	0.30	2.54	0.31	2.69	0.33	2.85	0.35	3.00	0.36	3.12
Water Heating	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Appliances	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Solar & Renewables	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Natural Gas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other	5.63	0.00	10.24	0.00	15.95	0.00	21.56	0.00	27.07	0.00	34.74	0.00	42.42	0.00	50.17	0.00	58.88	0.00	67.84	0.00
Total	5.78	86.15	10.45	167.89	16.18	250.93	21.81	335.50	27.35	421.56	35.04	509.12	42.73	598.17	50.50	688.78	59.23	781.04	68.21	874.97

Commercial/Industrial Summer Incremental MW

End Use	2000		2001		2002		2003		2004		2005		2006		2007		2008		2009	
	New	Exist	New	Exist	New	Exist	New	Exist	New	Exist	New	Exist	New	Exist	New	Exist	New	Exist	New	Exist
HVAC	0.00	17.48	1.88	8.49	1.90	8.49	1.91	8.50	1.89	8.35	1.86	8.21	1.84	8.08	1.82	7.96	1.80	7.84	1.78	7.73
Building Envelope	0.00	5.10	0.00	3.60	0.00	3.56	0.00	3.53	0.00	3.50	0.00	3.47	0.00	3.44	0.00	3.41	0.00	3.38	0.00	3.35
Peak Load Shaving	4.11	14.82	1.71	8.38	1.64	7.53	1.64	7.53	1.64	7.53	1.64	7.53	1.34	6.00	1.34	6.00	1.34	6.00	0.89	3.69
Lighting	0.00	4.63	0.00	2.87	0.00	3.05	0.00	3.74	0.00	4.20	0.00	4.95	0.00	4.72	0.00	4.51	0.00	4.31	0.00	4.12
Water Heating	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Power Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Refrigeration	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Freezing Equip	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Appliances	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Solar & Renewables	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Self Service Cogen	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Natural Gas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other	0.00	0.08	0.01	0.12	0.01	0.14	0.01	0.12	0.01	0.14	0.01	0.12	0.01	0.14	0.01	0.12	0.01	0.14	0.01	0.12
Total	4.11	42.12	3.60	23.46	3.54	22.78	3.55	23.43	3.53	23.73	3.50	24.28	3.19	22.38	3.16	21.99	3.14	21.67	2.68	19.01

Commercial/Industrial Summer Cumulative MW

End Use	2000		2001		2002		2003		2004		2005		2006		2007		2008		2009	
	New	Exist	New	Exist	New	Exist	New	Exist	New	Exist	New	Exist	New	Exist	New	Exist	New	Exist	New	Exist
HVAC	0.00	17.48	1.88	25.98	3.78	34.47	5.69	42.97	7.58	51.32	9.44	59.53	11.28	67.61	13.09	75.57	14.89	83.40	16.67	91.13
Building Envelope	0.00	5.10	0.00	8.70	0.00	12.26	0.00	15.79	0.00	19.29	0.00	22.76	0.00	26.20	0.00	29.61	0.00	32.99	0.00	36.34
Peak Load Shaving	4.11	14.82	5.82	23.20	7.46	30.73	9.09	38.27	10.73	45.80	12.36	53.33	13.70	59.33	15.04	65.33	16.38	71.33	17.27	75.02
Lighting	0.00	4.63	0.00	7.51	0.00	10.56	0.00	14.30	0.00	18.50	0.00	23.45	0.00	28.17	0.00	32.68	0.00	36.99	0.00	41.12
Water Heating	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Power Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Refrigeration	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Freezing Equip	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Appliances	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Solar & Renewables	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Self Service Cogen	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Natural Gas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other	0.00	0.08	0.01	0.20	0.01	0.34	0.02	0.46	0.03	0.60	0.04	0.72	0.04	0.86	0.05	0.98	0.06	1.12	0.07	1.24
Total	4.11	42.12	7.71	65.57	11.25	88.35	14.80	111.78	18.33	135.51	21.84	159.79	25.02	182.17	28.19	204.17	31.33	225.83	34.01	244.84

Commercial/Industrial Winter Incremental MW

End Use	2000		2001		2002		2003		2004		2005		2006		2007		2008		2009	
	New	Exist	New	Exist	New	Exist	New	Exist	New	Exist	New	Exist	New	Exist	New	Exist	New	Exist	New	Exist
HVAC	0.00	1.15	0.43	1.77	0.45	1.81	0.46	1.86	0.46	1.86	0.46	1.86	0.46	1.85	0.46	1.85	0.46	1.85	0.46	1.85
Building Envelope	0.00	0.56	0.00	0.67	0.00	0.67	0.00	0.66	0.00	0.66	0.00	0.65	0.00	0.65	0.00	0.64	0.00	0.64	0.00	0.63
Peak Load Shaving	3.86	12.04	1.34	4.17	1.34	4.17	1.34	4.17	1.34	4.17	1.34	4.17	1.11	3.47	1.11	3.47	1.11	3.47	0.78	2.43
Lighting	0.00	2.92	0.00	3.26	0.00	3.46	0.00	4.25	0.00	4.77	0.00	5.61	0.00	5.36	0.00	5.12	0.00	4.89	0.00	4.67
Water Heating	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Power Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Refrigeration	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Freezing Equip	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Appliances	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Solar & Renewables	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Self Service Cogen	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Natural Gas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other	0.00	0.01	0.00	0.01	0.00	0.01	0.00	0.01	0.00	0.01	0.00	0.01	0.00	0.01	0.00	0.01	0.00	0.01	0.00	0.01
Total	3.86	16.68	1.77	9.87	1.78	10.12	1.80	10.95	1.80	11.46	1.80	12.30	1.57	11.35	1.57	11.10	1.57	10.86	1.24	9.60

error

Commercial/Industrial Winter Cumulative MW

End Use	2000		2001		2002		2003		2004		2005		2006		2007		2008		2009	
	New	Exist	New	Exist	New	Exist	New	Exist	New	Exist	New	Exist	New	Exist	New	Exist	New	Exist	New	Exist
HVAC	0.00	1.15	0.43	2.92	0.88	4.73	1.34	6.60	1.80	8.46	2.26	10.32	2.72	12.17	3.18	14.02	3.63	15.87	4.09	17.72
Building Envelope	0.00	0.56	0.00	1.23	0.00	1.90	0.00	2.56	0.00	3.22	0.00	3.87	0.00	4.52	0.00	5.16	0.00	5.80	0.00	6.43
Peak Load Shaving	3.86	12.04	5.20	16.21	6.53	20.37	7.87	24.54	9.20	28.71	10.54	32.87	11.65	36.34	12.76	39.82	13.88	43.29	14.66	45.72
Lighting	0.00	2.92	0.00	6.18	0.00	9.64	0.00	13.88	0.00	18.65	0.00	24.26	0.00	29.61	0.00	34.73	0.00	39.62	0.00	44.30
Water Heating	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Power Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Refrigeration	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Freezing Equip	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Appliances	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Solar & Renewables	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Self Service Cogen	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Natural Gas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other	0.00	0.01	0.00	0.02	0.00	0.03	0.00	0.04	0.00	0.06	0.00	0.07	0.00	0.08	0.00	0.09	0.01	0.10	0.01	0.12
Total	3.86	16.68	5.63	26.55	7.41	36.67	9.21	47.62	11.00	59.09	12.80	71.38	14.37	82.73	15.94	93.82	17.52	104.69	18.75	114.29

Commercial/Industrial Incremental GWH

End Use	2000		2001		2002		2003		2004		2005		2006		2007		2008		2009	
	New	Exist	New	Exist	New	Exist	New	Exist	New	Exist	New	Exist	New	Exist	New	Exist	New	Exist	New	Exist
HVAC	0.00	40.70	1.73	10.49	1.62	9.85	1.51	9.23	1.42	8.68	1.33	8.17	1.24	7.68	1.16	7.21	1.08	6.77	1.01	6.35
Building Envelope	0.00	7.32	0.00	5.36	0.00	5.30	0.00	5.25	0.00	5.20	0.00	5.15	0.00	5.11	0.00	5.06	0.00	5.01	0.00	4.96
Peak Load Shaving	0.25	0.94	0.11	0.73	0.10	0.62	0.10	0.62	0.10	0.62	0.10	0.62	0.08	0.48	0.08	0.48	0.08	0.48	0.05	0.27
Lighting	0.00	19.31	0.00	10.66	0.00	11.34	0.00	13.94	0.00	15.67	0.00	18.46	0.00	17.65	0.00	16.87	0.00	16.13	0.00	15.43
Water Heating	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Power Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Refrigeration	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Freezing Equip	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Appliances	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Solar & Renewables	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Self Service Cogen	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Natural Gas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.25	68.27	1.85	27.24	1.72	27.12	1.61	29.04	1.52	30.18	1.43	32.40	1.32	30.91	1.24	29.62	1.16	28.40	1.06	27.02

Commercial/Industrial Cumulative GWH

End Use	2000		2001		2002		2003		2004		2005		2006		2007		2008		2009	
	New	Exist	New	Exist	New	Exist	New	Exist	New	Exist	New	Exist	New	Exist	New	Exist	New	Exist	New	Exist
HVAC	0.00	40.70	1.73	51.19	3.35	61.04	4.86	70.27	6.28	78.95	7.60	87.12	8.85	94.79	10.01	102.00	11.09	108.77	12.10	115.13
Building Envelope	0.00	7.32	0.00	12.68	0.00	17.98	0.00	23.24	0.00	28.44	0.00	33.60	0.00	38.70	0.00	43.76	0.00	48.77	0.00	53.74
Peak Load Shaving	0.25	0.94	0.37	1.67	0.47	2.29	0.57	2.91	0.67	3.53	0.77	4.16	0.85	4.64	0.93	5.12	1.02	5.61	1.07	5.88
Lighting	0.00	19.31	0.00	29.97	0.00	41.31	0.00	55.25	0.00	70.92	0.00	89.38	0.00	107.03	0.00	123.90	0.00	140.03	0.00	155.46
Water Heating	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Power Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Refrigeration	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Freezing Equip	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Appliances	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Solar & Renewables	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Self Service Cogen	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Natural Gas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.25	68.27	2.10	95.51	3.82	122.63	5.43	151.67	6.95	181.85	8.38	214.25	9.70	245.16	10.94	274.79	12.10	303.18	13.17	330.20

Document No. 4

DSM Achievable Potential By Measure - Summer MW

Residential New Construction

Measure	Description	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
BLDSMT-1	BuildSmart - EPI less than 90		2.440	3.018	2.968	2.920	4.057	4.060	4.100	4.611	4.741
RLC-1	Residential Load Control		1.530	0.574	0.574	0.574	0.574	0.478	0.478	0.478	0.383
	Existing DSM Programs	7.126									
Annual Total		7.126	3.971	3.591	3.542	3.493	4.631	4.538	4.578	5.090	5.124
Cumulative Total		7.126	11.096	14.688	18.229	21.723	26.354	30.892	35.470	40.560	45.684

Residential Existing Construction

Measure	Description	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
RSC-1	Hi Efficiency Air Source Heat Pump		3.796	3.957	4.107	4.248	4.383	4.515	4.645	4.775	4.905
RSC-2	Ground Source Heat Pump		0.031	0.032	0.034	0.035	0.036	0.037	0.038	0.039	0.040
RSC-5A	Reduced Duct Leakage		4.754	4.850	4.943	5.033	5.122	5.211	5.299	5.388	5.478
RSC-5B	Reduced Duct Leakage		1.055	1.077	1.097	1.117	1.137	1.157	1.176	1.196	1.216
RSC-10A	Ceiling Ins. R0-R19		4.993	4.452	3.972	3.545	3.165	2.828	2.528	2.261	2.024
RSC-10B	Ceiling Ins. R0-R19		0.501	0.449	0.403	0.362	0.325	0.292	0.262	0.235	0.212
RSC-21A	Hi Efficiency Central AC		18.755	19.571	20.322	21.026	21.696	22.348	22.990	23.630	24.274
RLC-1	Residential Load Control		13.142	4.928	4.928	4.928	4.928	4.107	4.107	4.107	3.285
	Existing DSM Programs	68.390									
Annual Total		68.390	47.027	39.316	39.805	40.293	40.793	40.494	41.046	41.632	41.434
Cumulative Total		68.390	115.417	154.733	194.538	234.832	275.624	316.118	357.164	398.796	440.230

Commercial/Industrial New Construction

Measure	Rate Class	Description	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
SC-D-1	GSD	High Eff. Chiller		0.052	0.050	0.048	0.046	0.044	0.043	0.041	0.040	0.038
SC-D-1	GSLD	High Eff. Chiller		0.179	0.169	0.159	0.151	0.142	0.134	0.127	0.119	0.113
SC-D-2	GSD	High Eff. Chiller W/ASD		0.003	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002
SC-D-2	GSLD	High Eff. Chiller W/ASD		0.009	0.008	0.008	0.008	0.007	0.007	0.006	0.006	0.006
SC-D-3	GS	Hi Efficiency DX AC		0.033	0.032	0.030	0.029	0.028	0.027	0.026	0.025	0.024
SC-D-3	GSD	Hi Efficiency DX AC		0.216	0.205	0.195	0.185	0.176	0.167	0.158	0.150	0.143
SC-D-3	GSLD	Hi Efficiency DX AC		0.055	0.052	0.049	0.046	0.044	0.041	0.039	0.037	0.035
SC-D-4	GS	Hi Eff. Room AC		0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
SC-D-5	GSD	Cool Storage		0.292	0.300	0.310	0.309	0.309	0.309	0.309	0.309	0.309
SC-D-5	GSLD	Cool Storage		1.045	1.076	1.108	1.108	1.108	1.108	1.108	1.108	1.108
OPBC	GSD	Off Peak Battery Charging		0.003	0.004	0.003	0.004	0.003	0.004	0.003	0.004	0.003
OPBC	GSLD	Off Peak Battery Charging		0.003	0.004	0.003	0.004	0.003	0.004	0.003	0.004	0.003
CILM	GS	Commercial/Industrial Load Management		0.225	0.188	0.188	0.188	0.188	0.150	0.150	0.150	0.075
CILM	GSD	Commercial/Industrial Load Management		0.150	0.113	0.113	0.113	0.113	0.075	0.075	0.075	0.038
CILM	GSLD	Commercial/Industrial Load Management		1.336	1.336	1.336	1.336	1.336	1.113	1.113	1.113	0.779
		Existing DSM Programs	4.108									
Annual Total			4.108	3.602	3.540	3.554	3.530	3.505	3.186	3.163	3.144	2.677
Cumulative Total			4.108	7.710	11.250	14.803	18.333	21.837	25.023	28.186	31.330	34.007

Commercial/Industrial Existing Construction

Measure	Rate Class	Description	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	
SC-D-1	GSD	High Eff. Chiller		0.506	0.488	0.470	0.453	0.436	0.420	0.405	0.390	0.375	
SC-D-1	GSLD	High Eff. Chiller		1.757	1.658	1.565	1.477	1.394	1.315	1.241	1.171	1.106	
SC-D-2	GSD	High Eff. Chiller W/ASD		0.025	0.024	0.023	0.023	0.022	0.021	0.020	0.019	0.019	
SC-D-2	GSLD	High Eff. Chiller W/ASD		0.088	0.083	0.078	0.074	0.070	0.066	0.062	0.059	0.055	
SC-D-3	GS	Hi Efficiency DX AC		0.086	0.082	0.079	0.076	0.073	0.070	0.067	0.064	0.062	
SC-D-3	GSD	Hi Efficiency DX AC		0.563	0.535	0.508	0.483	0.459	0.436	0.414	0.393	0.373	
SC-D-3	GSLD	Hi Efficiency DX AC		0.145	0.136	0.129	0.121	0.115	0.108	0.102	0.096	0.091	
SC-D-4	GS	Hi Eff. Room AC		0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.001	
SC-D-5	GSD	Cool Storage		1.160	1.195	1.231	1.230	1.230	1.230	1.230	1.230	1.230	
SC-D-5	GSLD	Cool Storage		4.154	4.279	4.407	4.407	4.407	4.407	4.407	4.407	4.407	
SC-D-18	GSD	Roof Insulation Chiller		0.786	0.781	0.775	0.770	0.764	0.759	0.754	0.748	0.743	
SC-D-18	GSLD	Roof Insulation Chiller		0.757	0.751	0.746	0.741	0.736	0.730	0.725	0.720	0.715	
SC-D-19	GS	Roof Insulation DX AC		0.563	0.559	0.555	0.551	0.547	0.543	0.539	0.535	0.532	
SC-D-19	GSD	Roof Insulation DX AC		1.043	1.036	1.028	1.021	1.014	1.007	1.000	0.992	0.985	
SC-D-19	GSLD	Roof Insulation DX AC		0.112	0.111	0.110	0.110	0.109	0.108	0.107	0.106	0.106	
SC-D-22	GSD	Window Film Chiller		0.082	0.080	0.078	0.075	0.073	0.071	0.069	0.067	0.065	
SC-D-22	GSLD	Window Film Chiller		0.028	0.027	0.026	0.025	0.025	0.024	0.023	0.023	0.022	
SC-D-23	GS	Window Film DX AC		0.083	0.080	0.078	0.076	0.073	0.071	0.069	0.067	0.065	
SC-D-23	GSD	Window Film DX AC		0.109	0.106	0.103	0.100	0.097	0.094	0.091	0.089	0.086	
SC-D-23	GSLD	Window Film DX AC		0.004	0.004	0.004	0.004	0.004	0.003	0.003	0.003	0.003	
SC-D-27	GS	Light Colored Roof DX		0.030	0.029	0.029	0.029	0.029	0.029	0.028	0.028	0.028	
V-D-1	GS	Leak Free Ducts DX AC		0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	
V-D-1	GSD	Leak Free Ducts DX AC		0.006	0.006	0.005	0.005	0.005	0.005	0.004	0.004	0.004	
V-D-1	GSLD	Leak Free Ducts DX AC		0.002	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	
FL8HP	GS	Fluorescent 8 Hour High Permanence		0.097	0.106	0.133	0.153	0.183	0.179	0.174	0.169	0.165	
FL8HP	GSD	Fluorescent 8 Hour High Permanence		1.213	1.282	1.575	1.759	2.059	1.940	1.828	1.723	1.624	
FL8HP	GSLD	Fluorescent 8 Hour High Permanence		1.106	1.193	1.486	1.693	2.020	1.953	1.888	1.825	1.764	
HID8HP	GSLD	HID 8 Hour High Permanence		0.455	0.471	0.549	0.599	0.683	0.652	0.623	0.595	0.568	
OPBC	GSD	Off Peak Battery Charging		0.059	0.071	0.059	0.071	0.059	0.071	0.059	0.071	0.059	
OPBC	GSLD	Off Peak Battery Charging		0.059	0.071	0.059	0.071	0.059	0.071	0.059	0.071	0.059	
CILM	GS	Commercial/Industrial Load Management		2.526	2.105	2.105	2.105	2.105	1.684	1.684	1.684	0.842	
CILM	GSD	Commercial/Industrial Load Management		1.684	1.263	1.263	1.263	1.263	0.842	0.842	0.842	0.421	
CILM	GSLD	Commercial/Industrial Load Management		4.166	4.166	4.166	4.166	4.166	3.472	3.472	3.472	2.430	
		Existing DSM Programs		42.118									
Annual Total				42.118	23.456	22.781	23.426	23.731	24.280	22.383	21.993	21.667	19.007
Cumulative Total				42.118	65.574	88.355	111.781	135.512	159.792	182.175	204.167	225.835	244.841

Document No. 4

DSM Achievable Potential By Measure - Winter MW

Residential New Construction

Measure	Description	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
BLDSMT-1	BuildSmart - EPI less than 90		2.475	3.060	3.010	2.961	4.114	4.117	4.158	4.676	4.808
RLC-1	Residential Load Control		2.721	1.020	1.020	1.020	1.020	0.850	0.850	0.850	0.680
	Existing DSM Programs	10.393									
Annual Total		10.393	5.195	4.080	4.030	3.981	5.134	4.967	5.008	5.527	5.488
Cumulative Total		10.393	15.588	19.668	23.698	27.679	32.813	37.781	42.789	48.315	53.804

Residential Existing Construction

Measure	Description	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
RSC-1	Hi Efficiency Air Source Heat Pump		3.287	3.426	3.555	3.678	3.795	3.909	4.022	4.134	4.246
RSC-2	Ground Source Heat Pump		0.012	0.012	0.013	0.013	0.014	0.014	0.015	0.015	0.015
RSC-5A	Reduced Duct Leakage		5.302	5.409	5.513	5.614	5.713	5.812	5.910	6.010	6.110
RSC-5B	Reduced Duct Leakage		1.177	1.201	1.224	1.246	1.268	1.290	1.312	1.334	1.356
RSC-10A	Ceiling Ins. R0-R19		8.560	7.632	6.808	6.076	5.426	4.848	4.334	3.876	3.469
RSC-10B	Ceiling Ins. R0-R19		0.537	0.482	0.432	0.388	0.348	0.313	0.281	0.252	0.227
RSC-21A	Hi Efficiency Central AC		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
RLC-1	Residential Load Control		23.363	8.761	8.761	8.761	8.761	7.301	7.301	7.301	5.841
	Existing DSM Programs	81.200									
Annual Total		81.200	42.237	26.923	26.306	25.776	25.325	23.487	23.175	22.922	21.266
Cumulative Total		81.200	123.437	150.360	176.666	202.442	227.768	251.255	274.430	297.352	318.617

Commercial/Industrial New Construction

Measure	Rate Class	Description	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
SC-D-1	GSD	High Eff. Chiller		0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
SC-D-1	GSLD	High Eff. Chiller		0.005	0.005	0.004	0.004	0.004	0.004	0.004	0.003	0.003
SC-D-2	GSD	High Eff. Chiller W/ASD		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SC-D-2	GSLD	High Eff. Chiller W/ASD		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SC-D-3	GS	Hi Efficiency DX AC		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SC-D-3	GSD	Hi Efficiency DX AC		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SC-D-3	GSLD	Hi Efficiency DX AC		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SC-D-4	GS	Hi Eff. Room AC		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SC-D-5	GSD	Cool Storage		0.099	0.102	0.106	0.106	0.106	0.106	0.106	0.106	0.106
SC-D-5	GSLD	Cool Storage		0.328	0.338	0.348	0.348	0.348	0.348	0.348	0.348	0.348
OPBC	GSD	Off Peak Battery Charging		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
OPBC	GSLD	Off Peak Battery Charging		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CILM	GS	Commercial/Industrial Load Management		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CILM	GSD	Commercial/Industrial Load Management		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CILM	GSLD	Commercial/Industrial Load Management		1.336	1.336	1.336	1.336	1.336	1.113	1.113	1.113	0.779
		Existing DSM Programs	3.860									
Annual Total			3.860	1.771	1.783	1.796	1.796	1.795	1.573	1.572	1.572	1.238
Cumulative Total			3.860	5.630	7.413	9.209	11.005	12.800	14.373	15.945	17.517	18.754

Commercial/Industrial Existing Construction

Measure	Rate Class	Description	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	
SC-D-1	GSD	High Eff. Chiller		0.014	0.014	0.013	0.013	0.012	0.012	0.011	0.011	0.011	
SC-D-1	GSLD	High Eff. Chiller		0.049	0.046	0.044	0.041	0.039	0.037	0.035	0.033	0.031	
SC-D-2	GSD	High Eff. Chiller W/ASD		0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	
SC-D-2	GSLD	High Eff. Chiller W/ASD		0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	
SC-D-3	GS	Hi Efficiency DX AC		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
SC-D-3	GSD	Hi Efficiency DX AC		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
SC-D-3	GSLD	Hi Efficiency DX AC		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
SC-D-4	GS	Hi Eff. Room AC		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
SC-D-5	GSD	Cool Storage		0.396	0.407	0.420	0.420	0.420	0.420	0.420	0.420	0.420	
SC-D-5	GSLD	Cool Storage		1.304	1.343	1.384	1.384	1.384	1.384	1.384	1.384	1.384	
SC-D-18	GSD	Roof Insulation Chiller		0.205	0.204	0.202	0.201	0.199	0.198	0.197	0.195	0.194	
SC-D-18	GSLD	Roof Insulation Chiller		0.198	0.196	0.195	0.193	0.192	0.191	0.189	0.188	0.187	
SC-D-19	GS	Roof Insulation DX AC		0.088	0.087	0.087	0.086	0.085	0.085	0.084	0.084	0.083	
SC-D-19	GSD	Roof Insulation DX AC		0.163	0.162	0.160	0.159	0.158	0.157	0.156	0.155	0.154	
SC-D-19	GSLD	Roof Insulation DX AC		0.017	0.017	0.017	0.017	0.017	0.017	0.017	0.017	0.016	
SC-D-22	GSD	Window Film Chiller		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
SC-D-22	GSLD	Window Film Chiller		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
SC-D-23	GS	Window Film DX AC		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
SC-D-23	GSD	Window Film DX AC		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
SC-D-23	GSLD	Window Film DX AC		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
SC-D-27	GS	Light Colored Roof DX		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
V-D-1	GS	Leak Free Ducts DX AC		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
V-D-1	GSD	Leak Free Ducts DX AC		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
V-D-1	GSLD	Leak Free Ducts DX AC		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
FL8HP	GS	Fluorescent 8 Hour High Permanence		0.110	0.120	0.151	0.173	0.208	0.203	0.197	0.192	0.187	
FL8HP	GSD	Fluorescent 8 Hour High Permanence		1.371	1.448	1.780	1.987	2.326	2.192	2.066	1.947	1.835	
FL8HP	GSLD	Fluorescent 8 Hour High Permanence		1.261	1.359	1.694	1.929	2.303	2.226	2.152	2.080	2.011	
HID8HP	GSLD	HID 8 Hour High Permanence		0.514	0.532	0.620	0.677	0.772	0.737	0.704	0.672	0.642	
OPBC	GSD	Off Peak Battery Charging		0.005	0.007	0.005	0.007	0.005	0.007	0.005	0.007	0.005	
OPBC	GSLD	Off Peak Battery Charging		0.005	0.007	0.005	0.007	0.005	0.007	0.005	0.007	0.005	
CILM	GS	Commercial/Industrial Load Management		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
CILM	GSD	Commercial/Industrial Load Management		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
CILM	GSLD	Commercial/Industrial Load Management		4.166	4.166	4.166	4.166	4.166	3.472	3.472	3.472	2.430	
		Existing DSM Programs		16.682									
Annual Total				16.682	9.871	10.121	10.948	11.464	12.296	11.346	11.097	10.865	9.597
Cumulative Total				16.682	26.553	36.674	47.622	59.086	71.382	82.728	93.825	104.690	114.287

Document No. 4

DSM Achievable Potential By Measure - Energy Gwh

Residential New Construction

Measure	Description	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
BLDSMT-1	BuildSmart - EPI less than 90		4.612	5.704	5.610	5.518	7.668	7.674	7.750	8.716	8.962
RLC-1	Residential Load Control		0.057	0.021	0.021	0.021	0.021	0.018	0.018	0.018	0.014
	Existing DSM Programs	5.785									
Annual Total		5.785	4.669	5.725	5.631	5.540	7.690	7.691	7.768	8.734	8.976
Cumulative Total		5.785	10.454	16.179	21.810	27.349	35.039	42.730	50.498	59.232	68.208

Residential Existing Construction

Measure	Description	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
RSC-1	Hi Efficiency Air Source Heat Pump		9.265	9.658	10.023	10.368	10.698	11.019	11.337	11.653	11.971
RSC-2	Ground Source Heat Pump		0.062	0.065	0.067	0.069	0.072	0.074	0.076	0.078	0.080
RSC-5A	Reduced Duct Leakage		10.970	11.192	11.406	11.615	11.820	12.025	12.228	12.434	12.641
RSC-5B	Reduced Duct Leakage		2.435	2.484	2.532	2.578	2.624	2.669	2.715	2.760	2.806
RSC-10A	Ceiling Ins. R0-R19		9.719	8.666	7.730	6.899	6.161	5.505	4.921	4.401	3.939
RSC-10B	Ceiling Ins. R0-R19		0.902	0.809	0.725	0.651	0.584	0.525	0.472	0.424	0.382
RSC-21A	Hi Efficiency Central AC		47.899	49.983	51.903	53.699	55.412	57.076	58.716	60.351	61.994
RLC-1	Residential Load Control		0.489	0.183	0.183	0.183	0.183	0.153	0.153	0.153	0.122
	Existing DSM Programs	86.150									
Annual Total		86.150	81.741	83.040	84.570	86.063	87.554	89.046	90.618	92.255	93.936
Cumulative Total		86.150	167.891	250.931	335.501	421.565	509.119	598.165	688.783	781.038	874.974

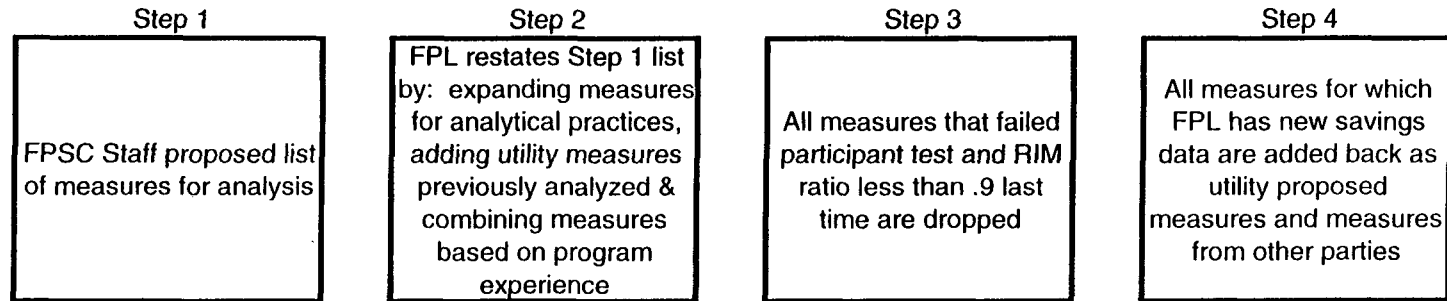
Commercial/Industrial New Construction

Measure	Rate Class	Description	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
SC-D-1	GSD	High Eff. Chiller		0.173	0.167	0.161	0.155	0.149	0.144	0.138	0.133	0.128
SC-D-1	GSLD	High Eff. Chiller		0.655	0.618	0.583	0.550	0.519	0.490	0.462	0.436	0.412
SC-D-2	GSD	High Eff. Chiller W/ASD		0.012	0.012	0.012	0.011	0.011	0.010	0.010	0.010	0.009
SC-D-2	GSLD	High Eff. Chiller W/ASD		0.047	0.044	0.042	0.040	0.037	0.035	0.033	0.031	0.030
SC-D-3	GS	Hi Efficiency DX AC		0.125	0.120	0.115	0.111	0.106	0.102	0.098	0.094	0.090
SC-D-3	GSD	Hi Efficiency DX AC		0.818	0.777	0.738	0.701	0.666	0.632	0.601	0.571	0.542
SC-D-3	GSLD	Hi Efficiency DX AC		0.226	0.213	0.201	0.189	0.179	0.169	0.159	0.150	0.142
SC-D-4	GS	Hi Eff. Room AC		0.002	0.002	0.002	0.002	0.001	0.001	0.001	0.001	0.001
SC-D-5	GSD	Cool Storage		-0.085	-0.087	-0.090	-0.090	-0.090	-0.090	-0.090	-0.090	-0.090
SC-D-5	GSLD	Cool Storage		-0.239	-0.246	-0.253	-0.253	-0.253	-0.253	-0.253	-0.253	-0.253
SC-D-27	GS	Light Colored Roof DX		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
OPBC	GSD	Off Peak Battery Charging		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
OPBC	GSLD	Off Peak Battery Charging		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CILM	GS	Commercial/Industrial Load Management		0.028	0.024	0.024	0.024	0.024	0.019	0.019	0.019	0.009
CILM	GSD	Commercial/Industrial Load Management		0.019	0.014	0.014	0.014	0.014	0.009	0.009	0.009	0.005
CILM	GSLD	Commercial/Industrial Load Management		0.064	0.064	0.064	0.064	0.064	0.053	0.053	0.053	0.037
		Existing DSM Programs	0.255									
Annual Total			0.255	1.845	1.721	1.611	1.517	1.427	1.322	1.241	1.165	1.062
Cumulative Total			0.255	2.100	3.821	5.433	6.949	8.376	9.698	10.939	12.104	13.166

Commercial/Industrial Existing Construction

Measure	Rate Class	Description	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	
SC-D-1	GSD	High Eff. Chiller		1.699	1.837	1.577	1.519	1.463	1.410	1.358	1.308	1.260	
SC-D-1	GSLD	High Eff. Chiller		6.420	6.059	5.719	5.397	5.094	4.807	4.537	4.282	4.041	
SC-D-2	GSD	High Eff. Chiller W/ASD		0.122	0.118	0.114	0.109	0.105	0.101	0.098	0.094	0.091	
SC-D-2	GSLD	High Eff. Chiller W/ASD		0.462	0.436	0.412	0.389	0.367	0.346	0.327	0.308	0.291	
SC-D-3	GS	Hi Efficiency DX AC		0.327	0.314	0.301	0.289	0.277	0.266	0.255	0.245	0.235	
SC-D-3	GSD	Hi Efficiency DX AC		2.137	2.030	1.928	1.831	1.739	1.652	1.569	1.490	1.416	
SC-D-3	GSLD	Hi Efficiency DX AC		0.589	0.556	0.525	0.495	0.467	0.440	0.415	0.392	0.370	
SC-D-4	GS	Hi Eff. Room AC		0.004	0.004	0.004	0.004	0.004	0.004	0.003	0.003	0.003	
SC-D-5	GSD	Cool Storage		-0.337	-0.347	-0.358	-0.358	-0.358	-0.358	-0.358	-0.358	-0.358	
SC-D-5	GSLD	Cool Storage		-0.949	-0.977	-1.006	-1.006	-1.006	-1.006	-1.006	-1.006	-1.006	
SC-D-18	GSD	Roof Insulation Chiller		1.356	1.346	1.337	1.327	1.318	1.308	1.299	1.290	1.281	
SC-D-18	GSLD	Roof Insulation Chiller		1.305	1.295	1.286	1.277	1.268	1.259	1.250	1.241	1.233	
SC-D-19	GS	Roof Insulation DX AC		0.666	0.661	0.657	0.652	0.647	0.643	0.638	0.634	0.629	
SC-D-19	GSD	Roof Insulation DX AC		1.235	1.226	1.217	1.209	1.200	1.192	1.183	1.175	1.167	
SC-D-19	GSLD	Roof Insulation DX AC		0.132	0.132	0.131	0.130	0.129	0.128	0.127	0.126	0.125	
SC-D-22	GSD	Window Film Chiller		0.164	0.159	0.155	0.150	0.146	0.141	0.137	0.133	0.129	
SC-D-22	GSLD	Window Film Chiller		0.053	0.051	0.050	0.048	0.047	0.045	0.044	0.043	0.042	
SC-D-23	GS	Window Film DX AC		0.166	0.161	0.156	0.151	0.147	0.143	0.138	0.134	0.130	
SC-D-23	GSD	Window Film DX AC		0.218	0.212	0.205	0.199	0.193	0.188	0.182	0.177	0.172	
SC-D-23	GSLD	Window Film DX AC		0.008	0.007	0.007	0.007	0.007	0.006	0.006	0.006	0.006	
SC-D-27	GS	Light Colored Roof DX		0.054	0.054	0.054	0.053	0.053	0.052	0.052	0.052	0.051	
V-D-1	GS	Leak Free Ducts DX AC		0.002	0.002	0.002	0.002	0.002	0.002	0.001	0.001	0.001	
V-D-1	GSD	Leak Free Ducts DX AC		0.012	0.012	0.011	0.011	0.010	0.009	0.009	0.009	0.008	
V-D-1	GSLD	Leak Free Ducts DX AC		0.003	0.003	0.003	0.003	0.002	0.002	0.002	0.002	0.002	
FL8HP	GS	Fluorescent 8 Hour High Permanence		0.318	0.347	0.436	0.499	0.601	0.585	0.570	0.555	0.540	
FL8HP	GSD	Fluorescent 8 Hour High Permanence		4.304	4.547	5.587	6.240	7.304	6.883	6.486	6.112	5.761	
FL8HP	GSLD	Fluorescent 8 Hour High Permanence		4.579	4.937	6.153	7.007	8.362	8.084	7.815	7.555	7.304	
HID8HP	GSLD	HID 8 Hour High Permanence		1.461	1.513	1.762	1.923	2.194	2.094	1.999	1.909	1.823	
OPBC	GSD	Off Peak Battery Charging		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
OPBC	GSLD	Off Peak Battery Charging		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
CILM	GS	Commercial/Industrial Load Management		0.318	0.265	0.265	0.265	0.265	0.212	0.212	0.212	0.106	
CILM	GSD	Commercial/Industrial Load Management		0.212	0.159	0.159	0.159	0.159	0.106	0.106	0.106	0.053	
CILM	GSLD	Commercial/Industrial Load Management		0.198	0.198	0.198	0.198	0.198	0.165	0.165	0.165	0.116	
		Existing DSM Programs		68.271									
Annual Total				68.271	27.239	27.117	29.044	30.179	32.403	30.912	29.622	28.396	27.021
Cumulative Total				68.271	95.510	122.627	151.671	181.850	214.253	245.165	274.787	303.183	330.204

FPL Measure Identification Process



Measure Summary

- C/I New Construction	14	42	28	45
- C/I Existing Construction	63	126	79	96
- Res New Construction	29	12	4	8
- Res Existing Construction	56	50	15	20
Total	162	230	126	169

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Process Step 1 FPSC Staff proposed list of measures for analysis

Residential New Construction - FPSC Staff Measures

End Use Category	Measure	Description
Cooling & Heating	RSC-1	Hi Efficiency Air Source Heat Pump
Cooling & Heating	RSC-2	Ground Source Heat Pump
Cooling & Heating	RSC-3	Two Speed Heat Pump
Cooling & Heating	RSC-7A	Setback/Programmable Thermostat
Cooling & Heating	RSC-7B	Setback/Programmable Thermostat
Peak Load Shaving	RSC-8A	Load Control for Residential Electric Heat
Peak Load Shaving	RSC-8B	Load Control for Residential Electric Heat
Cooling & Heating	RSC-21A	Hi Efficiency Central AC
Cooling & Heating	RSC-22A	2 Speed Central AC
Cooling & Heating	RSC-24	High Efficiency Room AC
Peak Load Shaving	RSC-26A	DLC of Central AC
Peak Load Shaving	RSC-26B	DLC of Central AC
Water Heating	WH-1	High Efficiency Elect. Resist. Water Heating
Water Heating	WH-2	Integral Heat Pump Water Heater
Renewables	WH-3	Solar Water Heater
Water Heating	WH-4	Heat Recovery (Desuperheater)
Water Heating	WH-4	Heat Recovery (Desuperheater)
Water Heating	WH-5	Add-On Heat Pump Water Heater
Water Heating	WH-6	DHW Heater Tank Insulation
Peak Load Shaving	WH-10	DLC of Electric Water Heater
Appliance Efficiency	CW-1	High Efficiency Clothes Washer
Other	LT-1	Compact Fluorescent
Other	LT-2	Efficient Incandescent
Other	LT-3	HPS Outdoor
Appliance Efficiency	RF-1	Bst Ref Frost Free
Appliance Efficiency	RF-2	Bst Ref Manual
Appliance Efficiency	FR-1	Bst Freezer FF
Appliance Efficiency	FR-2	Bst Freezer Manual
Peak Load Shaving	PP-3	DLC of Pool Pumps

Residential Existing Construction - FPSC Staff Measures

End Use Category	Measure	Description
Cooling & Heating	RSC-1	Hi Efficiency Air Source Heat Pump
Cooling & Heating	RSC-2	Ground Source Heat Pump
Cooling & Heating	RSC-3	Two Speed Heat Pump
Building Envelope	RSC-5A	Reduced Duct Leakage
Building Envelope	RSC-5B	Reduced Duct Leakage
Cooling & Heating	RSC-7A	Setback/Programmable Thermostat
Cooling & Heating	RSC-7B	Setback/Programmable Thermostat
Peak Load Shaving	RSC-8A	Load Control for Residential Electric Heat
Peak Load Shaving	RSC-8B	Load Control for Residential Electric Heat
Building Envelope	RSC-10A	Ceiling Ins. R0-R19
Building Envelope	RSC-10B	Ceiling Ins. R0-R19
Building Envelope	RSC-11A	Ceiling Ins. R11-R30
Building Envelope	RSC-11B	Ceiling Ins. R11-R30
Building Envelope	RSC-12A	Ceiling Ins. R19-R30
Building Envelope	RSC-12B	Ceiling Ins. R19-R30
Building Envelope	RSC-13A	Ceiling Insulation R30-R38
Building Envelope	RSC-13B	Ceiling Insulation R30-R38
Building Envelope	RSC-14A	Wall Insulation R0-R11 .EXS
Building Envelope	RSC-14B	Wall Insulation R0-R11 .EXS
Building Envelope	RSC-15A	Weather Strip/Caulk w/Blower Door
Building Envelope	RSC-15B	Weather Strip/Caulk w/Blower Door
Building Envelope	RSC-16A	Window Film & Reflective Glass
Building Envelope	RSC-16B	Window Film & Reflective Glass
Building Envelope	RSC-17A	Low E-Glass
Building Envelope	RSC-17B	Low E-Glass
Building Envelope	RSC-18A	Shade Screens
Building Envelope	RSC-18B	Shade Screens
Cooling & Heating	RSC-21A	Hi Efficiency Central AC
Cooling & Heating	RSC-22A	2 Speed Central AC
Cooling & Heating	RSC-24A	High Efficiency Room AC
Cooling & Heating	RSC-25A	Air Cond/ Heat Pump Maintenance
Cooling & Heating	RSC-25B	Air Cond/ Heat Pump Maintenance
Peak Load Shaving	RSC-26A	DLC of Central AC
Peak Load Shaving	RSC-26B	DLC of Central AC
Water Heating	WH-1	High Efficiency Elect. Resist. Water Heating
Water Heating	WH-2	Integral Heat Pump Water Heater
Renewables	WH-3	Solar Water Heater
Water Heating	WH-4	Heat Recovery (Desuperheater)
Water Heating	WH-5	Add-On Heat Pump Water Heater
Water Heating	WH-6	DHW Heater Tank Insulation
Water Heating	WH-7	DHW Pipe Insulation
Water Heating	WH-8	DHW Heat Trap
Water Heating	WH-9	Low Flow Shower Head, HD
Water Heating	WH-10	DLC of Electric Water Heater
Appliance Efficiency	CW-1	High Efficiency Clothes Washer

Other	LT-1	Compact Fluorescent
Other	LT-2	Efficient Incandescent
Other	LT-3	HPS Outdoor
Appliance Efficiency	RF-1	Bst Ref Frost Free
Appliance Efficiency	RF-2	Bst Ref Manual
Appliance Efficiency	RF-3	Bst Ref Manual
Appliance Efficiency	FR-1	Bst Freezer FF
Appliance Efficiency	FR-2	Bst Freezer Manual
Appliance Efficiency	FR-3	Bst Freezer Manual
Appliance Efficiency	PP-1	High Efficiency Pool Pumps
Peak Load Shaving	PP-3	DLC of Pool Pumps

Commercial/Industrial New Construction - FPSC Staff Measures

End Use Category	Measure	Description
Cooling & Heating	SC-D-1	High Eff. Chiller
Cooling & Heating	SC-D-2	High Eff. Chiller W/ASD
Cooling & Heating	SC-D-3	Hi Efficiency DX AC
Cooling & Heating	SC-D-4	Hi Eff. Room AC
Cooling & Heating	SC-D-5	Cool Storage
Cooling & Heating	V-D-8	High Eff. Motors Chiller
Cooling & Heating	V-D-9	High Eff. Motors DX AC
Lighting Efficiency	L-D-25	Compact Fluorescent Lamps (15/18/27W)
Lighting Efficiency	L-D-26	Two Lamp Compact Fluorescent (18W)
Water Heating	W-D-11	Heat Pump Water Heater
Water Heating	W-D-12	Solar Water Heating
Water Heating	W-D-13	HRU
Appliance Efficiency	C-D-18	Convection Oven
Appliance Efficiency	C-D-19	Energy Eff. Electric Fryer

Commercial/Industrial Existing Construction - FPSC Staff Measures

End Use Category	Measure	Description
Cooling & Heating	SC-D-1	High Eff. Chiller
Cooling & Heating	SC-D-2	High Eff. Chiller W/ASD
Cooling & Heating	SC-D-3	Hi Efficiency DX AC
Cooling & Heating	SC-D-4	Hi Eff. Room AC
Cooling & Heating	SC-D-5	Cool Storage
Cooling & Heating	SC-D-8	3 Speed Motor for Cooling Tower
Cooling & Heating	SC-D-10	AC Maintenance - Chiller
Cooling & Heating	SC-D-11	AC Maintenance - DX AC
Cooling & Heating	SC-D-12	HVAC Air Duct/Water Pipe Insul Chiller
Cooling & Heating	SC-D-13	HVAC Air Duct/Water Pipe Insul DX AC
Building Envelope	SC-D-18	Roof Insulation Chiller
Building Envelope	SC-D-19	Roof Insulation DX AC
Building Envelope	SC-D-22	Window Film Chiller
Building Envelope	SC-D-23	Window Film DX AC
Cooling & Heating	V-D-1	Leak Free Ducts DX AC
Cooling & Heating	V-D-8	High Eff. Motors Chiller
Cooling & Heating	V-D-9	High Eff. Motors DX
Cooling & Heating	V-D-10	Sep Makeup Air / Exhaust Hoods Chiller
Cooling & Heating	V-D-11	Sep Makeup Air / Exhaust Hoods DX AC
Lighting Efficiency	L-D-1	4' - 34W Fluor. Lamps / Hybrid Ballasts (#1)
Lighting Efficiency	L-D-2	4' - 34W Fluor. Lamps / Hybrid Ballasts (#2)
Lighting Efficiency	L-D-3	4' - 34W Fluor. Lamps / Electron Ballasts (#1)
Lighting Efficiency	L-D-4	4' - 34W Fluor. Lamps / Electron Ballasts (#2)
Lighting Efficiency	L-D-5	8' - 60W Fluor. Lamps / Electron Ballasts (#1)
Lighting Efficiency	L-D-6	8' - 60W Fluor. Lamps / Electron Ballasts (#2)
Lighting Efficiency	L-D-7	T8 Lamps / Electron Ballasts (#1)
Lighting Efficiency	L-D-8	T8 Lamps / Electron Ballasts (#2)
Lighting Efficiency	L-D-9	Ref/Delamps #1: Install 4' - 40W Fluor. Lamps/EE Ballast
Lighting Efficiency	L-D-10	Ref/Delamps #2: Install 4' - 34 W & 40W Fluor. Lamps/EE Ballast
Lighting Efficiency	L-D-11	Ref/Delamps #3: Install 8' - 75W Fluor. Lamps/EE Ballast
Lighting Efficiency	L-D-12	Ref/Delamps #4: Install 8' -60W Fluor. Lamps/EE Ballast
Lighting Efficiency	L-D-13	Ref/Delamps #5: Install 4' - 34W & 40W Fluor. Lamps/Hyb. Ballast
Lighting Efficiency	L-D-14	Ref/Delamps #6: Install 4' - 34W & 40W Fluor. Lamps/Hyb. Ballast
Lighting Efficiency	L-D-15	Ref/Delamps #7: Install 4' - 34W & 40W Fluor. Lamps/Elec. Ballast
Lighting Efficiency	L-D-16	Ref/Delamps #8: Install 4' - 34W & 40W Fluor. Lamps/Elec. Ballast
Lighting Efficiency	L-D-17	Ref/Delamps #9: 8' - 60W Fluor. Lamps/Elec. Ballast
Lighting Efficiency	L-D-18	Ref/Delamps #10: 8' - 60W Fluor. Lamps/Elec. Ballast
Lighting Efficiency	L-D-19	4' - 34W Fluor. Lamps / Dimming Ballasts (#1)
Lighting Efficiency	L-D-20	4' - 34W Fluor. Lamps / Dimming Ballasts (#2)
Lighting Efficiency	L-D-21	High pressure Sodium (70/100/150/250W)
Lighting Efficiency	L-D-22	High pressure Sodium (70/100/150/250W w/ES Ballast)
Lighting Efficiency	L-D-23	High pressure Sodium (35W)
Lighting Efficiency	L-D-24	Metal Halide (32W)
Lighting Efficiency	L-D-25	Compact Fluorescent Lamps (15/18/27W)
Lighting Efficiency	L-D-26	Two Lamp Compact Fluorescent (18W)

Refrigeration	R-D-1	Multiplex: Air-Cooled/No Subcooling
Refrigeration	R-D-2	Multiplex: Air-Cooled/Ambient Subcooling
Refrigeration	R-D-3	Multiplex: Air-Cooled/Mechanical Subcooling
Refrigeration	R-D-4	Multiplex: Air-Cooled/Ambient & Mech. Subcooling
Refrigeration	R-D-5	Multiplex: Air-Cooled/External Liquid Suction HX
Refrigeration	R-D-6	Open-Drive Refrigeration (ASD)
Refrigeration	R-D-7	Anti - Condensate Heater Controls
Refrigeration	R-D-8	High R-Value Glass Doors
Refrigeration	R-D-9	Refrigeration EMS
Water Heating	W-D-11	Heat Pump Water Heater
Renewables	W-D-12	Solar Water Heating
Water Heating	W-D-13	Heat Recovery Water Heater
Water Heating	W-D-14	DHW Heater Insulation
Water Heating	W-D-15	DWH Heat Trap
Water Heating	W-D-16	Low Flow/Variable Flow Shower Head
Water Heating	W-D-17	DWH Recirculation pump
Appliance Efficiency	C-D-18	Convection Oven
Appliance Efficiency	C-D-19	Energy Eff. Electric Fryer

Document No. 7

Process Step 2 Expanded for Rate Classes, Other FPL Measures Added, Measures Combined

Residential New Construction - FPSC Staff Measures

End Use Category	Measure	Description	Combined Measure
Cooling & Heating	RSC-1	Hi Efficiency Air Source Heat Pump	BLDSMT-1
Cooling & Heating	RSC-2	Ground Source Heat Pump	BLDSMT-1
Cooling & Heating	RSC-3	Two Speed Heat Pump	BLDSMT-1
Cooling & Heating	RSC-7A	Setback/Programmable Thermostat	BLDSMT-1
Cooling & Heating	RSC-7B	Setback/Programmable Thermostat	BLDSMT-1
Peak Load Shaving	RSC-8A	Load Control for Residential Electric Heat	RLC-1
Peak Load Shaving	RSC-8B	Load Control for Residential Electric Heat	RLC-1
Cooling & Heating	RSC-21A	Hi Efficiency Central AC	BLDSMT-1
Cooling & Heating	RSC-22A	2 Speed Central AC	BLDSMT-1
Cooling & Heating	RSC-24	High Efficiency Room AC	
Peak Load Shaving	RSC-26A	DLC of Central AC	RLC-1
Peak Load Shaving	RSC-26B	DLC of Central AC	RLC-1
Water Heating	WH-1	High Efficiency Elect. Resist. Water Heating	BLDSMT-1
Water Heating	WH-2	Integral Heat Pump Water Heater	BLDSMT-1
Renewables	WH-3	Solar Water Heater	
Water Heating	WH-4	Heat Recovery (Desuperheater)	BLDSMT-1
Water Heating	WH-4	Heat Recovery (Desuperheater)	BLDSMT-1
Water Heating	WH-5	Add-On Heat Pump Water Heater	BLDSMT-1
Water Heating	WH-6	DHW Heater Tank Insulation	
Peak Load Shaving	WH-10	DLC of Electric Water Heater	RLC-1
Appliance Efficiency	CW-1	High Efficiency Clothes Washer	
Other	LT-1	Compact Fluorescent	RSCLT-1
Other	LT-2	Efficient Incandescent	RSCLT-1
Other	LT-3	HPS Outdoor	RSCLT-2
Appliance Efficiency	RF-1	Bst Ref Frost Free	
Appliance Efficiency	RF-2	Bst Ref Manual	
Appliance Efficiency	FR-1	Bst Freezer FF	
Appliance Efficiency	FR-2	Bst Freezer Manual	
Peak Load Shaving	PP-3	DLC of Pool Pumps	RLC-1

Residential Existing Construction - FPSC Staff Measure:

End Use Category	Measure	Description	Combined Measure
Cooling & Heating	RSC-1	Hi Efficiency Air Source Heat Pump	
Cooling & Heating	RSC-2	Ground Source Heat Pump	
Cooling & Heating	RSC-3	Two Speed Heat Pump	
Building Envelope	RSC-5A	Reduced Duct Leakage	
Building Envelope	RSC-5B	Reduced Duct Leakage	
Cooling & Heating	RSC-7A	Setback/Programmable Thermostat	
Cooling & Heating	RSC-7B	Setback/Programmable Thermostat	
Peak Load Shaving	RSC-8A	Load Control for Residential Electric Heat	RLC-1
Peak Load Shaving	RSC-8B	Load Control for Residential Electric Heat	RLC-1
Building Envelope	RSC-10A	Ceiling Ins. R0-R19	
Building Envelope	RSC-10B	Ceiling Ins. R0-R19	
Building Envelope	RSC-11A	Ceiling Ins. R11-R30	
Building Envelope	RSC-11B	Ceiling Ins. R11-R30	
Building Envelope	RSC-12A	Ceiling Ins. R19-R30	
Building Envelope	RSC-12B	Ceiling Ins. R19-R30	
Building Envelope	RSC-13A	Ceiling Insulation R30-R38	
Building Envelope	RSC-13B	Ceiling Insulation R30-R38	
Building Envelope	RSC-14A	Wall Insulation R0-R11 .EXS	
Building Envelope	RSC-14B	Wall Insulation R0-R11 .EXS	
Building Envelope	RSC-15A	Weather Strip/Caulk w/Blower Door	
Building Envelope	RSC-15B	Weather Strip/Caulk w/Blower Door	
Building Envelope	RSC-16A	Window Film & Reflective Glass	
Building Envelope	RSC-16B	Window Film & Reflective Glass	
Building Envelope	RSC-17A	Low E-Glass	
Building Envelope	RSC-17B	Low E-Glass	
Building Envelope	RSC-18A	Shade Screens	
Building Envelope	RSC-18B	Shade Screens	
Cooling & Heating	RSC-21A	Hi Efficiency Central AC	
Cooling & Heating	RSC-22A	2 Speed Central AC	
Cooling & Heating	RSC-24A	High Efficiency Room AC	
Cooling & Heating	RSC-25A	Air Cond/ Heat Pump Maintenance	
Cooling & Heating	RSC-25B	Air Cond/ Heat Pump Maintenance	
Peak Load Shaving	RSC-26A	DLC of Central AC	RLC-1
Peak Load Shaving	RSC-26B	DLC of Central AC	RLC-1
Water Heating	WH-1	High Efficiency Elect. Resist. Water Heating	
Water Heating	WH-2	Integral Heat Pump Water Heater	
Renewables	WH-3	Solar Water Heater	
Water Heating	WH-4	Heat Recovery (Desuperheater)	
Water Heating	WH-5	Add-On Heat Pump Water Heater	
Water Heating	WH-6	DHW Heater Tank Insulation	
Water Heating	WH-7	DHW Pipe Insulation	
Water Heating	WH-8	DHW Heat Trap	
Water Heating	WH-9	Low Flow Shower Head, HD	
Water Heating	WH-10	DLC of Electric Water Heater	RLC-1
Appliance Efficiency	CW-1	High Efficiency Clothes Washer	
Other	LT-1	Compact Fluorescent	RSCLT-1
Other	LT-2	Efficient Incandescent	RSCLT-1
Other	LT-3	HPS Outdoor	RSCLT-2
Appliance Efficiency	RF-1	Bst Ref Frost Free	
Appliance Efficiency	RF-2	Bst Ref Manual	
Appliance Efficiency	RF-3	Bst Ref Manual	
Appliance Efficiency	FR-1	Bst Freezer FF	
Appliance Efficiency	FR-2	Bst Freezer Manual	
Appliance Efficiency	FR-3	Bst Freezer Manual	
Appliance Efficiency	PP-1	High Efficiency Pool Pumps	
Peak Load Shaving	PP-3	DLC of Pool Pumps	RLC-1

Commercial/Industrial New Construction - FPSC Staff Measure:

End Use Category	Measure	Description	Combined Measure	FPL Previously Analyzed	Rate Class Expansion
Cooling & Heating	SC-D-1	High Eff. Chiller			GSD GSLD
Cooling & Heating	SC-D-2	High Eff. Chiller W/ASD			GSD GSLD
Cooling & Heating	SC-D-3	Hi Efficiency DX AC			GS GSD GSLD
Cooling & Heating	SC-D-4	Hi Eff. Room AC			GS GSD GSLD
Cooling & Heating	SC-D-5	Cool Storage			GSD GSLD
Cooling & Heating	V-D-8	High Eff. Motors Chiller			GSD GSLD
Cooling & Heating	V-D-9	High Eff. Motors DX AC			GS GSD GSLD
Lighting Efficiency	L-D-25	Compact Fluorescent Lamps (15/18/27W)	FL8LP		GS GSD GSLD
Lighting Efficiency	L-D-26	Two Lamp Compact Fluorescent (18W)	FL8LP		GS GSD GSLD
Water Heating	W-D-11	Heat Pump Water Heater			GS GSD GSLD
Water Heating	W-D-12	Solar Water Heating			GS GSD GSLD
Water Heating	W-D-13	HRU			GS GSD GSLD
Appliance Efficiency	C-D-18	Convection Oven			GS GSD GSLD
Water Heating	W-D-11	Heat Pump Water Heater			GS GSD GSLD
Power Equipment	FPLM-1	Motors		Yes	GS GSD GSLD
Other	OPBC	Off Peak Battery Charging		Yes	GSD GSLD
Peak Load Shaving	CILM	Commercial/Industrial Load Management		Yes	GS GSLD

Commercial/Industrial Existing Construction - Fpsc Staff Measure:

End Use Category	Measure	Description	Combined Measure	FPL Previously Analyzed	Rate Class Expansion
Cooling & Heating	SC-D-1	High Eff. Chiller			GSD GSLD
Cooling & Heating	SC-D-2	High Eff. Chiller W/ASD			GSD GSLD
Cooling & Heating	SC-D-3	Hi Efficiency DX AC			GS GSD GSLD
Cooling & Heating	SC-D-4	Hi Eff. Room AC			GS GSD GSLD
Cooling & Heating	SC-D-5	Cool Storage			GS GSD GSLD
Cooling & Heating	SC-D-8	3 Speed Motor for Cooling Tower			GSD GSLD
Cooling & Heating	SC-D-10	AC Maintenance - Chiller			GSD GSLD
Cooling & Heating	SC-D-11	AC Maintenance - DX AC			GS GSD GSLD
Cooling & Heating	SC-D-12	HVAC Air Duct/Water Pipe Insul Chiller			GSD GSLD
Cooling & Heating	SC-D-13	HVAC Air Duct/Water Pipe Insul DX AC			GS GSD GSLD
Building Envelope	SC-D-18	Roof Insulation Chiller			GSD GSLD
Building Envelope	SC-D-19	Roof Insulation DX AC			GS GSD GSLD
Building Envelope	SC-D-22	Window Film Chiller			GSD GSLD
Building Envelope	SC-D-23	Window Film DX AC			GS GSD GSLD
Cooling & Heating	V-D-1	Leak Free Ducts DX AC			GS GSD GSLD
Cooling & Heating	V-D-8	High Eff. Motors Chiller			GSD GSLD
Cooling & Heating	V-D-9	High Eff. Motors DX			GS GSD GSLD
Cooling & Heating	V-D-10	Sep Makeup Air / Exhaust Hoods Chiller			GSD GSLD
Cooling & Heating	V-D-11	Sep Makeup Air / Exhaust Hoods DX AC			GS GSD GSLD
Lighting Efficiency	L-D-1	4' - 34W Fluor. Lamps / Hybrid Ballasts (#1)	FL8HP		GS GSD GSLD
Lighting Efficiency	L-D-2	4' - 34W Fluor. Lamps / Hybrid Ballasts (#2)	FL8HP		GS GSD GSLD
Lighting Efficiency	L-D-3	4' - 34W Fluor. Lamps / Electron Ballasts (#1)	FL8HP		GS GSD GSLD
Lighting Efficiency	L-D-4	4' - 34W Fluor. Lamps / Electron Ballasts (#2)	FL8HP		GS GSD GSLD
Lighting Efficiency	L-D-5	8' - 60W Fluor. Lamps / Electron Ballasts (#1)	FL8HP		GS GSD GSLD
Lighting Efficiency	L-D-6	8' - 60W Fluor. Lamps / Electron Ballasts (#2)	FL8HP		GS GSD GSLD
Lighting Efficiency	L-D-7	T8 Lamps / Electron Ballasts (#1)	FL8HP		GS GSD GSLD
Lighting Efficiency	L-D-8	T8 Lamps / Electron Ballasts (#2)	FL8HP		GS GSD GSLD
Lighting Efficiency	L-D-9	Refl/Delamps #1: Install 4' - 40W Fluor. Lamps/EE Ballast	FL8LP		GS GSD GSLD
Lighting Efficiency	L-D-10	Refl/Delamps #2: Install 4' - 34 W & 40W Fluor. Lamps/EE Ballast	FL8LP		GS GSD GSLD
Lighting Efficiency	L-D-11	Refl/Delamps #3: Install 8' - 75W Fluor. Lamps/EE Ballast	FL8LP		GS GSD GSLD
Lighting Efficiency	L-D-12	Refl/Delamps #4: Install 8' -60W Fluor. Lamps/EE Ballast	FL8LP		GS GSD GSLD
Lighting Efficiency	L-D-13	Refl/Delamps #5: Install 4' - 34W & 40W Fluor. Lamps/Hyb. Ballast	FL8LP		GS GSD GSLD
Lighting Efficiency	L-D-14	Refl/Delamps #6: Install 4' - 34W & 40W Fluor. Lamps/Hyb. Ballast	FL8LP		GS GSD GSLD
Lighting Efficiency	L-D-15	Refl/Delamps #7: Install 4' - 34W & 40W Fluor. Lamps/Elec. Ballast	FL8LP		GS GSD GSLD
Lighting Efficiency	L-D-16	Refl/Delamps #8: Install 4' - 34W & 40W Fluor. Lamps/Elec. Ballast	FL8HP		GS GSD GSLD
Lighting Efficiency	L-D-17	Refl/Delamps #9: 8' - 60W Fluor. Lamps/Elec. Ballast	FL8HP		GS GSD GSLD
Lighting Efficiency	L-D-18	Refl/Delamps #10: 8' - 60W Fluor. Lamps/Elec. Ballast	FL8HP		GS GSD GSLD
Lighting Efficiency	L-D-19	4' - 34W Fluor. Lamps / Dimming Ballasts (#1)	FL8HP		GS GSD GSLD
Lighting Efficiency	L-D-20	4' - 34W Fluor. Lamps / Dimming Ballasts (#2)	FL8HP		GS GSD GSLD
Lighting Efficiency	L-D-21	High pressure Sodium (70/100/150/250W)	HID8HP		GS GSD GSLD
Lighting Efficiency	L-D-22	High pressure Sodium (70/100/150/250W w/ES Ballast)	HID8HP		GS GSD GSLD
Lighting Efficiency	L-D-23	High pressure Sodium (35W)	HID8HP		GS GSD GSLD
Lighting Efficiency	L-D-24	Metal Halide (32W)	HID8HP		GS GSD GSLD
Lighting Efficiency	L-D-25	Compact Fluorescent Lamps (15/18/27W)	INC8LP		GS GSD GSLD
Lighting Efficiency	L-D-26	Two Lamp Compact Fluorescent (18W)	FL8LP		GS GSD GSLD
Lighting Efficiency	FPL-31	1 LAMP EXIT SGN. FLR	FL24LP	Yes	GS GSD GSLD
Lighting Efficiency	FPL-32	1 LAMP EXIT SGN. LED	FL24HP	Yes	GS GSD GSLD
Lighting Efficiency	FPL-33	1 LAMP EXIT SGN. FLR	FL24LP	Yes	GS GSD GSLD
Lighting Efficiency	FPL-34	1 LAMP EXIT SGN. LED	FL24HP	Yes	GS GSD GSLD
Lighting Efficiency	FPL-35	2-LAMP4FF T-8 EB	FL8HP	Yes	GS GSD GSLD
Lighting Efficiency	FPL-36	2-LAMP4FF T-8 HYB	FL8HP	Yes	GS GSD GSLD
Lighting Efficiency	FPL-37	2-LAMP4FF T-8 EB	FL8HP	Yes	GS GSD GSLD
Lighting Efficiency	FPL-38	2-LAMP4FF T-8 HYB	FL8HP	Yes	GS GSD GSLD
Lighting Efficiency	FPL-39	HPS 400W	HID8HP	Yes	GS GSD GSLD
Lighting Efficiency	FPL-40	HALOGEN HIR 60W	INC8LP	Yes	GS GSD GSLD
Lighting Efficiency	FPL-41	2-LAMP4FF T-10 EE	FL8LP	Yes	GS GSD GSLD
Lighting Efficiency	FPL-42	2-LAMP4FF T-10 EE	FL8LP	Yes	GS GSD GSLD
Lighting Efficiency	FPL-43	2-LAMP4FF T-10 EE	FL8LP	Yes	GS GSD GSLD
Lighting Efficiency	FPL-44	2-LAMP4FF T-10 EE	FL8LP	Yes	GS GSD GSLD
Lighting Efficiency	FPL-45	COMP. FL. REFLECTOR	FL8LP	Yes	GS GSD GSLD
Lighting Efficiency	FPL-46	4-4FF T8 EB	FL8HP	Yes	GS GSD GSLD

Lighting Efficiency	FPL-47	2-8FF T8 EB	FL8HP	Yes	GS GSD GSLD
Lighting Efficiency	FPL-48	2-2X2U-BEND T8 EB	FL8HP	Yes	GS GSD GSLD
Lighting Efficiency	FPL-49	2-T8 EB REF.	FL8HP	Yes	GS GSD GSLD
Lighting Efficiency	FPL-50	COMP.FLR.22W	FL8LP	Yes	GS GSD GSLD
Lighting Efficiency	FPL-51	HALOGEN PAR38 45W	INC8LP	Yes	GS GSD GSLD
Refrigeration	R-D-1	Multiplex: Air-Cooled/No Subcooling			GS GSD GSLD
Refrigeration	R-D-2	Multiplex: Air-Cooled/Ambient Subcooling			GS GSD GSLD
Refrigeration	R-D-3	Multiplex: Air-Cooled/Mechanical Subcooling			GS GSD GSLD
Refrigeration	R-D-4	Multiplex: Air-Cooled/Ambient & Mech. Subcooling			GS GSD GSLD
Refrigeration	R-D-5	Multiplex: Air-Cooled/External Liquid Suction HX			GS GSD GSLD
Refrigeration	R-D-6	Open-Drive Refrigeration (ASD)			GS GSD GSLD
Refrigeration	R-D-7	Anti - Condensate Heater Controls			GS GSD GSLD
Refrigeration	R-D-8	High R-Value Glass Doors			GS GSD GSLD
Refrigeration	R-D-9	Refrigeration EMS			GS GSD GSLD
Water Heating	W-D-11	Heat Pump Water Heater			GS GSD GSLD
Renewables	W-D-12	Solar Water Heating			GS GSD GSLD
Water Heating	W-D-13	Heat Recovery Water Heater			GS GSD GSLD
Water Heating	W-D-14	DHW Heater Insulation			GS GSD GSLD
Water Heating	W-D-15	DWH Heat Trap			GS GSD GSLD
Water Heating	W-D-16	Low Flow/Variable Flow Shower Head			GS GSD GSLD
Water Heating	W-D-17	DWH Recirculation pump			GS GSD GSLD
Appliance Efficiency	C-D-18	Convection Oven			GS GSD GSLD
Appliance Efficiency	C-D-19	Energy Eff. Electric Fryer			GS GSD GSLD
Power Equipment	FPLM-1	Motors		Yes	GS GSD GSLD
Other	OPBC	Off Peak Battery Charging		Yes	GSD GSLD
Peak Load Shaving	CILM	Commercial/Industrial Load Management		Yes	GS GSLD

Document No. 8

Summary of Combined Measures

Technology	Combined Measure	Comments
C/I Lighting	FL8HP FL8LP FL24HP FL24LP INC8HP INC8LP INC24HP INC24LP HID8HP HID8LP HID24HP HID24LP	All Commercial / Industrial lighting measures are combined based on: - the type of lighting technology (fluorescent, incandescent or HID) - the daily usage (24 hours a day vs 'day time usage') - the permanence of the new technology (high vs low) This results in 12 potential combined measures. Measure codes are structured as follows: - FL = fluorescent - INC = incandescent - HID = HID - 8 = day time usage - 24 = 24 hours a day usage - HP = high permanence - LP = low permanence For example: FL8HP is a high permanence florescent fixture that is used for day time lighting
Residential Lighting	RSCLT-1 RSCLT-2	Residential lighting was combined based on whether is was used for indoor or outdoor lighting
Residential Load Control	RLC-1	Many of the costs of systems and equipment are shared between the various equipment options. The combined measure considers the impacts of an average program participant who signs up for more than one appliance option.
Residential New Construction	BldSmt-1	Those measures which are awarded points toward an EPI rating as calculated using the State of Florida Whole Building Performance Method are evaluated as the BuildSmart program. This program considers the overall efficiency of the resulting structure as opposed to sub-optimizing the building by encouraging energy efficiency of one technology which can be used to allow another technology to be not as energy efficient as it would otherwise be.

Note: The individual measures that form a combined measure can be determined from the "Combined Measure" column on the list of measures in Document No. 7

Document No. 9

Process Step 3 Cost Effectiveness of Measures - Pre Screening

Residential New Construction

Measure	Description	Latest CPF	RIM	TRC	Participant	Comments	Evaluate
BLSMT-1	BuildSmart - EPI less than 90	97 Pgm Filing	1.20	1.32	1.76		Yes
RLC-1	Residential Load Control	97 Pgm Rev	1.09	3.30	Infinite		Yes
RSC-24	High Efficiency Room AC	97 Pgm Rev	1.04	0.90	1.30		Yes
WH-3	Solar Water Heater	96 R&D Project	0.38	0.28	1.00	HT-55	No
WH-6	DHW Heater Tank Insulation	95 Goals	0.57	0.56	1.62		No
CW-1	High Efficiency Clothes Washer	95 Goals	0.50	0.24	0.66		No
RSCLT-1	Residential Indoor Lighting	95 Goals	0.64	0.14	0.35	Most cost-effective measure	No
RSCLT-1	Residential Outdoor Lighting	95 Goals	0.63	0.15	0.39		No
RF-1	Bst Ref Frost Free	95 Goals	0.86	1.18	2.44	\$0 incentives	No
RF-2	Bst Ref Manual	95 Goals	0.81	0.97	2.08	\$0 incentives	No
FR-1	Bst Freezer FF	95 Goals	0.94	2.06	4.36	\$0 incentives	Yes
FR-2	Bst Freezer Manual	95 Goals	0.88	2.21	6.17	\$0 incentives	No

Residential Existing Construction

Measure	Description	Latest CPF	RIM	TRC	Participant	Comments	Evaluate
RSC-1	Hi Efficiency Air Source Heat Pump	97 Pgm Rev	1.02	1.16	1.74		Yes
RSC-2	Ground Source Heat Pump	97 Pgm Rev	1.02	1.01	1.49		Yes
RSC-3	Two Speed Heat Pump	95 Goals	0.83	0.53	1.00		No
RSC-5A	Reduced Duct Leakage	97 Pgm Rev	1.02	1.54	2.49		Yes
RSC-5B	Reduced Duct Leakage	97 Pgm Rev	1.02	1.38	2.13		Yes
RSC-7A	Setback/Programmable Thermostat	Not evaluated					Yes
RSC-7B	Setback/Programmable Thermostat	Not evaluated					Yes
RSC-10A	Ceiling Ins. R0-R19	97 Pgm Rev	1.02	1.84	2.72		Yes
RSC-10B	Ceiling Ins. R0-R19	97 Pgm Rev	1.02	1.60	2.35		Yes
RSC-11A	Ceiling Ins. R11-R30	97 Pgm Rev	0.50	0.41	1.00		No
RSC-11B	Ceiling Ins. R11-R30	95 Goals	0.54	0.48	1.00		No
RSC-12A	Ceiling Ins. R19-R30	97 Pgm Rev	0.31	0.28	1.00		No
RSC-12B	Ceiling Ins. R19-R30	95 Goals	0.24	0.23	1.00		No
RSC-13A	Ceiling Insulation R30-R38	95 Goals	0.24	0.23	1.00		No
RSC-13B	Ceiling Insulation R30-R38	95 Goals	0.19	0.19	1.00		No
RSC-14A	Wall Insulation R0-R11_EXS	95 Goals	0.18	0.16	1.00		No
RSC-14B	Wall Insulation R0-R11_EXS	95 Goals	0.13	0.11	1.00		No
RSC-15A	Weather Strip/Caulk w/Blower Door	95 Goals	0.53	0.63	2.03		No
RSC-15B	Weather Strip/Caulk w/Blower Door	95 Goals	0.51	0.61	2.03		No
RSC-16A	Window Film & Reflective Glass	97 Pgm Rev	0.92	0.68	1.11	\$0 incentives	Yes
RSC-16B	Window Film & Reflective Glass	95 Goals	0.12	0.12	1.00		No
RSC-17A	Low E-Glass	97 Pgm Rev	0.53	0.40	1.00		No
RSC-17B	Low E-Glass	95 Goals	0.42	0.38	1.00		No
RSC-18A	Shade Screens	97 Pgm Rev	0.85	0.57	1.00		No
RSC-18B	Shade Screens	95 Goals	0.14	0.13	1.00		No
RSC-21A	Hi Efficiency Central AC	97 Pgm Rev	1.03	1.62	2.50		Yes
RSC-22A	2 Speed Central AC	95 Goals	0.91	0.90	1.61	\$0 incentives	Yes
RSC-24A	High Efficiency Room AC	97 Pgm Rev	1.04	0.90	1.30		Yes
RSC-25A	Air Cond/ Heat Pump Maintenance	95 Goals	0.57	0.33	0.61		No
RSC-25B	Air Cond/ Heat Pump Maintenance	95 Goals	0.52	0.29	0.56		No
WH-1	High Efficiency Elect. Resist. Water Heating	95 Goals	0.49	0.28	0.72		No
WH-2	Integral Heat Pump Water Heater	95 Goals	0.36	0.28	1.00		No
WH-3	Solar Water Heater	96 R&D Project	0.38	0.28	1.00	HT-55	No
WH-4	Heat Recovery (Desuperheater)	97 Pgm Rev	0.33	0.28	1.00		No
WH-5	Add-On Heat Pump Water Heater	95 Goals	0.72	0.28	0.59		No
WH-6	DHW Heater Tank Insulation	95 Goals	0.57	0.56	1.62		No
WH-7	DHW Pipe Insulation	95 Goals	0.80	0.61	1.00		No
WH-8	DHW Heat Trap	95 Goals	0.47	0.40	1.00		No
WH-9	Low Flow Shower Head, HD	95 Goals	0.72	1.45	4.32		No
CW-1	High Efficiency Clothes Washer	95 Goals	0.50	0.24	0.66		No
RF-1	Bst Ref Frost Free	95 Goals	0.86	1.18	2.44	\$0 incentives	No
RF-2	Bst Ref Manual	95 Goals	0.81	0.97	2.08	\$0 incentives	No
RF-3	Bst Ref Manual	95 Goals	0.78	7.96	Infinite	\$0 incentives	No
FR-1	Bst Freezer FF	95 Goals	0.94	2.06	4.36	\$0 incentives	Yes
FR-2	Bst Freezer Manual	95 Goals	0.88	2.21	6.17	\$0 incentives	No
FR-3	Bst Freezer Manual	95 Goals	0.81	7.60	Infinite	\$0 incentives	No
PP-1	High Efficiency Pool Pumps	95 Goals	0.94	1.33	3.24	\$0 incentives	Yes
RLC-1	Residential Load Control	97 Pgm Rev	1.09	3.30	Infinite		Yes
RSCLT-1	Residential Indoor Lighting	95 Goals	0.64	0.14	0.35	Most cost-effective measure	No
RSCLT-1	Residential Outdoor Lighting	95 Goals	0.63	0.15	0.39		No

Commercial/Industrial New Construction

Measure	Rate Class	Description	Latest CPF	RIM	TRC	Participant	Comments	Evaluate
SC-D-1	GSD	High Eff. Chiller	97 Pgm Rev	1.09	2.00	2.30		Yes
SC-D-1	GSLD	High Eff. Chiller	97 Pgm Rev	1.06	2.00	2.35		Yes
SC-D-2	GSD	High Eff. Chiller W/ASD	97 Pgm Rev	1.07	1.07	1.19		Yes
SC-D-2	GSLD	High Eff. Chiller W/ASD	97 Pgm Rev	1.05	1.07	1.19		Yes
SC-D-3	GS	Hi Efficiency DX AC	97 Pgm Rev	1.10	1.67	2.12		Yes
SC-D-3	GSD	Hi Efficiency DX AC	97 Pgm Rev	1.06	1.67	1.98		Yes
SC-D-3	GSLD	Hi Efficiency DX AC	97 Pgm Rev	1.05	1.67	1.98		Yes
SC-D-4	GS	Hi Eff. Room AC	95 Goals	1.04	1.49	2.26		Yes
SC-D-4	GSD	Hi Eff. Room AC	95 Goals	0.99	1.23	1.93		Yes
SC-D-4	GSLD	Hi Eff. Room AC	95 Goals	0.99	1.23	1.85		Yes
SC-D-5	GSD	Cool Storage	97 Pgm Rev	1.04	1.08	1.01		Yes
SC-D-5	GSLD	Cool Storage	97 Pgm Rev	1.05	1.05	1.02		Yes
V-D-8	GSD	High Eff. Motors Chiller	95 Goals	0.65	1.05	3.94	\$0 incentives	No
V-D-8	GSLD	High Eff. Motors Chiller	95 Goals	1.13	3.88	5.03	Payback<2 years	Yes
V-D-9	GS	High Eff. Motors DX AC	95 Goals	0.88	1.99	3.74	\$0 incentives	No
V-D-9	GSD	High Eff. Motors DX AC	95 Goals	0.89	1.65	3.82	\$0 incentives	No
V-D-9	GSLD	High Eff. Motors DX AC	95 Goals	0.91	2.23	5.63	\$0 incentives	Yes
FL8LP	GS	Fluorescent 8 Hour Low Permanence					New bundle	Yes
FL8LP	GSD	Fluorescent 8 Hour Low Permanence					New bundle	Yes
FL8LP	GSLD	Fluorescent 8 Hour Low Permanence					New bundle	Yes
W-D-11	GS	Heat Pump Water Heater	95 Goals	0.54	0.10	0.20		No
W-D-11	GSD	Heat Pump Water Heater	95 Goals	0.50	0.42	1.00		No
W-D-11	GSLD	Heat Pump Water Heater	95 Goals	0.48	0.41	1.00		No
W-D-12	GS	Solar Water Heating	95 Goals	0.56	0.07	0.14		No
W-D-12	GSD	Solar Water Heating	95 Goals	0.39	0.35	1.00		No
W-D-12	GSLD	Solar Water Heating	95 Goals	0.39	0.34	1.00		No
W-D-13	GS	HRU	95 Goals	0.42	0.36	1.00		No
W-D-13	GSD	HRU	95 Goals	0.95	1.69	2.53	\$0 incentives	Yes
W-D-13	GSLD	HRU	95 Goals	0.96	1.58	2.41	\$0 incentives	Yes
C-D-18	GS	Convection Oven	95 Goals	0.66	1.59	3.67	\$0 incentives	No
C-D-18	GSD	Convection Oven	95 Goals	0.88	1.84	3.05	\$0 incentives	No
C-D-18	GSLD	Convection Oven	95 Goals	1.10	2.54	3.30	\$0 incentives	Yes
C-D-19	GS	Energy Eff. Electric Fryer	95 Goals	0.63	2.34	7.96	\$0 incentives	No
C-D-19	GSD	Energy Eff. Electric Fryer	95 Goals	0.81	2.85	6.46	\$0 incentives	No
C-D-19	GSLD	Energy Eff. Electric Fryer	95 Goals	1.01	4.20	7.09	\$0 incentives	Yes
FPLM-1	GS	Motors	97 Pgm Rev	1.00	1.28	1.95	\$9.65 incentive per motor	Yes
FPLM-1	GSD	Motors	97 Pgm Rev	0.92	1.38	2.02	\$0 incentives	Yes
FPLM-1	GSLD	Motors	97 Pgm Rev	0.94	1.38	1.94	\$0 incentives	Yes
OPBC	GSD	Off Peak Battery Charging	97 Pgm Rev	1.63	2.88	2.32		Yes
OPBC	GSLD	Off Peak Battery Charging	97 Pgm Rev	1.63	2.88	2.32		Yes
CILM	GS	Commercial/Industrial Load Management	97 Pgm Rev	1.15	2.94	Infinite		Yes
CILM	GSLD	Commercial/Industrial Load Management	95 Goals	1.49	44.74	167.90		Yes

Commercial/Industrial Existing Construction

Measure	Rate Class	Description	Latest CPF	RIM	TRC	Participant	Comments	Evaluate
SC-D-1	GSD	High Eff. Chiller	97 Pgm Rev	1.09	2.00	2.30		Yes
SC-D-1	GSLD	High Eff. Chiller	97 Pgm Rev	1.06	2.00	2.35		Yes
SC-D-2	GSD	High Eff. Chiller W/ASD	97 Pgm Rev	1.07	1.07	1.19		Yes
SC-D-2	GSLD	High Eff. Chiller W/ASD	97 Pgm Rev	1.05	1.07	1.19		Yes
SC-D-3	GS	Hi Efficiency DX AC	97 Pgm Rev	1.10	1.67	2.12		Yes
SC-D-3	GSD	Hi Efficiency DX AC	97 Pgm Rev	1.06	1.67	1.98		Yes
SC-D-3	GSLD	Hi Efficiency DX AC	97 Pgm Rev	1.05	1.67	1.98		Yes
SC-D-4	GS	Hi Eff. Room AC	95 Goals	1.04	1.49	2.26		Yes
SC-D-4	GSD	Hi Eff. Room AC	95 Goals	0.99	1.23	1.93		Yes
SC-D-4	GSLD	Hi Eff. Room AC	95 Goals	0.99	1.23	1.85		Yes
SC-D-5	GSD	Cool Storage	97 Pgm Rev	1.04	1.08	1.01		Yes
SC-D-5	GSLD	Cool Storage	97 Pgm Rev	1.05	1.05	1.02		Yes
SC-D-8	GSD	3 Speed Motor for Cooling Tower	95 Goals	0.91	2.89	5.28	\$0 incentives	Yes
SC-D-8	GSLD	3 Speed Motor for Cooling Tower	95 Goals	1.01	3.30	4.94	\$0 incentives	Yes
SC-D-10	GSD	AC Maintenance Chiller	95 Goals	0.09	0.09	1.00		No
SC-D-10	GSLD	AC Maintenance Chiller	95 Goals	0.09	0.09	1.00		No
SC-D-11	GS	AC Maintenance DX AC	95 Goals	0.11	0.11	1.00		No
SC-D-11	GSD	AC Maintenance DX AC	95 Goals	0.09	0.09	1.00		No
SC-D-11	GSLD	AC Maintenance DX AC	95 Goals	0.09	0.08	1.00		No
SC-D-12	GSD	HVAC Air Duct/Water Pipe Insul Chiller	95 Goals	0.25	0.02	0.03	\$0 incentives	No
SC-D-12	GSLD	HVAC Air Duct/Water Pipe Insul Chiller	95 Goals	0.25	0.02	0.03	\$0 incentives	No
SC-D-13	GS	HVAC Air Duct/Water Pipe Insul DX AC	95 Goals	0.03	0.03	1.00		No
SC-D-13	GSD	HVAC Air Duct/Water Pipe Insul DX AC	95 Goals	0.02	0.02	1.00		No
SC-D-13	GSLD	HVAC Air Duct/Water Pipe Insul DX AC	95 Goals	0.02	0.02	1.00		No
SC-D-18	GSD	Roof Insulation Chiller	97 Pgm Rev	1.02	1.27	1.40		Yes
SC-D-18	GSLD	Roof Insulation Chiller	97 Pgm Rev	1.02	1.45	1.59		Yes
SC-D-19	GS	Roof Insulation DX AC	97 Pgm Rev	1.03	1.28	1.62		Yes
SC-D-19	GSD	Roof Insulation DX AC	97 Pgm Rev	1.03	1.53	1.66		Yes
SC-D-19	GSLD	Roof Insulation DX AC	97 Pgm Rev	1.03	1.73	1.85		Yes
SC-D-22	GSD	Window Film Chiller	97 Pgm Rev	1.02	1.21	1.38		Yes
SC-D-22	GSLD	Window Film Chiller	97 Pgm Rev	1.02	1.25	1.39		Yes
SC-D-23	GS	Window Film DX AC	97 Pgm Rev	1.02	1.07	1.33		Yes
SC-D-23	GSD	Window Film DX AC	97 Pgm Rev	1.02	1.19	1.37		Yes
SC-D-23	GSLD	Window Film DX AC	97 Pgm Rev	1.02	1.26	1.40		Yes
V-D-1	GS	Leak Free Ducts DX AC	97 Pgm Rev	1.25	1.29	1.35		Yes
V-D-1	GSD	Leak Free Ducts DX AC	97 Pgm Rev	1.06	1.29	1.42		Yes
V-D-1	GSLD	Leak Free Ducts DX AC	97 Pgm Rev	1.03	1.29	1.44		Yes
V-D-8	GSD	High Eff. Motors Chiller	95 Goals	0.65	1.05	3.94	\$0 incentives	No
V-D-8	GSLD	High Eff. Motors Chiller	95 Goals	1.13	3.88	5.03	\$0 incentives	Yes
V-D-9	GS	High Eff. Motors DX AC	95 Goals	0.88	1.99	3.74	\$0 incentives	No
V-D-9	GSD	High Eff. Motors DX AC	95 Goals	0.89	1.85	3.92	\$0 incentives	No
V-D-9	GSLD	High Eff. Motors DX AC	95 Goals	0.91	2.23	5.63	\$0 incentives	Yes
V-D-10	GSD	Sep Makeup Air / Exhaust Hoods Chiller	97 Pgm Rev	1.00	0.83	1.00		Yes
V-D-10	GSLD	Sep Makeup Air / Exhaust Hoods Chiller	97 Pgm Rev	0.99	0.83	1.00		Yes
V-D-11	GS	Sep Makeup Air / Exhaust Hoods DX AC	97 Pgm Rev	1.07	0.84	1.00		Yes
V-D-11	GSD	Sep Makeup Air / Exhaust Hoods DX AC	97 Pgm Rev	0.96	0.84	1.00		Yes
V-D-11	GSLD	Sep Makeup Air / Exhaust Hoods DX AC	97 Pgm Rev	0.95	0.84	1.00		Yes
FL24HP	GS	Fluorescent 24 Hour High Permanence					New bundle	Yes
FL24HP	GSD	Fluorescent 24 Hour High Permanence					New bundle	Yes
FL24HP	GSLD	Fluorescent 24 Hour High Permanence					New bundle	Yes
FL24LP	GS	Fluorescent 24 Hour Low Permanence					New bundle	Yes
FL24LP	GSD	Fluorescent 24 Hour Low Permanence					New bundle	Yes
FL24LP	GSLD	Fluorescent 24 Hour Low Permanence					New bundle	Yes
FL8HP	GS	Fluorescent 8 Hour High Permanence					New bundle	Yes
FL8HP	GSD	Fluorescent 8 Hour High Permanence					New bundle	Yes
FL8HP	GSLD	Fluorescent 8 Hour High Permanence					New bundle	Yes
FL8LP	GS	Fluorescent 8 Hour Low Permanence					New bundle	Yes
FL8LP	GSD	Fluorescent 8 Hour Low Permanence					New bundle	Yes
FL8LP	GSLD	Fluorescent 8 Hour Low Permanence					New bundle	Yes
HID8HP	GSLD	HID 8 Hour High Permanence					New bundle	Yes
INC8LP	GSD	Incandescent 8 Hour Low Permanence					New bundle	Yes
INC8LP	GSLD	Incandescent 8 Hour Low Permanence					New bundle	Yes
R-D-1	GS	Multiplex: Air-Cooled/No Subcooling	95 Goals	0.60	1.28	4.20	\$0 incentives	No
R-D-1	GSD	Multiplex: Air-Cooled/No Subcooling	95 Goals	0.96	2.01	2.94	\$0 incentives	Yes
R-D-1	GSLD	Multiplex: Air-Cooled/No Subcooling	95 Goals	1.03	2.23	2.99	\$0 incentives	Yes
R-D-2	GS	Multiplex: Air-Cooled/Ambient Subcooling	95 Goals	0.59	1.19	3.63	\$0 incentives	No
R-D-2	GSD	Multiplex: Air-Cooled/Ambient Subcooling	95 Goals	0.96	1.75	2.52	\$0 incentives	Yes
R-D-2	GSLD	Multiplex: Air-Cooled/Ambient Subcooling	95 Goals	1.03	1.93	2.56	\$0 incentives	Yes
RD-3	GS	Multiplex: Air-Cooled/Mechanical Subcooling	95 Goals	0.58	0.80	2.05	\$0 incentives	No
RD-3	GSD	Multiplex: Air-Cooled/Mechanical Subcooling	95 Goals	1.04	0.97	1.37	\$0 incentives	Yes
RD-3	GSLD	Multiplex: Air-Cooled/Mechanical Subcooling	95 Goals	1.03	1.05	1.38	\$0 incentives	Yes
R-D-4	GS	Multiplex: Air-Cooled/Ambient & Mech. Subcooling	95 Goals	0.58	0.83	2.15	\$0 incentives	No
R-D-4	GSD	Multiplex: Air-Cooled/Ambient & Mech. Subcooling	95 Goals	0.96	1.01	1.41	\$0 incentives	Yes
R-D-4	GSLD	Multiplex: Air-Cooled/Ambient & Mech. Subcooling	95 Goals	1.03	1.09	1.43	\$0 incentives	Yes
R-D-5	GS	Multiplex: Air-Cooled/External Liquid Suction HX	95 Goals	0.74	1.26	2.64	\$0 incentives	No
R-D-5	GSD	Multiplex: Air-Cooled/External Liquid Suction HX	95 Goals	1.05	1.49	1.94	\$0 incentives	Yes
R-D-5	GSLD	Multiplex: Air-Cooled/External Liquid Suction HX	95 Goals	1.10	1.59	1.90	\$0 incentives	Yes
R-D-6	GS	Open - Drive Refrigeration System (ASD)	95 Goals	0.50	0.56	1.57	\$0 incentives	No
R-D-6	GSD	Open - Drive Refrigeration System (ASD)	95 Goals	0.91	0.72	1.06	\$0 incentives	Yes

R-D-6	GSLD	Open - Drive Refrigeration System (ASD)	95 Goals	0.72	0.62	1.00		No
R-D-7	GS	Anti - Condensate Heater Controls	95 Goals	0.63	0.20	0.34	\$0 incentives	No
R-D-7	GSD	Anti - Condensate Heater Controls	95 Goals	0.20	0.19	1.00		No
R-D-7	GSLD	Anti - Condensate Heater Controls	95 Goals	0.20	0.19	1.00		No
R-D-8	GS	High R-Value Glass Doors	95 Goals	0.79	1.21	2.19	\$0 incentives	No
R-D-8	GSD	High R-Value Glass Doors	95 Goals	1.04	1.21	1.58	\$0 incentives	Yes
R-D-8	GSLD	High R-Value Glass Doors	95 Goals	1.10	1.25	1.52	\$0 incentives	Yes
R-D-9	GS	Refrigeration Energy Mgt System	95 Goals	0.59	0.58	1.31	\$0 incentives	No
R-D-9	GSD	Refrigeration Energy Mgt System	95 Goals	0.71	0.60	1.00		No
R-D-9	GSLD	Refrigeration Energy Mgt System	95 Goals	0.75	0.61	1.00		No
W-D-11	GS	Heat Pump Water Heater	95 Goals	0.11	0.10	1.00		No
W-D-11	GSD	Heat Pump Water Heater	95 Goals	0.51	0.43	1.00		No
W-D-11	GSLD	Heat Pump Water Heater	95 Goals	0.49	0.42	1.00		No
W-D-12	GS	Solar Water Heating	95 Goals	0.14	0.13	1.00		No
W-D-12	GSD	Solar Water Heating	95 Goals	0.35	0.32	1.00		No
W-D-12	GSLD	Solar Water Heating	95 Goals	0.34	0.31	1.00		No
W-D-13	GS	HRU	95 Goals	0.42	0.36	1.00		No
W-D-13	GSD	HRU	95 Goals	0.95	1.72	2.56	\$0 incentives	Yes
W-D-13	GSLD	HRU	95 Goals	0.96	1.61	2.43	\$0 incentives	Yes
W-D-14	GS	DWH Heater Insulation	95 Goals	0.08	0.08	1.00		No
W-D-14	GSD	DWH Heater Insulation	95 Goals	0.62	0.66	1.47	\$0 incentives	No
W-D-14	GSLD	DWH Heater Insulation	95 Goals	0.65	0.66	1.38	\$0 incentives	No
W-D-15	GS	DWH Heat Trap	95 Goals	0.37	0.31	1.00		No
W-D-15	GSD	DWH Heat Trap	95 Goals	0.90	2.33	4.29	\$0 incentives	Yes
W-D-15	GSLD	DWH Heat Trap	95 Goals	0.94	2.33	4.05	\$0 incentives	Yes
W-D-16	GS	Low Flow/Variable Flow Shower Head	95 Goals	0.83	1.27	2.94	\$0 incentives	No
W-D-16	GSD	Low Flow/Variable Flow Shower Head	95 Goals	1.11	4.50	6.75	\$0 incentives	Yes
W-D-16	GSLD	Low Flow/Variable Flow Shower Head	95 Goals	1.15	4.50	6.50	\$0 incentives	Yes
W-D-17	GS	DWH Recirculation pump	95 Goals	0.74	6.77	13.74	\$0 incentives	No
W-D-17	GSD	DWH Recirculation pump	95 Goals	0.97	6.77	10.46	\$0 incentives	Yes
W-D-17	GSLD	DWH Recirculation pump	95 Goals	1.03	6.77	9.78	\$0 incentives	Yes
C-D-18	GS	Convection Oven	95 Goals	0.66	1.59	3.67	\$0 incentives	No
C-D-18	GSD	Convection Oven	95 Goals	0.88	1.84	3.05	\$0 incentives	No
C-D-18	GSLD	Convection Oven	95 Goals	1.10	2.54	3.30	\$0 incentives	Yes
C-D-19	GS	Energy Eff. Electric Fryer	95 Goals	0.63	2.34	7.96	\$0 incentives	No
C-D-19	GSD	Energy Eff. Electric Fryer	95 Goals	0.81	2.85	6.46	\$0 incentives	No
C-D-19	GSLD	Energy Eff. Electric Fryer	95 Goals	1.01	4.20	7.09	\$0 incentives	Yes
FPLM-1	GS	Motors	97 Pgm Rev	1.00	1.28	1.95	\$9.65 incentive per motor	Yes
FPLM-1	GSD	Motors	97 Pgm Rev	0.92	1.38	2.02	\$0 incentives	Yes
FPLM-1	GSLD	Motors	97 Pgm Rev	0.94	1.38	1.94	\$0 incentives	Yes
OPBC	GSD	Off Peak Battery Charging	97 Pgm Rev	1.63	2.88	2.32		Yes
OPBC	GSLD	Off Peak Battery Charging	97 Pgm Rev	1.63	2.88	2.32		Yes
CILM	GS	Commercial/Industrial Load Management	97 Pgm Rev	1.15	2.94	Infinite		Yes
CILM	GSLD	Commercial/Industrial Load Management	95 Goals	1.49	44.74	167.90		Yes

Document No. 10

Process Step 4 Cost Effectiveness of Measures - Final Listing

Residential New Construction

Measure	Description	Added Measure
BLDSMT-1	BuildSmart - EPI less than 90	
RLC-1	Residential Load Control	
RSC-19A	Reflective Roof Coatings	Yes
RSC-19B	Reflective Roof Coatings	Yes
RSC-24	High Efficiency Room AC	
RSC-27A	LandScape Shading	Yes
RSC-27B	LandScape Shading	Yes
FR-1	Bst Freezer FF	

Residential Existing Construction

Measure	Description	Added Measure
RSC-1	Hi Efficiency Air Source Heat Pump	
RSC-2	Ground Source Heat Pump	
RSC-5A	Reduced Duct Leakage	
RSC-5B	Reduced Duct Leakage	
RSC-7A	Setback/Programmable Thermostat	
RSC-7B	Setback/Programmable Thermostat	
RSC-10A	Ceiling Ins. R0-R19	
RSC-10B	Ceiling Ins. R0-R19	
RSC-16A	Window Film & Reflective Glass	
RSC-19A	Reflective Roof Coatings	Yes
RSC-19B	Reflective Roof Coatings	Yes
RSC-21A	Hi Efficiency Central AC	
RSC-22A	2 Speed Central AC	
RSC-24A	High Efficiency Room AC	
RSC-27A	LandScape Shading	Yes
RSC-27B	LandScape Shading	Yes
FPL-BD	Blower Door Infiltration Reduction	Yes
FR-1	Bst Freezer FF	
PP-1	High Efficiency Pool Pumps	
RLC-1	Residential Load Control	

Commercial/Industrial New Construction

Measure	Rate Class	Description	Added Measure
SC-D-1	GSD	High Eff. Chiller	
SC-D-1	GSLD	High Eff. Chiller	
SC-D-2	GSD	High Eff. Chiller W/ASD	
SC-D-2	GSLD	High Eff. Chiller W/ASD	
SC-D-3	GS	Hi Efficiency DX AC	
SC-D-3	GSD	Hi Efficiency DX AC	
SC-D-3	GSLD	Hi Efficiency DX AC	
SC-D-4	GS	Hi Eff. Room AC	
SC-D-4	GSD	Hi Eff. Room AC	
SC-D-4	GSLD	Hi Eff. Room AC	
SC-D-5	GSD	Cool Storage	
SC-D-5	GSLD	Cool Storage	
SC-D-6	GS	Heat Pipe DX	Yes
SC-D-6	GSD	Heat Pipe DX	Yes
SC-D-6	GSLD	Heat Pipe DX	Yes
SC-D-26A	GSD	Light Colored Roof Chiller Air	Yes
SC-D-26A	GSLD	Light Colored Roof Chiller Air	Yes
SC-D-26W	GSD	Light Colored Roof Chiller Water	Yes
SC-D-26W	GSLD	Light Colored Roof Chiller Water	Yes
SC-D-27	GS	Light Colored Roof DX	Yes
SC-D-27	GSD	Light Colored Roof DX	Yes
SC-D-27	GSLD	Light Colored Roof DX	Yes
FL8LP	GS	Fluorescent 8 Hour Low Permanence	
FL8LP	GSD	Fluorescent 8 Hour Low Permanence	
FL8LP	GSLD	Fluorescent 8 Hour Low Permanence	
V-D-8	GSLD	High Eff. Motors Chiller	
V-D-9	GSLD	High Eff. Motors DX AC	
R-D-10	GS	Dual Path AC	Yes
R-D-10	GSD	Dual Path AC	Yes
R-D-10	GSLD	Dual Path AC	Yes
W-D-13	GSD	HRU	
W-D-13	GSLD	HRU	
C-D-18	GSLD	Convection Oven	
C-D-19	GSLD	Energy Eff. Electric Fryer	
FPLM-1	GS	Motors	
FPLM-1	GSD	Motors	
FPLM-1	GSLD	Motors	
OPBC	GSD	Off Peak Battery Charging	
OPBC	GSLD	Off Peak Battery Charging	
FPLC-1	GS	Dessicant Cooling	Yes
FPLC-1	GSD	Dessicant Cooling	Yes
FPLC-1	GSLD	Dessicant Cooling	Yes
CILM	GS	Commercial/Industrial Load Management	
CILM	GSD	Commercial/Industrial Load Management	Yes
CILM	GSLD	Commercial/Industrial Load Management	

Commercial/Industrial Existing Construction

Measure	Rate Class	Description	Added Measure
SC-D-1	GSD	High Eff. Chiller	
SC-D-1	GSLD	High Eff. Chiller	
SC-D-2	GSD	High Eff. Chiller W/ASD	
SC-D-2	GSLD	High Eff. Chiller W/ASD	
SC-D-3	GS	Hi Efficiency DX AC	
SC-D-3	GSD	Hi Efficiency DX AC	
SC-D-3	GSLD	Hi Efficiency DX AC	
SC-D-4	GS	Hi Eff. Room AC	
SC-D-4	GSD	Hi Eff. Room AC	
SC-D-4	GSLD	Hi Eff. Room AC	
SC-D-5	GSD	Cool Storage	
SC-D-5	GSLD	Cool Storage	
SC-D-6	GS	Heat Pipe DX	Yes
SC-D-6	GSD	Heat Pipe DX	Yes
SC-D-6	GSLD	Heat Pipe DX	Yes
SC-D-8	GSD	3 Speed Motor for Cooling Tower	
SC-D-8	GSLD	3 Speed Motor for Cooling Tower	
SC-D-18	GSD	Roof Insulation Chiller	
SC-D-18	GSLD	Roof Insulation Chiller	
SC-D-19	GS	Roof Insulation DX AC	
SC-D-19	GSD	Roof Insulation DX AC	
SC-D-19	GSLD	Roof Insulation DX AC	
SC-D-22	GSD	Window Film Chiller	
SC-D-22	GSLD	Window Film Chiller	
SC-D-23	GS	Window Film DX AC	
SC-D-23	GSD	Window Film DX AC	
SC-D-23	GSLD	Window Film DX AC	
SC-D-26A	GSD	Light Colored Roof Chiller Air	Yes
SC-D-26A	GSLD	Light Colored Roof Chiller Air	Yes
SC-D-26W	GSD	Light Colored Roof Chiller Water	Yes
SC-D-26W	GSLD	Light Colored Roof Chiller Water	Yes
SC-D-27	GS	Light Colored Roof DX	Yes
SC-D-27	GSD	Light Colored Roof DX	Yes
SC-D-27	GSLD	Light Colored Roof DX	Yes
V-D-1	GS	Leak Free Ducts DX AC	
V-D-1	GSD	Leak Free Ducts DX AC	
V-D-1	GSLD	Leak Free Ducts DX AC	
V-D-8	GSLD	High Eff. Motors Chiller	
V-D-9	GSLD	High Eff. Motors DX AC	
V-D-10	GSD	Sep Makeup Air / Exhaust Hoods Chiller	
V-D-10	GSLD	Sep Makeup Air / Exhaust Hoods Chiller	
V-D-11	GS	Sep Makeup Air / Exhaust Hoods DX AC	
V-D-11	GSD	Sep Makeup Air / Exhaust Hoods DX AC	
V-D-11	GSLD	Sep Makeup Air / Exhaust Hoods DX AC	
FL24HP	GS	Fluorescent 24 Hour High Permanence	
FL24HP	GSD	Fluorescent 24 Hour High Permanence	
FL24HP	GSLD	Fluorescent 24 Hour High Permanence	

FL24LP	GS	Fluorescent 24 Hour Low Permanence	
FL24LP	GSD	Fluorescent 24 Hour Low Permanence	
FL24LP	GSLD	Fluorescent 24 Hour Low Permanence	
FL8HP	GS	Fluorescent 8 Hour High Permanence	
FL8HP	GSD	Fluorescent 8 Hour High Permanence	
FL8HP	GSLD	Fluorescent 8 Hour High Permanence	
FL8LP	GS	Fluorescent 8 Hour Low Permanence	
FL8LP	GSD	Fluorescent 8 Hour Low Permanence	
FL8LP	GSLD	Fluorescent 8 Hour Low Permanence	
HID8HP	GSLD	HID 8 Hour High Permanence	
INC8LP	GSD	Incandescent 8 Hour Low Permanence	
INC8LP	GSLD	Incandescent 8 Hour Low Permanence	
R-D-1	GSD	Multiplex: Air-Cooled/No Subcooling	
R-D-1	GSLD	Multiplex: Air-Cooled/No Subcooling	
R-D-2	GSD	Multiplex: Air-Cooled/Ambient Subcooling	
R-D-2	GSLD	Multiplex: Air-Cooled/Ambient Subcooling	
RD-3	GSD	Multiplex: Air-Cooled/Mechanical Subcooling	
RD-3	GSLD	Multiplex: Air-Cooled/Mechanical Subcooling	
R-D-4	GSD	Multiplex: Air-Cooled/Ambient & Mech. Subcooling	
R-D-4	GSLD	Multiplex: Air-Cooled/Ambient & Mech. Subcooling	
R-D-5	GSD	Multiplex: Air-Cooled/External Liquid Suction HX	
R-D-5	GSLD	Multiplex: Air-Cooled/External Liquid Suction HX	
R-D-6	GSD	Open - Drive Refrigeration System (ASD)	
R-D-8	GSD	High R-Value Glass Doors	
R-D-8	GSLD	High R-Value Glass Doors	
R-D-10	GS	Dual Path AC	Yes
R-D-10	GSD	Dual Path AC	Yes
R-D-10	GSLD	Dual Path AC	Yes
W-D-13	GSD	HRU	
W-D-13	GSLD	HRU	
W-D-15	GSD	DWH Heat Trap	
W-D-15	GSLD	DWH Heat Trap	
W-D-16	GSD	Low Flow/Variable Flow Shower Head	
W-D-16	GSLD	Low Flow/Variable Flow Shower Head	
W-D-17	GSD	DWH Recirculation pump	
W-D-17	GSLD	DWH Recirculation pump	
C-D-18	GSLD	Convection Oven	
C-D-19	GSLD	Energy Eff. Electric Fryer	
FPLM-1	GS	Motors	
FPLM-1	GSD	Motors	
FPLM-1	GSLD	Motors	
OPBC	GSD	Off Peak Battery Charging	
OPBC	GSLD	Off Peak Battery Charging	
FPLC-1	GS	Dessicant Cooling	Yes
FPLC-1	GSD	Dessicant Cooling	Yes
FPLC-1	GSLD	Dessicant Cooling	Yes
CILM	GS	Commercial/Industrial Load Management	
CILM	GSD	Commercial/Industrial Load Management	Yes
CILM	GSLD	Commercial/Industrial Load Management	

Cost Effectiveness of Measures - Cost Effectiveness Models Inputs & Sources

Residential New Construction

Measure	Description	Participant	Summer kw	Winter kw	kwh	Admin \$/Part *	Participant Cost *	Data Sources		
								kw & kwh	Participant Cost	Admin Cost
BLDSMT-1	BuildSmart - EPI less than 90	Participant	0.71	0.72	1,342	\$ 215	\$ 960	End-Use Eval	BuildSmart Pgm	BuildSmart Pgm
RLC-1	Residential Load Control	Participant	1.08	1.92	40	\$ 26	\$ -	End-Use Eval	N/A	On Call Pgm
RSC-19A	Reflective Roof Coatings	Participant	0.46	-	561	\$ 12	\$ -	Cool Comm R&D	Cool Comm R&D	Res Build Env Pgm
RSC-19B	Reflective Roof Coatings	Participant	0.39	-	476	\$ 12	\$ -	Cool Comm R&D	Cool Comm R&D	Res Build Env Pgm
RSC-24	High Efficiency Room AC	Participant	0.50	-	215	\$ 21	\$ 155	End-Use Eval	SRC Study / Eng Estimate	Res HVAC Pgm
RSC-27A	LandScape Shading	Participant	0.22	-	263	\$ 12	\$ 335	Cool Comm R&D	Cool Comm R&D	Res Build Env Pgm
RSC-27B	LandScape Shading	Participant	0.34	-	409	\$ 12	\$ 335	Cool Comm R&D	Cool Comm R&D	Res Build Env Pgm
FR-1	Bst Freezer FF	Participant	0.06	0.04	282	\$ 21	\$ 62	SRC Study	SRC Study	Res HVAC Pgm

Residential Existing Construction

Measure	Description	Participant	Summer kw	Winter kw	kwh	Admin \$/Part *	Participant Cost *	Data Sources		
								kw & kwh	Participant Cost	Admin Cost
RSC-1	Hi Efficiency Air Source Heat Pump	Participant	0.42	0.40	1,166	\$ 21	\$ 160	End-Use Eval	Res HVAC Pgm	Res HVAC Pgm
RSC-2	Ground Source Heat Pump	Participant	0.73	0.28	1,455	\$ 21	\$ 967	End-Use Eval	SRC Study / Eng Estimate	Res HVAC Pgm
RSC-5A	Reduced Duct Leakage	Participant	0.26	0.29	600	\$ 82	\$ 273	End-Use Eval	Res Duct Pgm	Res Duct Pgm
RSC-5B	Reduced Duct Leakage	Participant	0.26	0.29	600	\$ 82	\$ 273	End-Use Eval	Res Duct Pgm	Res Duct Pgm
RSC-7A	Setback/Programmable Thermostat	Participant	-	-	519	\$ 21	\$ 87	SRC Study	SRC Study	Res HVAC Pgm
RSC-7B	Setback/Programmable Thermostat	Participant	-	-	609	\$ 21	\$ 103	SRC Study	SRC Study	Res HVAC Pgm
RSC-10A	Ceiling Ins R0-R21	Participant	0.28	0.48	545	\$ 12	\$ 280	End-Use Eval	Trade Ally Survey	Res Build Env Pgm
RSC-10B	Ceiling Ins R0-R21	Participant	0.28	0.30	504	\$ 12	\$ 280	End-Use Eval	Trade Ally Survey	Res Build Env Pgm
RSC-16A	Window Film & Reflective Glass	Participant	0.044	0.02	97	\$ 12	\$ 75	End-Use Eval	Res Build Env Pgm	Res Build Env Pgm
RSC-16B	Window Film & Reflective Glass	Participant	0.043	0.01	104	\$ 12	\$ 75	End-Use Eval	Res Build Env Pgm	Res Build Env Pgm
RSC-19A	Reflective Roof Coatings	Participant	0.46	-	561	\$ 12	\$ -	Cool Comm R&D	Res Build Env Pgm	Res Build Env Pgm
RSC-19B	Reflective Roof Coatings	Participant	0.39	-	476	\$ 12	\$ -	Cool Comm R&D	Res Build Env Pgm	Res Build Env Pgm
RSC-21A	Hi Efficiency Central AC	Participant	0.48	-	1,247	\$ 21	\$ 360	End-Use Eval	Res HVAC Pgm	Res HVAC Pgm
RSC-22A	2 Speed Central AC	Participant	0.235	-	1,247	\$ 21	\$ 700	End-Use Eval	SRC Study	Res HVAC Pgm
RSC-24A	High Efficiency Room AC	Participant	0.50	-	215	\$ 21	\$ 155	End-Use Eval	SRC Study / Eng Estimate	Res HVAC Pgm
RSC-27A	LandScape Shading	Participant	0.22	-	263	\$ 12	\$ 335	Cool Comm R&D	Cool Comm R&D	Res Build Env Pgm
RSC-27B	LandScape Shading	Participant	0.34	-	409	\$ 12	\$ 335	Cool Comm R&D	Cool Comm R&D	Res Build Env Pgm
FPL-BD	Blower Door Infiltration Reduction	Participant	0.001	0.001	395	\$ 121	\$ 75	HELP End Use Eval	Res Duct Pgm	Res Duct Pgm
FR-1	Bst Freezer FF	Participant	0.06	0.04	282	\$ 21	\$ 62	SRC Study	SRC Study	Res HVAC Pgm
PP-1	High Efficiency Pool Pumps	Participant	0.44	0.01	181	\$ 21	\$ 37	SRC Study	SRC Study	Res HVAC Pgm
RLC-1	Residential Load Control	Participant	1.08	1.92	40	\$ 26	\$ -	End-Use Eval	N/A	On Call Pgm

Commercial/Industrial New Construction

Measure	Rate Class	Description	Participant	Summer kw	Winter kw	kwh	Admin \$/Part	Participant Cost *	Data Sources		
									kw & kwh	Participant Cost	Admin Cost
SC-D-1	GSD	High Eff. Chiller	1 Summer kw	1.00	0.028	3,356	\$ 31	\$ 636	End-Use Eval	Industry Costs	HVAC Pgm - Chiller
SC-D-1	GSLD	High Eff. Chiller	1 Summer kw	1.00	0.028	3,655	\$ 31	\$ 636	End-Use Eval	Industry Costs	HVAC Pgm - Chiller
SC-D-2	GSD	High Eff. Chiller W/ASD	1 Summer kw	1.00	0.028	4,833	\$ 31	\$ 1,523	End-Use Eval / Eng Estimate	Industry Costs	HVAC Pgm - Chiller
SC-D-2	GSLD	High Eff. Chiller W/ASD	1 Summer kw	1.00	0.028	5,263	\$ 31	\$ 1,523	End-Use Eval / Eng Estimate	Industry Costs	HVAC Pgm - Chiller
SC-D-3	GS	Hi Efficiency DX AC	1 Summer kw	1.00	-	3,808	\$ 83	\$ 721	End-Use Eval	Industry Costs	HVAC Pgm - DX
SC-D-3	GSD	Hi Efficiency DX AC	1 Summer kw	1.00	-	3,793	\$ 83	\$ 721	End-Use Eval	Industry Costs	HVAC Pgm - DX
SC-D-3	GSLD	Hi Efficiency DX AC	1 Summer kw	1.00	-	4,075	\$ 83	\$ 721	End-Use Eval	Industry Costs	HVAC Pgm - DX
SC-D-4	GS	Hi Eff. Room AC	1 Summer kw	1.00	-	2,165	\$ 83	\$ 627	SRC Study	SRC Study	HVAC Pgm - DX
SC-D-5	GSD	Cool Storage	1 Summer kw	1.00	0.341	(291)	\$ 115	\$ 372	End-Use Eval / Eng Estimate	HVAC Pgm - TES	HVAC Pgm - TES
SC-D-5	GSLD	Cool Storage	1 Summer kw	1.00	0.314	(228)	\$ 115	\$ 447	End-Use Eval / Eng Estimate	HVAC Pgm - TES	HVAC Pgm - TES
SC-D-6	GS	Heat Pipe DX	1 Summer kw	1.00	(0.039)	(3,595)	\$ 83	\$ 4,159	FSEC Dehumid R&D	FSEC Dehumid R&D	HVAC Pgm - DX
SC-D-6	GSD	Heat Pipe DX	1 Summer kw	1.00	(0.039)	(3,595)	\$ 83	\$ 4,159	FSEC Dehumid R&D	FSEC Dehumid R&D	HVAC Pgm - DX
SC-D-6	GSLD	Heat Pipe DX	1 Summer kw	1.00	(0.039)	(3,595)	\$ 83	\$ 4,159	FSEC Dehumid R&D	FSEC Dehumid R&D	HVAC Pgm - DX
SC-D-26A	GSD	Light Colored Roof Chiller Air	1 Summer kw	1.00	-	1,953	\$ 100	\$ -	FSEC / QC Lgt Roof R&D	N/A	CIBE Pgm
SC-D-26A	GSLD	Light Colored Roof Chiller Air	1 Summer kw	1.00	-	1,953	\$ 100	\$ -	FSEC / QC Lgt Roof R&D	N/A	CIBE Pgm
SC-D-26W	GSD	Light Colored Roof Chiller Water	1 Summer kw	1.00	-	1,968	\$ 100	\$ -	FSEC / QC Lgt Roof R&D	N/A	CIBE Pgm
SC-D-26W	GSLD	Light Colored Roof Chiller Water	1 Summer kw	1.00	-	1,968	\$ 100	\$ -	FSEC / QC Lgt Roof R&D	N/A	CIBE Pgm
SC-D-27	GS	Light Colored Roof DX	1 Summer kw	1.00	-	1,833	\$ 100	\$ -	FSEC / QC Lgt Roof R&D	N/A	CIBE Pgm
SC-D-27	GSD	Light Colored Roof DX	1 Summer kw	1.00	-	1,833	\$ 100	\$ -	FSEC / QC Lgt Roof R&D	N/A	CIBE Pgm
SC-D-27	GSLD	Light Colored Roof DX	1 Summer kw	1.00	-	1,833	\$ 100	\$ -	FSEC / QC Lgt Roof R&D	N/A	CIBE Pgm
FLBLP	GS	Fluorescent 8 Hour Low Permanence	1 Summer kw	1.00	1.14	3,806	\$ 50	\$ 816	End-Use Eval	CIL Pgm	CIL Pgm
FLBLP	GSD	Fluorescent 8 Hour Low Permanence	1 Summer kw	1.00	1.12	4,130	\$ 50	\$ 816	End-Use Eval	CIL Pgm	CIL Pgm
FLBLP	GSLD	Fluorescent 8 Hour Low Permanence	1 Summer kw	1.00	1.13	4,263	\$ 50	\$ 816	End-Use Eval	CIL Pgm	CIL Pgm
V-D-8	GSD	High Eff. Motors Chiller	1 Summer kw	1.00	0.66	5,299	\$ 973	\$ 776	SRC Study	SRC Study	Motors Pgm
V-D-8	GSLD	High Eff. Motors Chiller	1 Summer kw	1.00	0.66	5,299	\$ 973	\$ 776	SRC Study	SRC Study	Motors Pgm
V-D-9	GS	High Eff. Motors DX AC	1 Summer kw	1.00	1.00	5,895	\$ 973	\$ 1,158	SRC Study	SRC Study	Motors Pgm
V-D-9	GSD	High Eff. Motors DX AC	1 Summer kw	1.00	1.00	5,870	\$ 973	\$ 870	SRC Study	SRC Study	Motors Pgm
V-D-9	GSLD	High Eff. Motors DX AC	1 Summer kw	1.00	1.00	5,869	\$ 973	\$ 579	SRC Study	SRC Study	Motors Pgm
R-D-10	GS	Dual Path AC	1 Summer kw	1.00	0.752	(9,192)	\$ 83	\$ 6,618	FSEC Dehumid R&D	FSEC Dehumid R&D	HVAC Pgm - DX
R-D-10	GSD	Dual Path AC	1 Summer kw	1.00	0.752	(9,192)	\$ 83	\$ 6,618	FSEC Dehumid R&D	FSEC Dehumid R&D	HVAC Pgm - DX
R-D-10	GSLD	Dual Path AC	1 Summer kw	1.00	0.752	(9,192)	\$ 83	\$ 6,618	FSEC Dehumid R&D	FSEC Dehumid R&D	HVAC Pgm - DX
W-D-13	GS	HRU	1 Summer kw	1.00	0.98	6,284	\$ 100	\$ 7,368	U of F R&D	U of F R&D / EPRI	CIBE Pgm
W-D-13	GSD	HRU	1 Summer kw	1.00	1.40	9,845	\$ 100	\$ 1,513	U of F R&D	U of F R&D / EPRI	CIBE Pgm
W-D-13	GSLD	HRU	1 Summer kw	1.00	1.40	9,845	\$ 100	\$ 1,513	U of F R&D	U of F R&D / EPRI	CIBE Pgm
C-D-18	GS	Convection Oven	1 Summer kw	1.00	1.84	13,285	\$ 83	\$ 2,018	SRC Study	SRC Study	HVAC Pgm - Vent
C-D-18	GSD	Convection Oven	1 Summer kw	1.00	1.84	13,285	\$ 83	\$ 2,018	SRC Study	SRC Study	HVAC Pgm - Vent
C-D-18	GSLD	Convection Oven	1 Summer kw	1.00	1.84	13,285	\$ 83	\$ 2,018	SRC Study	SRC Study	HVAC Pgm - Vent
C-D-21	GS	Energy Eff. Electric Fryer	1 Summer kw	1.00	2.14	16,494	\$ 83	\$ 1,159	SRC Study	SRC Study	HVAC Pgm - Vent
C-D-21	GSD	Energy Eff. Electric Fryer	1 Summer kw	1.00	2.14	16,494	\$ 83	\$ 1,159	SRC Study	SRC Study	HVAC Pgm - Vent
C-D-21	GSLD	Energy Eff. Electric Fryer	1 Summer kw	1.00	2.14	16,494	\$ 83	\$ 1,159	SRC Study	SRC Study	HVAC Pgm - Vent
FPLM-1	GS	Motors	1 Summer kw	1.00	1.00	2,905	\$ 973	\$ 830	Motors Pgm	SRC Study	Motors Pgm
FPLM-1	GSD	Motors	1 Summer kw	1.00	1.00	2,905	\$ 973	\$ 830	Motors Pgm	SRC Study	Motors Pgm
FPLM-1	GSLD	Motors	1 Summer kw	1.00	1.00	2,905	\$ 973	\$ 830	Motors Pgm	SRC Study	Motors Pgm
OPBC	GSD	Off Peak Battery Charging	1 Summer kw	1.00	0.093	-	\$ 63	\$ 244	End-Use Eval	OPBC Pgm	OPBC Pgm
OPBC	GSLD	Off Peak Battery Charging	1 Summer kw	1.00	0.093	-	\$ 63	\$ 244	End-Use Eval	OPBC Pgm	OPBC Pgm
FPLC-1	GS	Dessicant Cooling	1 Summer kw	1.00	6.55	1,150	\$ 83	\$ 981	FSEC Dehumid R&D	FSEC Dehumid R&D	HVAC Pgm - DX
FPLC-1	GSD	Dessicant Cooling	1 Summer kw	1.00	6.55	1,150	\$ 83	\$ 981	FSEC Dehumid R&D	FSEC Dehumid R&D	HVAC Pgm - DX
FPLC-1	GSLD	Dessicant Cooling	1 Summer kw	1.00	6.55	1,150	\$ 83	\$ 981	FSEC Dehumid R&D	FSEC Dehumid R&D	HVAC Pgm - DX
CILM	GS	Commercial/Industrial Load Management	1 Summer kw	1.00	-	126	\$ 24	\$ -	End-Use Eval	GS On Call Pgm	GS On Call Pgm
CILM	GSD	Commercial/Industrial Load Management	1 Summer kw	1.00	-	28	\$ 24	\$ -	End-Use Eval	GS On Call Pgm	GS On Call Pgm
CILM	GSLD	Commercial/Industrial Load Management	1 Summer kw	1.00	1.00	48	\$ 9	\$ -	CILC Pgm	CILC Pgm	CILC Pgm

Commercial/Industrial Existing Construction

Measure	Rate Class	Description	Participant	Summer kw	Winter kw	kwh	Admin \$/Part	Participant Cost *	Data Sources		
									kw & kwh	Participant Cost	Admin Cost
SC-D-1	GSD	High Eff. Chiller	1 Summer kw	1.00	0.028	3,356	\$ 31	\$ 636	End-Use Eval	Industry Costs	HVAC Pgm - Chiller
SC-D-1	GSLD	High Eff. Chiller	1 Summer kw	1.00	0.028	3,655	\$ 31	\$ 636	End-Use Eval	Industry Costs	HVAC Pgm - Chiller
SC-D-2	GSD	High Eff. Chiller/WASD	1 Summer kw	1.00	0.028	4,833	\$ 31	\$ 1,523	End-Use Eval / Eng Estimate	Industry Costs	HVAC Pgm - Chiller
SC-D-2	GSLD	High Eff. Chiller/WASD	1 Summer kw	1.00	0.028	5,263	\$ 31	\$ 1,523	End-Use Eval / Eng Estimate	Industry Costs	HVAC Pgm - Chiller
SC-D-3	GS	Hi Efficiency DX AC	1 Summer kw	1.00	-	3,808	\$ 83	\$ 721	End-Use Eval	Industry Costs	HVAC Pgm - DX
SC-D-3	GSD	Hi Efficiency DX AC	1 Summer kw	1.00	-	3,793	\$ 83	\$ 721	End-Use Eval	Industry Costs	HVAC Pgm - DX
SC-D-3	GSLD	Hi Efficiency DX AC	1 Summer kw	1.00	-	4,075	\$ 83	\$ 721	End-Use Eval	Industry Costs	HVAC Pgm - DX
SC-D-4	GS	Hi Eff. Room AC	1 Summer kw	1.00	-	2,165	\$ 83	\$ 627	SRC Study	SRC Study	HVAC Pgm - DX
SC-D-5	GSD	Cool Storage	1 Summer kw	1.00	0.341	(291)	\$ 115	\$ 372	End-Use Eval / Eng Estimate	HVAC Pgm - TES	HVAC Pgm - TES
SC-D-5	GSLD	Cool Storage	1 Summer kw	1.00	0.314	(228)	\$ 115	\$ 447	End-Use Eval / Eng Estimate	HVAC Pgm - TES	HVAC Pgm - TES
SC-D-6	GS	Heat Pipe DX	1 Summer kw	1.00	(0.039)	(3,595)	\$ 83	\$ 4,159	FSEC Dehumid R&D	FSEC Dehumid R&D	HVAC Pgm - DX
SC-D-6	GSD	Heat Pipe DX	1 Summer kw	1.00	(0.039)	(3,595)	\$ 83	\$ 4,159	FSEC Dehumid R&D	FSEC Dehumid R&D	HVAC Pgm - DX
SC-D-6	GSLD	Heat Pipe DX	1 Summer kw	1.00	(0.039)	(3,595)	\$ 83	\$ 4,159	FSEC Dehumid R&D	FSEC Dehumid R&D	HVAC Pgm - DX
SC-D-8	GSD	3 Speed Motor for Cooling Tower	Motor	-	-	231	\$ 61	\$ 21	SRC Study	SRC Study	Motors Pgm
SC-D-8	GSLD	3 Speed Motor for Cooling Tower	Motor	-	-	231	\$ 61	\$ 21	SRC Study	SRC Study	Motors Pgm
SC-D-18	GSD	Roof Insulation Chiller	1 Summer kw	1.00	0.26	1,724	\$ 75	\$ 971	CIBE Pgm	CIBE Pgm	CIBE Pgm
SC-D-18	GSLD	Roof Insulation Chiller	1 Summer kw	1.00	0.26	1,724	\$ 75	\$ 856	CIBE Pgm	CIBE Pgm	CIBE Pgm
SC-D-21	GS	Roof Insulation DX AC	1 Summer kw	1.00	0.16	1,184	\$ 75	\$ 625	CIBE Pgm	CIBE Pgm	CIBE Pgm
SC-D-21	GSD	Roof Insulation DX AC	1 Summer kw	1.00	0.16	1,184	\$ 75	\$ 695	CIBE Pgm	CIBE Pgm	CIBE Pgm
SC-D-21	GSLD	Roof Insulation DX AC	1 Summer kw	1.00	0.16	1,184	\$ 75	\$ 629	CIBE Pgm	CIBE Pgm	CIBE Pgm
SC-D-22	GSD	Window Film Chiller	1 Summer kw	1.00	0.00	1,995	\$ 75	\$ 839	CIBE Pgm	CIBE Pgm	CIBE Pgm
SC-D-22	GSLD	Window Film Chiller	1 Summer kw	1.00	0.00	1,895	\$ 75	\$ 839	CIBE Pgm	CIBE Pgm	CIBE Pgm
SC-D-23	GS	Window Film DX AC	1 Summer kw	1.00	0.00	2,005	\$ 75	\$ 880	CIBE Pgm	CIBE Pgm	CIBE Pgm
SC-D-23	GSD	Window Film DX AC	1 Summer kw	1.00	0.00	1,995	\$ 83	\$ 963	CIBE Pgm	CIBE Pgm	CIBE Pgm
SC-D-23	GSLD	Window Film DX AC	1 Summer kw	1.00	0.00	1,895	\$ 75	\$ 813	CIBE Pgm	CIBE Pgm	CIBE Pgm
SC-D-26A	GSD	Light Colored Roof Chiller Air	1 Summer kw	1.00	-	1,953	\$ 100	\$ 1,282	FSEC / QC Lgt Roof R&D	FSEC / Local Contractors	CIBE Pgm
SC-D-26A	GSLD	Light Colored Roof Chiller Air	1 Summer kw	1.00	-	1,953	\$ 100	\$ 1,282	FSEC / QC Lgt Roof R&D	FSEC / Local Contractors	CIBE Pgm
SC-D-26W	GSD	Light Colored Roof Chiller Water	1 Summer kw	1.00	-	1,968	\$ 100	\$ 2,000	FSEC / QC Lgt Roof R&D	FSEC / Local Contractors	CIBE Pgm
SC-D-26W	GSLD	Light Colored Roof Chiller Water	1 Summer kw	1.00	-	1,968	\$ 100	\$ 2,000	FSEC / QC Lgt Roof R&D	FSEC / Local Contractors	CIBE Pgm
SC-D-27	GS	Light Colored Roof DX	1 Summer kw	1.00	-	1,833	\$ 100	\$ 1,190	FSEC / QC Lgt Roof R&D	FSEC / Local Contractors	CIBE Pgm
SC-D-27	GSD	Light Colored Roof DX	1 Summer kw	1.00	-	1,833	\$ 100	\$ 1,190	FSEC / QC Lgt Roof R&D	FSEC / Local Contractors	CIBE Pgm
SC-D-27	GSLD	Light Colored Roof DX	1 Summer kw	1.00	-	1,833	\$ 100	\$ 1,190	FSEC / QC Lgt Roof R&D	FSEC / Local Contractors	CIBE Pgm
V-D-1	GS	Leak Free Ducts DX AC	1 Summer kw	1.00	0.052	2,054	\$ 83	\$ 627	HVAC Pgm	SRC Study	HVAC Pgm - DX
V-D-1	GSD	Leak Free Ducts DX AC	1 Summer kw	1.00	0.052	2,054	\$ 83	\$ 627	HVAC Pgm	SRC Study	HVAC Pgm - DX
V-D-1	GSLD	Leak Free Ducts DX AC	1 Summer kw	1.00	0.052	2,054	\$ 83	\$ 627	HVAC Pgm	SRC Study	HVAC Pgm - DX
V-D-8	GSD	High Eff. Motors Chiller	1 Summer kw	1.00	0.69	5,163	\$ 973	\$ 855	SRC Study	SRC Study	Motors Pgm
V-D-8	GSLD	High Eff. Motors Chiller	1 Summer kw	1.00	0.69	5,163	\$ 973	\$ 855	SRC Study	SRC Study	Motors Pgm
V-D-9	GS	High Eff. Motors DX AC	1 Summer kw	1.00	1.00	5,895	\$ 973	\$ 1,158	SRC Study	SRC Study	Motors Pgm
V-D-9	GSD	High Eff. Motors DX AC	1 Summer kw	1.00	1.00	5,870	\$ 973	\$ 870	SRC Study	SRC Study	Motors Pgm
V-D-9	GSLD	High Eff. Motors DX AC	1 Summer kw	1.00	1.00	5,869	\$ 973	\$ 579	SRC Study	SRC Study	Motors Pgm
V-D-10	GSD	Sep Makeup Air / Exhaust Hoods Chiller	1 Summer kw	1.00	0.42	4,474	\$ 83	\$ 2,392	SRC Study	SRC Study	HVAC Pgm - Chiller
V-D-10	GSLD	Sep Makeup Air / Exhaust Hoods Chiller	1 Summer kw	1.00	0.42	4,474	\$ 83	\$ 2,392	SRC Study	SRC Study	HVAC Pgm - Chiller
V-D-11	GS	Sep Makeup Air / Exhaust Hoods DX AC	1 Summer kw	1.00	0.14	2,467	\$ 83	\$ 1,581	SRC Study	SRC Study	HVAC Pgm - DX
V-D-11	GSD	Sep Makeup Air / Exhaust Hoods DX AC	1 Summer kw	1.00	0.14	2,467	\$ 83	\$ 1,581	SRC Study	SRC Study	HVAC Pgm - DX
V-D-11	GSLD	Sep Makeup Air / Exhaust Hoods DX AC	1 Summer kw	1.00	0.14	2,467	\$ 83	\$ 1,581	SRC Study	SRC Study	HVAC Pgm - DX
FL24HP	GS	Fluorescent 24 Hour High Permanence	1 Summer kw	1.00	1.16	7,650	\$ 50	\$ 2,763	End-Use Eval	CIL Pgm	CIL Pgm
FL24HP	GSD	Fluorescent 24 Hour High Permanence	1 Summer kw	1.00	1.18	9,510	\$ 50	\$ 2,763	End-Use Eval	CIL Pgm	CIL Pgm
FL24HP	GSLD	Fluorescent 24 Hour High Permanence	1 Summer kw	1.00	1.10	7,772	\$ 50	\$ 2,763	End-Use Eval	CIL Pgm	CIL Pgm
FL24LP	GS	Fluorescent 24 Hour Low Permanence	1 Summer kw	1.00	1.17	7,624	\$ 50	\$ 1,347	End-Use Eval	CIL Pgm	CIL Pgm
FL24LP	GSD	Fluorescent 24 Hour Low Permanence	1 Summer kw	1.00	1.18	8,194	\$ 50	\$ 1,347	End-Use Eval	CIL Pgm	CIL Pgm
FL24LP	GSLD	Fluorescent 24 Hour Low Permanence	1 Summer kw	1.00	1.17	8,907	\$ 50	\$ 1,347	End-Use Eval	CIL Pgm	CIL Pgm
FL8HP	GS	Fluorescent 8 Hour High Permanence	1 Summer kw	1.00	1.14	3,275	\$ 50	\$ 1,160	End-Use Eval	CIL Pgm	CIL Pgm
FL8HP	GSD	Fluorescent 8 Hour High Permanence	1 Summer kw	1.00	1.13	3,548	\$ 50	\$ 1,160	End-Use Eval	CIL Pgm	CIL Pgm
FL8HP	GSLD	Fluorescent 8 Hour High Permanence	1 Summer kw	1.00	1.14	4,140	\$ 50	\$ 1,160	End-Use Eval	CIL Pgm	CIL Pgm
FL8LP	GS	Fluorescent 8 Hour Low Permanence	1 Summer kw	1.00	1.14	3,806	\$ 50	\$ 816	End-Use Eval	CIL Pgm	CIL Pgm
FL8LP	GSD	Fluorescent 8 Hour Low Permanence	1 Summer kw	1.00	1.12	4,130	\$ 50	\$ 816	End-Use Eval	CIL Pgm	CIL Pgm
FL8LP	GSLD	Fluorescent 8 Hour Low Permanence	1 Summer kw	1.00	1.13	4,263	\$ 50	\$ 816	End-Use Eval	CIL Pgm	CIL Pgm
HID8HP	GSLD	HID 8 Hour High Permanence	1 Summer kw	1.00	1.13	3,210	\$ 50	\$ 1,847	End-Use Eval	CIL Pgm	CIL Pgm

INC8LP	GSD	Incandescent 8 Hour Low Permanence	1 Summer kw	1.00	1.18	3,579	\$	50	\$	816	End-Use Eval	CIL Pgm	CIL Pgm
INC8LP	GSLD	Incandescent 8 Hour Low Permanence	1 Summer kw	1.00	1.26	3,731	\$	50	\$	816	End-Use Eval	CIL Pgm	CIL Pgm
R-D-1	GS	Multiplex: Air-Cooled/No Subcooling	1 Summer kw	1.00	0.87	10,264	\$	83	\$	1,504	SRC Study	SRC Study	HVAC Pgm - DX
R-D-1	GSD	Multiplex: Air-Cooled/No Subcooling	1 Summer kw	1.00	0.89	10,556	\$	83	\$	1,504	SRC Study	SRC Study	HVAC Pgm - DX
R-D-1	GSLD	Multiplex: Air-Cooled/No Subcooling	1 Summer kw	1.00	0.92	11,441	\$	83	\$	1,504	SRC Study	SRC Study	HVAC Pgm - DX
R-D-2	GS	Multiplex: Air-Cooled/Ambient Subcooling	1 Summer kw	1.00	0.88	11,134	\$	83	\$	1,770	SRC Study	SRC Study	HVAC Pgm - DX
R-D-2	GSD	Multiplex: Air-Cooled/Ambient Subcooling	1 Summer kw	1.00	0.88	11,134	\$	83	\$	1,770	SRC Study	SRC Study	HVAC Pgm - DX
R-D-2	GSLD	Multiplex: Air-Cooled/Ambient Subcooling	1 Summer kw	1.00	0.88	11,134	\$	83	\$	1,770	SRC Study	SRC Study	HVAC Pgm - DX
RD-3	GS	Multiplex: Air-Cooled/Mechanical Subcooling	1 Summer kw	1.00	0.88	11,566	\$	83	\$	1,907	SRC Study	SRC Study	HVAC Pgm - DX
RD-3	GSD	Multiplex: Air-Cooled/Mechanical Subcooling	1 Summer kw	1.00	0.88	11,566	\$	83	\$	1,907	SRC Study	SRC Study	HVAC Pgm - DX
RD-3	GSLD	Multiplex: Air-Cooled/Mechanical Subcooling	1 Summer kw	1.00	0.88	11,566	\$	83	\$	1,907	SRC Study	SRC Study	HVAC Pgm - DX
R-D-4	GS	Multiplex: Air-Cooled/Ambient & Mech. Subcooling	1 Summer kw	1.00	0.89	12,377	\$	83	\$	2,268	SRC Study	SRC Study	HVAC Pgm - DX
R-D-4	GSD	Multiplex: Air-Cooled/Ambient & Mech. Subcooling	1 Summer kw	1.00	0.89	12,377	\$	83	\$	2,268	SRC Study	SRC Study	HVAC Pgm - DX
R-D-4	GSLD	Multiplex: Air-Cooled/Ambient & Mech. Subcooling	1 Summer kw	1.00	0.89	12,377	\$	83	\$	2,268	SRC Study	SRC Study	HVAC Pgm - DX
R-D-5	GS	Multiplex: Air-Cooled/External Liquid Suction HX	1 Summer kw	1.00	0.88	7,685	\$	83	\$	1,279	SRC Study	SRC Study	HVAC Pgm - DX
R-D-5	GSD	Multiplex: Air-Cooled/External Liquid Suction HX	1 Summer kw	1.00	0.88	7,685	\$	83	\$	1,279	SRC Study	SRC Study	HVAC Pgm - DX
R-D-5	GSLD	Multiplex: Air-Cooled/External Liquid Suction HX	1 Summer kw	1.00	0.88	7,685	\$	83	\$	1,279	SRC Study	SRC Study	HVAC Pgm - DX
R-D-6	GS	Open - Drive Refrigeration System (ASD)	1 Summer kw	1.00	3.41	30,368	\$	83	\$	10,474	SRC Study	SRC Study	HVAC Pgm - DX
R-D-6	GSD	Open - Drive Refrigeration System (ASD)	1 Summer kw	1.00	3.58	31,978	\$	83	\$	10,520	SRC Study	SRC Study	HVAC Pgm - DX
R-D-6	GSLD	Open - Drive Refrigeration System (ASD)	1 Summer kw	1.00	3.17	26,402	\$	83	\$	10,520	SRC Study	SRC Study	HVAC Pgm - DX
R-D-8	GS	High R-Value Glass Doors	1 Summer kw	1.00	0.89	8,225	\$	147	\$	410	SRC Study	SRC Study	CIBE Pgm - 1st year
R-D-8	GSD	High R-Value Glass Doors	1 Summer kw	1.00	0.89	8,225	\$	147	\$	410	SRC Study	SRC Study	CIBE Pgm - 1st year
R-D-8	GSLD	High R-Value Glass Doors	1 Summer kw	1.00	0.89	8,225	\$	147	\$	410	SRC Study	SRC Study	CIBE Pgm - 1st year
R-D-10	GS	Dual Path AC	1 Summer kw	1.00	0.752	(9,192)	\$	83	\$	6,618	FSEC Dehumid R&D	FSEC Dehumid R&D	HVAC Pgm - DX
R-D-10	GSD	Dual Path AC	1 Summer kw	1.00	0.752	(9,192)	\$	83	\$	6,618	FSEC Dehumid R&D	FSEC Dehumid R&D	HVAC Pgm - DX
R-D-10	GSLD	Dual Path AC	1 Summer kw	1.00	0.752	(9,192)	\$	83	\$	6,618	FSEC Dehumid R&D	FSEC Dehumid R&D	HVAC Pgm - DX
W-D-13	GS	HRU	1 Summer kw	1.00	0.98	6,284	\$	100	\$	7,368	U of F R&D	U of F R&D / EPRI	CIBE Pgm
W-D-13	GSD	HRU	1 Summer kw	1.00	1.40	9,845	\$	100	\$	1,513	U of F R&D	U of F R&D / EPRI	CIBE Pgm
W-D-13	GSLD	HRU	1 Summer kw	1.00	1.40	9,845	\$	100	\$	1,513	U of F R&D	U of F R&D / EPRI	CIBE Pgm
W-D-15	GS	DWH Heat Trap	1 Summer kw	1.00	1.66	165,178	\$	83	\$	1,898	SRC Study	SRC Study	Res Bldg Env Pgm
W-D-15	GSD	DWH Heat Trap	1 Summer kw	1.00	1.66	165,178	\$	83	\$	1,898	SRC Study	SRC Study	Res Bldg Env Pgm
W-D-15	GSLD	DWH Heat Trap	1 Summer kw	1.00	1.66	165,178	\$	83	\$	1,898	SRC Study	SRC Study	Res Bldg Env Pgm
W-D-16	GS	Low Flow/Variable Flow Shower Head	1 Summer kw	1.00	0.37	4,934	\$	83	\$	28	SRC Study	SRC Study	Res Bldg Env Pgm
W-D-16	GSD	Low Flow/Variable Flow Shower Head	1 Summer kw	1.00	0.37	4,934	\$	83	\$	28	SRC Study	SRC Study	Res Bldg Env Pgm
W-D-16	GSLD	Low Flow/Variable Flow Shower Head	1 Summer kw	1.00	0.37	4,934	\$	83	\$	28	SRC Study	SRC Study	Res Bldg Env Pgm
W-D-17	GS	DWH Recirculation pump	1 Summer kw	-	-	284	\$	83	\$	4	SRC Study	SRC Study	Res Bldg Env Pgm
W-D-17	GSD	DWH Recirculation pump	1 Summer kw	-	-	284	\$	83	\$	4	SRC Study	SRC Study	Res Bldg Env Pgm
W-D-17	GSLD	DWH Recirculation pump	1 Summer kw	-	-	284	\$	83	\$	4	SRC Study	SRC Study	Res Bldg Env Pgm
C-D-18	GS	Convection Oven	1 Summer kw	1.00	1.84	13,284	\$	83	\$	2,018	SRC Study	SRC Study	HVAC Pgm - Vent
C-D-18	GSD	Convection Oven	1 Summer kw	1.00	1.84	13,284	\$	83	\$	2,018	SRC Study	SRC Study	HVAC Pgm - Vent
C-D-18	GSLD	Convection Oven	1 Summer kw	1.00	1.84	13,284	\$	83	\$	2,018	SRC Study	SRC Study	HVAC Pgm - Vent
C-D-21	GS	Energy Eff. Electric Fryer	1 Summer kw	1.00	2.14	16,495	\$	83	\$	1,159	SRC Study	SRC Study	HVAC Pgm - Vent
C-D-21	GSD	Energy Eff. Electric Fryer	1 Summer kw	1.00	2.14	16,495	\$	83	\$	1,159	SRC Study	SRC Study	HVAC Pgm - Vent
C-D-21	GSLD	Energy Eff. Electric Fryer	1 Summer kw	1.00	2.14	16,495	\$	83	\$	1,159	SRC Study	SRC Study	HVAC Pgm - Vent
FPLM-1	GS	Motors	1 Summer kw	1.00	1.00	2,905	\$	973	\$	830	Motors Pgm	SRC Study	Motors Pgm
FPLM-1	GSD	Motors	1 Summer kw	1.00	1.00	2,905	\$	973	\$	830	Motors Pgm	SRC Study	Motors Pgm
FPLM-1	GSLD	Motors	1 Summer kw	1.00	1.00	2,905	\$	973	\$	830	Motors Pgm	SRC Study	Motors Pgm
OPBC	GSD	Off Peak Battery Charging	1 Summer kw	1.00	0.093	-	\$	63	\$	244	End-Use Eval	OPBC Pgm	OPBC Pgm
OPBC	GSLD	Off Peak Battery Charging	1 Summer kw	1.00	0.093	-	\$	63	\$	244	End-Use Eval	OPBC Pgm	OPBC Pgm
FPLC-1	GS	Dessicant Cooling	1 Summer kw	1.00	6.55	1,150	\$	83	\$	981	FSEC Dehumid R&D	FSEC Dehumid R&D	HVAC Pgm - DX
FPLC-1	GSD	Dessicant Cooling	1 Summer kw	1.00	6.55	1,150	\$	83	\$	981	FSEC Dehumid R&D	FSEC Dehumid R&D	HVAC Pgm - DX
FPLC-1	GSLD	Dessicant Cooling	1 Summer kw	1.00	6.55	1,150	\$	83	\$	981	FSEC Dehumid R&D	FSEC Dehumid R&D	HVAC Pgm - DX
CILM	GS	Commercial/Industrial Load Management	1 Summer kw	1.00	-	126	\$	24	\$	-	End-Use Eval	GS On Call Pgm	GS On Call Pgm
CILM	GSD	Commercial/Industrial Load Management	1 Summer kw	1.00	-	28	\$	24	\$	-	Demand LC R&D	GS On Call Pgm	GS On Call Pgm
CILM	GSLD	Commercial/Industrial Load Management	1 Summer kw	1.00	1.00	48	\$	9	\$	-	CILC Pgm	CILC Pgm	CILC Pgm

* = Includes capital cost and 1 year of O&M

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Cost Effectiveness of Measures - Results

Residential New Construction

Measure	Description	Participant	RIM	TRC	Part	Incentive / Participant	Payback
BLDSMT-1	BuildSmart - EPI less than 90	Participant	1.02	0.85	1.24	144	7.3
RLC-1	Residential Load Control	Participant	1.21	3.36	N/A	72	N/A
RSC-19A	Reflective Roof Coatings	Participant	0.12	0.22	N/A	0	N/A
RSC-19B	Reflective Roof Coatings	Participant	0.10	0.19	N/A	0	N/A
RSC-24	High Efficiency Room AC	Participant	0.72	0.41	0.85	0	8.6
RSC-27A	LandScape Shading	Participant	0.54	0.47	1.00	353	-2.4
RSC-27B	LandScape Shading	Participant	0.90	0.73	1.00	265	2.5
FR-1	Bst Freezer FF	Participant	0.95	1.29	2.41	0	2.6

Residential Existing Construction

Measure	Description	Participant	RIM	TRC	Part	Incentive / Participant	Payback
RSC-1	Hi Efficiency Air Source Heat Pump	Participant	1.02	1.27	1.91	160	4.0
RSC-2	Ground Source Heat Pump	Participant	1.02	1.02	1.47	318	5.3
RSC-5A	Reduced Duct Leakage	Participant	1.02	1.60	2.73	69	4.1
RSC-5B	Reduced Duct Leakage	Participant	1.02	1.60	2.73	69	4.1
RSC-7A	Setback/Programmable Thermostat	Participant	0.38	0.49	2.22	0	2.0
RSC-7B	Setback/Programmable Thermostat	Participant	0.39	0.50	2.20	0	2.0
RSC-10A	Ceiling Ins. R0-R19	Participant	1.06	2.04	2.83	189	2.0
RSC-10B	Ceiling Ins. R0-R19	Participant	1.02	1.89	2.69	196	2.0
RSC-16A	Window Film & Reflective Glass	Participant	0.99	0.55	0.78	0	-351.1
RSC-16B	Window Film & Reflective Glass	Participant	0.94	0.55	0.84	0	203.7
RSC-19A	Reflective Roof Coatings	Participant	0.12	0.22	1.00	2,027	-2.7
RSC-19B	Reflective Roof Coatings	Participant	0.10	0.19	1.00	2,079	-4.5
RSC-21A	Hi Efficiency Central AC	Participant	1.02	1.92	3.03	105	2.4
RSC-22A	2 Speed Central AC	Participant	0.99	0.54	0.87	0	6.7
RSC-24A	High Efficiency Room AC	Participant	0.72	0.41	0.85	0	8.6
RSC-27A	LandScape Shading	Participant	0.54	0.47	1.00	353	-2.4
RSC-27B	LandScape Shading	Participant	0.90	0.73	1.00	265	2.5
FPL-BD	Blower Door Infiltration Reduction	Participant	0.22	0.27	2.58	0	2.3
FR-1	Bst Freezer FF	Participant	0.95	1.29	2.41	0	2.6
PP-1	High Efficiency Pool Pumps	Participant	0.81	0.87	1.82	0	2.4
RLC-1	Residential Load Control	Participant	1.21	3.36	N/A	72	N/A

Commercial/Industrial New Construction

Measure		Description	Participant	RIM	TRC	Part	Incentive / Participant	Payback
SC-D-1	GSD	High Eff. Chiller	1 Summer kw	1.05	2.30	2.68	93	2.0
SC-D-1	GSLD	High Eff. Chiller	1 Summer kw	1.07	2.39	2.73	85	2.0
SC-D-2	GSD	High Eff. Chiller W/ASD	1 Summer kw	1.01	1.18	1.44	93	4.1
SC-D-2	GSLD	High Eff. Chiller W/ASD	1 Summer kw	1.01	1.23	1.49	143	4.0
SC-D-3	GS	Hi Efficiency DX AC	1 Summer kw	1.01	1.87	2.61	36	2.1
SC-D-3	GSD	Hi Efficiency DX AC	1 Summer kw	1.01	1.86	2.35	90	2.2
SC-D-3	GSLD	Hi Efficiency DX AC	1 Summer kw	1.01	1.93	2.42	133	2.0
SC-D-4	GS	Hi Eff. Room AC	1 Summer kw	1.01	0.85	1.04	260	3.7
SC-D-4	GSD	Hi Eff. Room AC	1 Summer kw	0.96	0.85	1.00	136	4.0
SC-D-4	GSLD	Hi Eff. Room AC	1 Summer kw	0.95	0.85	1.00	165	3.9
SC-D-5	GSD	Cool Storage	1 Summer kw	1.02	1.39	1.47	478	2.1
SC-D-5	GSLD	Cool Storage	1 Summer kw	1.02	1.15	1.16	281	2.3
SC-D-6	GS	Heat Pipe DX	1 Summer kw	0.17	-0.05	-0.42	0	-13.2
SC-D-6	GSD	Heat Pipe DX	1 Summer kw	0.86	-0.05	-0.14	0	-54.5
SC-D-6	GSLD	Heat Pipe DX	1 Summer kw	1.18	-0.05	-0.12	0	-69.6
SC-D-26A	GSD	Light Colored Roof Chiller Air	1 Summer kw	1.16	11.21	N/A	0	0.0
SC-D-26A	GSLD	Light Colored Roof Chiller Air	1 Summer kw	1.29	11.21	N/A	0	0.0
SC-D-26W	GSD	Light Colored Roof Chiller Water	1 Summer kw	1.16	11.24	N/A	0	0.0
SC-D-26W	GSLD	Light Colored Roof Chiller Water	1 Summer kw	1.29	11.24	N/A	0	0.0
SC-D-27	GS	Light Colored Roof DX	1 Summer kw	1.44	10.93	N/A	0	0.0
SC-D-27	GSD	Light Colored Roof DX	1 Summer kw	1.17	10.93	N/A	0	0.0
SC-D-27	GSLD	Light Colored Roof DX	1 Summer kw	1.30	10.93	N/A	0	0.0
FL8LP	GS	Fluorescent & Hour Low Permanence	1 Summer kw	0.96	1.01	1.43	0	2.4
FL8LP	GSD	Fluorescent & Hour Low Permanence	1 Summer kw	0.99	1.05	1.31	0	2.5
FL8LP	GSLD	Fluorescent & Hour Low Permanence	1 Summer kw	1.00	1.06	1.30	16	2.4
V-D-8	GSD	High Eff. Motors Chiller	1 Summer kw	0.72	1.13	2.85	0	2.2
V-D-8	GSLD	High Eff. Motors Chiller	1 Summer kw	0.73	1.13	2.73	0	2.3
V-D-9	GS	High Eff. Motors DX AC	1 Summer kw	0.71	1.09	2.64	0	2.3
V-D-9	GSD	High Eff. Motors DX AC	1 Summer kw	0.73	1.09	2.53	0	2.4
V-D-9	GSLD	High Eff. Motors DX AC	1 Summer kw	0.64	0.93	2.47	0	2.2
R-D-10	GS	Dual Path AC	1 Summer kw	0.28	-0.13	-0.67	0	-8.2
R-D-10	GSD	Dual Path AC	1 Summer kw	0.61	-0.13	-0.34	0	-18.8
R-D-10	GSLD	Dual Path AC	1 Summer kw	0.68	-0.13	-0.31	0	-21.0
W-D-13	GS	HRU	1 Summer kw	0.85	0.21	0.31	0	13.4
W-D-13	GSD	HRU	1 Summer kw	0.87	1.17	1.75	0	2.5
W-D-13	GSLD	HRU	1 Summer kw	0.92	1.17	1.66	0	2.7
C-D-18	GS	Convection Oven	1 Summer kw	0.61	1.08	2.43	0	1.7
C-D-18	GSD	Convection Oven	1 Summer kw	0.83	1.08	1.70	0	2.6
C-D-18	GSLD	Convection Oven	1 Summer kw	0.88	1.08	1.61	0	2.8
C-D-19	GS	Energy Eff. Electric Fryer	1 Summer kw	0.59	2.17	5.25	0	0.8
C-D-19	GSD	Energy Eff. Electric Fryer	1 Summer kw	0.82	2.17	3.59	0	1.2
C-D-19	GSLD	Energy Eff. Electric Fryer	1 Summer kw	0.87	2.17	3.39	0	1.3
FPLM-1	GS	Motors	1 Summer kw	0.71	0.80	1.70	0	3.3
FPLM-1	GSD	Motors	1 Summer kw	0.66	0.80	1.71	0	3.2
FPLM-1	GSLD	Motors	1 Summer kw	0.68	0.80	1.64	0	3.3
OPBC	GSD	Off Peak Battery Charging	1 Summer kw	1.86	2.97	1.73	144	2.0
OPBC	GSLD	Off Peak Battery Charging	1 Summer kw	1.86	2.97	1.74	144	2.0
FPLC-1	GS	Dessicant Cooling	1 Summer kw	0.98	0.91	1.01	1,495	-212.1
FPLC-1	GSD	Dessicant Cooling	1 Summer kw	0.95	0.91	1.01	1,160	-4.6
FPLC-1	GSLD	Dessicant Cooling	1 Summer kw	0.95	0.91	1.01	1,175	-5.0
CILM	GS	Commercial/Industrial Load Management	1 Summer kw	1.23	2.70	N/A	39	N/A
CILM	GSD	Commercial/Industrial Load Management	1 Summer kw	1.26	2.54	N/A	39	N/A
CILM	GSLD	Commercial/Industrial Load Management	1 Summer kw	1.04	5.71	N/A	57	N/A

Commercial/Industrial Existing Construction

Measure		Description	Participant	RIM	TRC	Part	Incentive / Participant	Payback
SC-D-1	GSD	High Eff. Chiller	1 Summer kw	1.05	2.30	2.68	93	2.0
SC-D-1	GSLD	High Eff. Chiller	1 Summer kw	1.07	2.39	2.73	85	2.0
SC-D-2	GSD	High Eff. Chiller W/ASD	1 Summer kw	1.01	1.18	1.44	93	4.1
SC-D-2	GSLD	High Eff. Chiller W/ASD	1 Summer kw	1.01	1.23	1.49	143	4.0
SC-D-3	GS	Hi Efficiency DX AC	1 Summer kw	1.01	1.87	2.61	36	2.1
SC-D-3	GSD	Hi Efficiency DX AC	1 Summer kw	1.01	1.86	2.35	90	2.2
SC-D-3	GSLD	Hi Efficiency DX AC	1 Summer kw	1.01	1.93	2.42	133	2.0
SC-D-4	GS	Hi Eff. Room AC	1 Summer kw	1.01	0.85	1.04	260	3.7
SC-D-4	GSD	Hi Eff. Room AC	1 Summer kw	0.96	0.85	1.00	136	4.0
SC-D-4	GSLD	Hi Eff. Room AC	1 Summer kw	0.95	0.85	1.00	165	3.9
SC-D-5	GSD	Cool Storage	1 Summer kw	1.02	1.39	1.47	478	2.1
SC-D-5	GSLD	Cool Storage	1 Summer kw	1.02	1.15	1.16	281	2.3
SC-D-6	GS	Heat Pipe DX	1 Summer kw	0.17	-0.05	-0.42	0	-13.2
SC-D-6	GSD	Heat Pipe DX	1 Summer kw	0.86	-0.05	-0.14	0	-54.5
SC-D-6	GSLD	Heat Pipe DX	1 Summer kw	1.18	-0.05	-0.12	0	-69.6
SC-D-8	GSD	3 Speed Motor for Cooling Tower	motor	0.06	0.35	22.49	0	0.2
SC-D-8	GSLD	3 Speed Motor for Cooling Tower	motor	0.06	0.35	22.41	0	0.2
SC-D-18	GSD	Roof Insulation Chiller	1 Summer kw	1.01	1.13	1.27	271	4.0
SC-D-18	GSLD	Roof Insulation Chiller	1 Summer kw	1.01	1.27	1.43	393	3.0
SC-D-19	GS	Roof Insulation DX AC	1 Summer kw	1.19	1.48	1.53	417	2.0
SC-D-19	GSD	Roof Insulation DX AC	1 Summer kw	1.01	1.34	1.50	247	3.0
SC-D-19	GSLD	Roof Insulation DX AC	1 Summer kw	1.01	1.47	1.65	359	2.1
SC-D-22	GSD	Window Film Chiller	1 Summer kw	1.01	0.94	1.06	80	3.7
SC-D-22	GSLD	Window Film Chiller	1 Summer kw	1.01	0.92	1.02	190	3.8
SC-D-23	GS	Window Film DX AC	1 Summer kw	1.01	0.90	1.10	295	3.3
SC-D-23	GSD	Window Film DX AC	1 Summer kw	1.01	0.96	1.08	80	3.7
SC-D-23	GSLD	Window Film DX AC	1 Summer kw	1.01	0.94	1.05	190	3.6
SC-D-26A	GSD	Light Colored Roof Chiller Air	1 Summer kw	0.75	0.81	1.00	334	5.1
SC-D-26A	GSLD	Light Colored Roof Chiller Air	1 Summer kw	0.70	0.81	1.00	464	5.0
SC-D-26W	GSD	Light Colored Roof Chiller Water	1 Summer kw	0.38	0.54	1.00	1,224	4.1
SC-D-26W	GSLD	Light Colored Roof Chiller Water	1 Summer kw	0.37	0.54	1.00	1,354	3.9
SC-D-27	GS	Light Colored Roof DX	1 Summer kw	1.01	0.85	1.02	397	4.9
SC-D-27	GSD	Light Colored Roof DX	1 Summer kw	0.80	0.85	1.00	265	5.1
SC-D-27	GSLD	Light Colored Roof DX	1 Summer kw	0.74	0.85	1.00	392	5.0
V-D-1	GS	Leak Free Ducts DX AC	1 Summer kw	1.11	1.62	1.94	267	2.0
V-D-1	GSD	Leak Free Ducts DX AC	1 Summer kw	1.01	1.62	1.93	140	2.4
V-D-1	GSLD	Leak Free Ducts DX AC	1 Summer kw	1.01	1.62	1.92	161	2.4
V-D-8	GSD	High Eff. Motors Chiller	1 Summer kw	0.72	1.13	2.85	0	2.2
V-D-8	GSLD	High Eff. Motors Chiller	1 Summer kw	0.73	1.13	2.73	0	2.3
V-D-9	GS	High Eff. Motors DX AC	1 Summer kw	0.71	1.09	2.64	0	2.3
V-D-9	GSD	High Eff. Motors DX AC	1 Summer kw	0.73	1.09	2.53	0	2.4
V-D-9	GSLD	High Eff. Motors DX AC	1 Summer kw	0.64	0.93	2.47	0	2.2
V-D-10	GSD	Sep Makeup Air / Exhaust Hoods Chiller	1 Summer kw	0.40	0.51	1.00	1,300	3.3
V-D-10	GSLD	Sep Makeup Air / Exhaust Hoods Chiller	1 Summer kw	0.39	0.51	1.00	1,370	3.3
V-D-11	GS	Sep Makeup Air / Exhaust Hoods DX AC	1 Summer kw	0.45	0.57	1.00	879	3.2
V-D-11	GSD	Sep Makeup Air / Exhaust Hoods DX AC	1 Summer kw	0.44	0.57	1.00	858	3.2
V-D-11	GSLD	Sep Makeup Air / Exhaust Hoods DX AC	1 Summer kw	0.62	0.57	1.00	900	3.1
FL24HP	GS	Fluorescent 24 Hour High Permanence	1 Summer kw	0.67	1.27	2.58	0	4.1
FL24HP	GSD	Fluorescent 24 Hour High Permanence	1 Summer kw	0.82	1.44	2.29	0	4.6
FL24HP	GSLD	Fluorescent 24 Hour High Permanence	1 Summer kw	0.89	1.27	1.83	0	5.7
FL24LP	GS	Fluorescent 24 Hour Low Permanence	1 Summer kw	0.66	0.84	1.74	0	2.0
FL24LP	GSD	Fluorescent 24 Hour Low Permanence	1 Summer kw	0.82	0.87	1.36	0	2.5
FL24LP	GSLD	Fluorescent 24 Hour Low Permanence	1 Summer kw	0.84	0.91	1.39	0	2.5
FL8HP	GS	Fluorescent 8 Hour High Permanence	1 Summer kw	1.02	2.05	2.73	154	3.5
FL8HP	GSD	Fluorescent 8 Hour High Permanence	1 Summer kw	1.02	2.12	2.58	127	3.4
FL8HP	GSLD	Fluorescent 8 Hour High Permanence	1 Summer kw	1.02	2.28	2.78	136	3.2
FL8LP	GS	Fluorescent 8 Hour Low Permanence	1 Summer kw	0.96	1.01	1.43	0	2.4
FL8LP	GSD	Fluorescent 8 Hour Low Permanence	1 Summer kw	0.99	1.05	1.31	0	2.5
FL8LP	GSLD	Fluorescent 8 Hour Low Permanence	1 Summer kw	1.00	1.06	1.30	16	2.4
HID8HP	GSLD	HID 8 Hour High Permanence	1 Summer kw	1.02	1.29	1.52	214	5.8
INC8LP	GSD	Incandescent 8 Hour Low Permanence	1 Summer kw	1.02	1.83	2.30	0	1.4
INC8LP	GSLD	Incandescent 8 Hour Low Permanence	1 Summer kw	1.05	1.87	2.29	0	1.4
R-D-1	GSD	Multiplex: Air-Cooled/No Subcooling	1 Summer kw	0.86	1.20	1.84	0	2.4
R-D-1	GSLD	Multiplex: Air-Cooled/No Subcooling	1 Summer kw	0.88	1.25	1.87	0	2.4
R-D-2	GSD	Multiplex: Air-Cooled/Ambient Subcooling	1 Summer kw	0.84	1.05	1.64	0	2.7
R-D-2	GSLD	Multiplex: Air-Cooled/Ambient Subcooling	1 Summer kw	0.88	1.05	1.55	0	2.9
RD-3	GS	Multiplex: Air-Cooled/Mechanical Subcooling	1 Summer kw	0.61	1.00	2.23	0	1.9
RD-3	GSD	Multiplex: Air-Cooled/Mechanical Subcooling	1 Summer kw	0.83	1.00	1.57	0	2.8

RD-3	GSLD	Multiplex: Air-Cooled/Mechanical Subcooling	1 Summer kw	0.87	1.00	1.49	0	3.0
R-D-4	GS	Multiplex: Air-Cooled/Ambient & Mech. Subcooling	1 Summer kw	0.60	0.88	2.01	0	2.1
R-D-4	GSD	Multiplex: Air-Cooled/Ambient & Mech. Subcooling	1 Summer kw	0.82	0.88	1.40	0	3.2
R-D-4	GSLD	Multiplex: Air-Cooled/Ambient & Mech. Subcooling	1 Summer kw	0.87	0.88	1.33	0	3.4
R-D-5	GS	Multiplex: Air-Cooled/External Liquid Suction HX	1 Summer kw	0.76	1.22	2.21	0	1.9
R-D-5	GSD	Multiplex: Air-Cooled/External Liquid Suction HX	1 Summer kw	0.96	1.22	1.65	0	2.7
R-D-5	GSLD	Multiplex: Air-Cooled/External Liquid Suction HX	1 Summer kw	1.00	1.22	1.57	0	2.8
R-D-6	GS	Open - Drive Refrigeration System (ASD)	1 Summer kw	0.54	0.43	1.07	0	3.9
R-D-6	GSD	Open - Drive Refrigeration System (ASD)	1 Summer kw	0.81	0.45	0.73	0	6.3
R-D-6	GSLD	Open - Drive Refrigeration System (ASD)	1 Summer kw	0.87	0.38	0.57	0	8.1
R-D-8	GS	High R-Value Glass Doors	1 Summer kw	0.72	3.08	7.39	0	0.6
R-D-8	GSD	High R-Value Glass Doors	1 Summer kw	0.88	3.08	5.57	0	0.8
R-D-8	GSLD	High R-Value Glass Doors	1 Summer kw	0.92	3.08	5.28	0	0.8
R-D-10	GS	Dual Path AC	1 Summer kw	0.28	-0.13	-0.67	0	-8.2
R-D-10	GSD	Dual Path AC	1 Summer kw	0.61	-0.13	-0.34	0	-18.8
R-D-10	GSLD	Dual Path AC	1 Summer kw	0.68	-0.13	-0.31	0	-21.0
W-D-13	GS	HRU	1 Summer kw	0.85	0.21	0.31	0	13.4
W-D-13	GSD	HRU	1 Summer kw	0.87	1.17	1.75	0	2.5
W-D-13	GSLD	HRU	1 Summer kw	0.92	1.17	1.66	0	2.7
W-D-15	GS	DWH Heat Trap	1 Summer kw	0.46	10.58	32.06	0	0.1
W-D-15	GSD	DWH Heat Trap	1 Summer kw	0.74	10.58	19.99	0	0.2
W-D-15	GSLD	DWH Heat Trap	1 Summer kw	0.79	10.58	18.71	0	0.2
W-D-16	GS	Low Flow/Variable Flow Shower Head	1 Summer kw	0.93	12.01	65.80	0	0.1
W-D-16	GSD	Low Flow/Variable Flow Shower Head	1 Summer kw	1.00	12.01	55.63	0	0.1
W-D-16	GSLD	Low Flow/Variable Flow Shower Head	1 Summer kw	1.04	12.01	53.08	0	0.1
W-D-17	GSD	DWH Recirculation pump	1 Summer kw	0.06	0.40	117.84	0	0.0
W-D-17	GSLD	DWH Recirculation pump	1 Summer kw	0.06	0.40	117.20	0	0.0
C-D-18	GS	Convection Oven	1 Summer kw	0.61	1.08	2.43	0	1.7
C-D-18	GSD	Convection Oven	1 Summer kw	0.83	1.08	1.70	0	2.6
C-D-18	GSLD	Convection Oven	1 Summer kw	0.88	1.08	1.61	0	2.8
C-D-19	GS	Energy Eff. Electric Fryer	1 Summer kw	0.59	2.17	5.25	0	0.8
C-D-19	GSD	Energy Eff. Electric Fryer	1 Summer kw	0.82	2.17	3.59	0	1.2
C-D-19	GSLD	Energy Eff. Electric Fryer	1 Summer kw	0.87	2.17	3.39	0	1.3
FPLM-1	GS	Motors	1 Summer kw	0.71	0.80	1.70	0	3.3
FPLM-1	GSD	Motors	1 Summer kw	0.66	0.80	1.71	0	3.2
FPLM-1	GSLD	Motors	1 Summer kw	0.68	0.80	1.64	0	3.3
OPBC	GSD	Off Peak Battery Charging	1 Summer kw	1.86	2.97	1.73	144	2.0
OPBC	GSLD	Off Peak Battery Charging	1 Summer kw	1.86	2.97	1.74	144	2.0
FPPLC-1	GS	Dessicant Cooling	1 Summer kw	0.98	0.91	1.01	1,495	-212.1
FPPLC-1	GSD	Dessicant Cooling	1 Summer kw	0.95	0.91	1.01	1,160	-4.6
FPPLC-1	GSLD	Dessicant Cooling	1 Summer kw	0.95	0.91	1.01	1,175	-5.0
CILM	GS	Commercial/Industrial Load Management	1 Summer kw	1.23	2.70	N/A	39	N/A
CILM	GSD	Commercial/Industrial Load Management	1 Summer kw	1.26	2.54	N/A	39	N/A
CILM	GSLD	Commercial/Industrial Load Management	1 Summer kw	1.04	5.71	N/A	57	N/A

Incentive for load management measures is annual recurring amount

Document No. 13

Cost Effectiveness of CUE Measures - Pre Screening

Residential New Construction

Measure	Description	Latest CPF	RIM	TRC	Participant	Comments	Evaluate
RSC-6A	Reduced Duct Heat Transfer	95 Goals	0.14	0.13	1.00		No
RSC-6B	Reduced Duct Heat Transfer	95 Goals	0.12	0.11	1.00		No
RSC-9A	Ceiling Insulation	95 Goals	1.24	0.82	1.00		Yes
RSC-9B	Ceiling Insulation	95 Goals	0.32	0.31	1.00		No
RSC-28A	Ceiling Fans	95 Goals	0.30	0.25	1.00		No
RSC-28B	Ceiling Fans	95 Goals	0.23	0.20	1.00		No
PP-1	High Efficiency Pool pump	95 Goals	0.85	1.33	3.24	\$0 incentives	No
PP-2	Big Pipe / Little Pump	95 Goals	1.05	5.14	11.25	\$0 incentives	Yes

Commercial/Industrial New Construction

Measure	Rate Class	Description	Latest CPF	RIM	TRC	Participant	Comments	Evaluate
SC-D-8	GSD	3 Speed Motor for Cooling Tower	95 Goals	0.91	2.89	5.29	\$0 incentives	Yes
SC-D-8	GSLD	3 Speed Motor for Cooling Tower	95 Goals	1.01	3.30	4.94	\$0 incentives	Yes
SC-D-9	GSD	Speed Control for Cooling Tower	95 Goals	0.92	0.78	1.13	\$0 incentives	Yes
SC-D-9	GSLD	Speed Control for Cooling Tower	95 Goals	1.02	0.80	1.06	\$0 incentives	Yes
SC-D-18	GSD	Roof Insulation Chiller	95 Goals	0.15	0.14	1.00		No
SC-D-18	GSLD	Roof Insulation Chiller	95 Goals	0.18	0.17	1.00		No
SC-D-19	GS	Roof Insulation DX AC	95 Goals	0.52	0.48	1.00		No
SC-D-19	GSD	Roof Insulation DX AC	95 Goals	0.19	0.18	1.00		No
SC-D-19	GSLD	Roof Insulation DX AC	95 Goals	0.21	0.20	1.00		No
SC-D-20	GSD	Wall Insulation - Chiller	95 Goals	0.05	0.05	1.00		No
SC-D-20	GSLD	Wall Insulation - Chiller	95 Goals	0.06	0.06	1.00		No
SC-D-21	GS	Wall Insulation - DX AC	95 Goals	0.12	0.12	1.00		No
SC-D-21	GSD	Wall Insulation - DX AC	95 Goals	0.11	0.11	1.00		No
SC-D-21	GSLD	Wall Insulation - DX AC	95 Goals	0.14	0.13	1.00		No
SC-D-22	GSD	Window Film Chiller	95 Goals	0.67	0.57	1.00		No
SC-D-22	GSLD	Window Film Chiller	95 Goals	0.78	0.65	1.00		No
SC-D-23	GS	Window Film DX AC	95 Goals	1.33	0.79	1.05		Yes
SC-D-23	GSD	Window Film DX AC	95 Goals	0.94	0.75	1.00		Yes
SC-D-23	GSLD	Window Film DX AC	95 Goals	0.97	0.78	1.00		Yes
SC-D-24	GSD	Spectrally Selective Glass Chiller	95 Goals	0.46	0.41	1.00		No
SC-D-24	GSLD	Spectrally Selective Glass Chiller	95 Goals	0.47	0.42	1.00		No
SC-D-25	GS	Spectrally Selective Glass DX AC	95 Goals	0.96	0.64	1.00		Yes
SC-D-25	GSD	Spectrally Selective Glass DX AC	95 Goals	0.64	0.55	1.00		No
SC-D-25	GSLD	Spectrally Selective Glass DX AC	95 Goals	0.58	0.50	1.00		No
L-D-3	GS	4' 34W Flour Lamp, Electronic Ballast #1	95 Goals	0.32	0.40	5.12	\$0 incentives	No
L-D-3	GSD	4' 34W Flour Lamp, Electronic Ballast #1	95 Goals	0.49	0.76	9.54	\$0 incentives	No
L-D-3	GSLD	4' 34W Flour Lamp, Electronic Ballast #1	95 Goals	0.53	0.87	10.66	\$0 incentives	No
R-D-1	GS	Multiplex: Air-Cooled/No Subcooling	95 Goals	0.60	1.28	4.20	\$0 incentives	No
R-D-1	GSD	Multiplex: Air-Cooled/No Subcooling	95 Goals	0.96	2.01	2.94	\$0 incentives	Yes
R-D-1	GSLD	Multiplex: Air-Cooled/No Subcooling	95 Goals	1.03	2.33	2.99	\$0 incentives	Yes
R-D-2	GS	Multiplex: Air-Cooled/Ambient Subcooling	95 Goals	0.59	1.19	3.63	\$0 incentives	No
R-D-2	GSD	Multiplex: Air-Cooled/Ambient Subcooling	95 Goals	0.96	1.75	2.52	\$0 incentives	Yes
R-D-2	GSLD	Multiplex: Air-Cooled/Ambient Subcooling	95 Goals	1.03	1.93	2.56	\$0 incentives	Yes
RD-3	GS	Multiplex: Air-Cooled/Mechanical Subcooling	95 Goals	0.58	0.80	2.05	\$0 incentives	No
RD-3	GSD	Multiplex: Air-Cooled/Mechanical Subcooling	95 Goals	0.96	0.97	1.37	\$0 incentives	Yes
RD-3	GSLD	Multiplex: Air-Cooled/Mechanical Subcooling	95 Goals	1.03	1.05	1.38	\$0 incentives	Yes
R-D-4	GS	Multiplex: Air-Cooled/Ambient & Mech. Subcooling	95 Goals	0.58	0.83	2.15	\$0 incentives	No
R-D-4	GSD	Multiplex: Air-Cooled/Ambient & Mech. Subcooling	95 Goals	0.96	1.01	1.41	\$0 incentives	Yes
R-D-4	GSLD	Multiplex: Air-Cooled/Ambient & Mech. Subcooling	95 Goals	1.03	1.09	1.60	\$0 incentives	Yes
R-D-5	GS	Multiplex: Air-Cooled/External Liquid Suction HX	95 Goals	0.74	1.26	2.64	\$0 incentives	No
R-D-5	GSD	Multiplex: Air-Cooled/External Liquid Suction HX	95 Goals	1.05	1.49	1.93	\$0 incentives	Yes
R-D-5	GSLD	Multiplex: Air-Cooled/External Liquid Suction HX	95 Goals	1.10	1.59	1.97	\$0 incentives	Yes
R-D-6	GS	Open - Drive Refrigeration System (ASD)	95 Goals	0.50	0.56	1.57	\$0 incentives	No
R-D-6	GSD	Open - Drive Refrigeration System (ASD)	95 Goals	0.91	0.72	1.07	\$0 incentives	Yes
R-D-6	GSLD	Open - Drive Refrigeration System (ASD)	95 Goals	0.78	0.62	1.00		No
R-D-7	GS	Anti - Condensate Heater Controls	95 Goals	0.21	0.20	1.00		No
R-D-7	GSD	Anti - Condensate Heater Controls	95 Goals	0.20	0.19	1.00		No
R-D-7	GSLD	Anti - Condensate Heater Controls	95 Goals	0.20	0.19	1.00		No
R-D-8	GS	High R-Value Glass Doors	95 Goals	0.79	1.21	2.19	\$0 incentives	No
R-D-8	GSD	High R-Value Glass Doors	95 Goals	1.04	1.21	1.58	\$0 incentives	Yes
R-D-8	GSLD	High R-Value Glass Doors	95 Goals	1.10	1.25	1.53	\$0 incentives	Yes
R-D-9	GS	Refrigeration Energy Mgt System	95 Goals	0.59	0.58	1.31	\$0 incentives	No
R-D-9	GSD	Refrigeration Energy Mgt System	95 Goals	0.76	0.60	1.00		No
R-D-9	GSLD	Refrigeration Energy Mgt System	95 Goals	0.78	0.61	1.00		No

Document No. 14

Cost Effectiveness of CUE Measures - Final Measure:

Residential New Constructor

Measure		Description	RIM	TRC	Part	Incentive / Participant	Payback
RSC-9A		Ceiling Insulation	0.50	0.43	1.01	\$ 181	6.72
PP-2		Big Pipe / Little Pump	1.10	3.01	5.53	\$ -	0.80

Commercial/Industrial New Constructor

Measure	Rate Class	Description	RIM	TRC	Part	Incentive / Participant	Payback
SC-D-8	GSD	3 Speed Motor for Cooling Tower	0.06	0.35	22.49	\$ -	0.16
SC-D-8	GSLD	3 Speed Motor for Cooling Tower	0.06	0.35	22.41	\$ -	0.16
SC-D-9	GSD	Speed Control for Cooling Tower	0.06	0.35	22.41	\$ -	0.16
SC-D-9	GSLD	Speed Control for Cooling Tower	0.06	0.35	22.41	\$ -	0.16
SC-D-23	GS	Window Film DX AC	1.01	0.99	1.24	\$ 235	2.97
SC-D-23	GSD	Window Film DX AC	1.01	1.20	1.44	\$ 67	2.81
SC-D-23	GSLD	Window Film DX AC	1.01	1.21	1.44	\$ 199	2.58
SC-D-25	GS	Spectrally Selective Glass DX AC	0.39	0.36	1.01	\$ 2,907	2.72
R-D-1	GSD	Multiplex: Air-Cooled/No Subcooling	0.86	1.20	1.84	\$ -	2.42
R-D-1	GSLD	Multiplex: Air-Cooled/No Subcooling	0.88	1.25	1.87	\$ -	2.41
R-D-2	GSD	Multiplex: Air-Cooled/Ambient Subcooling	0.84	1.05	1.64	\$ -	2.72
R-D-2	GSLD	Multiplex: Air-Cooled/Ambient Subcooling	0.88	1.05	1.55	\$ -	2.90
RD-3	GSD	Multiplex: Air-Cooled/Mechanical Subcooling	0.83	1.00	1.57	\$ -	2.84
RD-3	GSLD	Multiplex: Air-Cooled/Mechanical Subcooling	0.87	1.00	1.49	\$ -	3.03
R-D-4	GSD	Multiplex: Air-Cooled/Ambient & Mech. Subcooling	0.82	0.88	1.40	\$ -	3.18
R-D-4	GSLD	Multiplex: Air-Cooled/Ambient & Mech. Subcooling	0.87	0.88	1.33	\$ -	3.40
R-D-5	GSD	Multiplex: Air-Cooled/External Liquid Suction HX	0.96	1.22	1.65	\$ -	2.66
R-D-5	GSLD	Multiplex: Air-Cooled/External Liquid Suction HX	1.00	1.22	1.57	\$ -	2.82
R-D-6	GSD	Open - Drive Refrigeration System (ASD)	0.81	0.39	0.64	\$ -	7.11
R-D-8	GSD	High R-Value Glass Doors	0.88	3.08	5.57	\$ -	0.79
R-D-8	GSLD	High R-Value Glass Doors	0.92	3.08	5.28	\$ -	0.84

Cost Effectiveness of CUE Measures - Cost Effectiveness Models Inputs & Sources

Residential New Construction

Measure	Description	Participant	Summer kw	Winter kw	kwh	Admin \$/Part	Participant Cost	Data Sources		
								kw & kwh	Participant Cost	Admin Cost
RSC-9A	Ceiling Insulation	Participant	0.06	0.09	170	\$ 12	\$ 277	Quantum/FSEC/FPL	SRC/FPL/FSEC	Res Build Env Pgm
PP-2	Big Pipe / Little Pump	Participant	0.21	0.06	847	\$ 21	\$ 57	SRC Study	SRC Study	Res HVAC Pgm

Commercial/Industrial New Construction

Measure	Rate Class	Description	Participant	Summer kw	Winter kw	kwh	Admin \$/Part	Participant Cost	Data Sources		
									kw & kwh	Participant Cost	Admin Cost
SC-D-8	GSD	3 Speed Motor for Cooling Tower	Motor	-	-	231	\$ 61	\$ 21	SRC Study	SRC Study	C/I Motors Pgm
SC-D-8	GSLD	3 Speed Motor for Cooling Tower	Motor	-	-	231	\$ 61	\$ 21	SRC Study	SRC Study	C/I Motors Pgm
SC-D-9	GSD	Speed Control for Cooling Tower	Motor	-	-	231	\$ 61	\$ 21	SRC Study	SRC Study	C/I Motors Pgm
SC-D-9	GSLD	Speed Control for Cooling Tower	Motor	-	-	231	\$ 61	\$ 21	SRC Study	SRC Study	C/I Motors Pgm
SC-D-23	GS	Window Film DX AC	1 Summer kw	1.00	0.04	2,477	\$ 75	\$ 890	C/I Bldg Env Pgm	C/I Bldg Env Pgm	C/I Bldg Env Pgm
SC-D-23	GSD	Window Film DX AC	1 Summer kw	1.00	0.04	3,347	\$ 75	\$ 823	C/I Bldg Env Pgm	C/I Bldg Env Pgm	C/I Bldg Env Pgm
SC-D-23	GSLD	Window Film DX AC	1 Summer kw	1.00	0.04	3,347	\$ 75	\$ 813	C/I Bldg Env Pgm	C/I Bldg Env Pgm	C/I Bldg Env Pgm
SC-D-25	GS	Spectrally Selective Glass DX AC	1 Summer kw	1.00	0.11	2,154	\$ 75	\$ 3,421	SRC Study	SRC Study	C/I Bldg Env Pgm
R-D-1	GSD	Multiplex: Air-Cooled/No Subcooling	1 Summer kw	1.00	0.89	10,556	\$ 83	\$ 1,504	SRC Study	SRC Study	C/I HVAC Pgm
R-D-1	GSLD	Multiplex: Air-Cooled/No Subcooling	1 Summer kw	1.00	0.92	11,441	\$ 83	\$ 1,504	SRC Study	SRC Study	C/I HVAC Pgm
R-D-2	GSD	Multiplex: Air-Cooled/Ambient Subcooling	1 Summer kw	1.00	0.88	11,134	\$ 83	\$ 1,770	SRC Study	SRC Study	C/I HVAC Pgm
R-D-2	GSLD	Multiplex: Air-Cooled/Ambient Subcooling	1 Summer kw	1.00	0.88	11,134	\$ 83	\$ 1,770	SRC Study	SRC Study	C/I HVAC Pgm
RD-3	GSD	Multiplex: Air-Cooled/Mechanical Subcooling	1 Summer kw	1.00	0.88	11,566	\$ 83	\$ 1,907	SRC Study	SRC Study	C/I HVAC Pgm
RD-3	GSLD	Multiplex: Air-Cooled/Mechanical Subcooling	1 Summer kw	1.00	0.88	11,566	\$ 83	\$ 1,907	SRC Study	SRC Study	C/I HVAC Pgm
R-D-4	GSD	Multiplex: Air-Cooled/Ambient & Mech. Subcooling	1 Summer kw	1.00	0.89	12,377	\$ 83	\$ 2,268	SRC Study	SRC Study	C/I HVAC Pgm
R-D-4	GSLD	Multiplex: Air-Cooled/Ambient & Mech. Subcooling	1 Summer kw	1.00	0.89	12,377	\$ 83	\$ 2,268	SRC Study	SRC Study	C/I HVAC Pgm
R-D-5	GSD	Multiplex: Air-Cooled/External Liquid Suction HX	1 Summer kw	1.00	0.88	7,685	\$ 83	\$ 1,279	SRC Study	SRC Study	C/I HVAC Pgm
R-D-5	GSLD	Multiplex: Air-Cooled/External Liquid Suction HX	1 Summer kw	1.00	0.88	7,685	\$ 83	\$ 1,279	SRC Study	SRC Study	C/I HVAC Pgm
R-D-6	GSD	Open - Drive Refrigeration System (ASD)	1 Summer kw	1.00	3.58	31,978	\$ 83	\$ 11,949	SRC Study	SRC Study	C/I HVAC Pgm
R-D-8	GSD	High R-Value Glass Doors	1 Summer kw	1.00	0.89	8,225	\$ 147	\$ 410	SRC Study	SRC Study	C/I Bldg Env Pgm
R-D-8	GSLD	High R-Value Glass Doors	1 Summer kw	1.00	0.89	8,225	\$ 147	\$ 410	SRC Study	SRC Study	C/I Bldg Env Pgm