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July 30, 2009

VIA HAND DELIVERY

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

Re: Commission Review of Numeric Conservation Goals, Docket Nos. 080407-EG, 080408-EG, 080409-EG, 080410-EG, 080411-EG, 080412-EG, 080413-EG

Dear Ms. Cole:

Enclosed for filing are an original and 15 copies of the rebuttal testimony and exhibits of Mike Rufo, Managing Director of the Consulting and Analysis Group for Itron, Inc. Mr. Rufo is appearing as a witness on behalf of each of the Florida Energy Efficiency and Conservation Act (FEECA) utilities: Florida Power & Light Company; Progress Energy Florida, Inc.; Tampa Electric Company; Gulf Power Company; Florida Public Utilities Company; Orlando Utilities Commission; and JEA. Accordingly, Mr. Rufo's rebuttal testimony and exhibits should be filed as part of the record in each of the dockets indicated above in support of each utility's petition.

Please acknowledge your receipt of the above filing on the enclosed copy of this letter and return to the undersigned. Thank you for your assistance in this matter.

Sincerely,

Susan F. Clark

Susan F. Clark

COM 5
ECR 22
GCL 2
OPC
RCP
SSC
SGA
ADM
CLK 1

SFC:plk

Attachments

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Commission review of numeric conservation goals (Florida Power & Light Company).	DOCKET NO. 080407-EG
In re: Commission review of numeric conservation goals (Progress Energy Florida, Inc.).	DOCKET NO. 080408-EG
In re: Commission review of numeric conservation goals (Tampa Electric Company).	DOCKET NO. 080409-EG
In re: Commission review of numeric conservation goals (Gulf Power Company).	DOCKET NO. 080410-EG
In re: Commission review of numeric conservation goals (Florida Public Utilities Company).	DOCKET NO. 080411-EG
In re: Commission review of numeric conservation goals (Orlando Utilities Commission).	DOCKET NO. 080412-EG
In re: Commission review of numeric conservation goals (JEA).	DOCKET NO. 080413-EG Filed: July 30, 2009

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a copy of the foregoing Rebuttal Testimony and Exhibits of Mike Rufo has been furnished by U.S. Mail, electronic mail or hand delivery (*) on this 30th of July, 2009, to the following.

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By: s/Susan F. Clark
Susan F. Clark

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

IN RE: COMMISSION REVIEW OF NUMERIC CONSERVATION GOALS

REBUTTAL TESTIMONY OF MIKE RUFO

DOCKET NO. 080407-EG (Florida Power & Light Company)

DOCKET NO. 080408-EG (Progress Energy Florida, Inc.)

DOCKET NO. 080409-EG (Tampa Electric Company)

DOCKET NO. 080410-EG (Gulf Power Company)

DOCKET NO. 080411-EG (Florida Public Utilities Company)

DOCKET NO. 080412-EG (Orlando Utilities Commission)

DOCKET NO. 080413-EG (JEA)

Q: Please state your name, title and business address.

A: My name is Mike Rufo. I am Managing Director in the Consulting and Analysis Group at Itron, Inc. (Itron), 1111 Broadway Street, Suite 1800, Oakland, California 94607.

Q: Did you previously submit testimony in this proceeding?

A: Yes, I did.

Q: What is the purpose of your rebuttal testimony?

A; The purpose of my rebuttal testimony is to respond to points raised in the testimonies of witnesses Wilson and Mosenthal on behalf of the Natural Resources Defense Council (NRDC)/the Southern Alliance for Clean Energy (SACE) and of witnesses Spellman and Guidry, GDS & Associates (GDS), on behalf of the Staff of the Florida Public Service Commission (FPSC).

Q: Are you sponsoring any rebuttal exhibits in this case?

A: Yes, I am sponsoring Rebuttal Exhibits MR-12 through MR-24, which are attached to my rebuttal testimony.

TECHNICAL POTENTIAL

Q: Are the technical potential estimates developed by Itron for the Florida Energy Efficiency & Conservation Act (FEECA) utilities comprehensive and do they represent reasonable starting points for assessing economic and achievable potential from utility programs?

A: Yes. The technical potential estimates developed for the FEECA utilities are comprehensive and represent reasonable, expected value estimates of the technical potential for energy and peak demand savings from which to then assess the economic and achievable potential from utility programs. These technical potential estimates incorporated calibrated, bottom-up end-use baselines developed using the best available data in Florida and other jurisdictions and cost and savings data for 267 unique measures, including 49 unique measures not previously included in technical potential studies conducted by Itron for other clients.

Q: Do you agree with witness Spellman's assertion that the baseline estimates developed by Itron significantly underestimate actual electricity sales and therefore result in systematic underestimates of energy efficiency potential (Spellman Testimony, p 23, lines 9-11; p 24, lines 1-3)?

A: No. In fact, Itron's bottom-up baseline estimates are very well calibrated to actual historical total sales in each of the FEECA utilities. As shown in the table provided below, the difference between Itron's bottom-up baselines and actual total sales by the

FEECA utilities is insignificant and thus does not result in systematic underestimation of energy efficiency potential in Florida.

Bottom-Up[1] vs. Actual Sales[2] (GWh)	FPL	PEF	Gulf	TECO	JEA	OUC	FPU	Total
Residential	52,910	20,645	5,148	8,092	5,274	2,343	334	**94,745**
Commercial	34,320	11,544	3,783	8,660	3,381	3,038	325	**65,051**
Industrial	5,493	2,670	886	1,433	1,056	205	134	**11,877**
Out of Scope Sectors	7,946	8,199	1,025	1,168	3,000	636	9	**21,983**
Total Bottom-Up Sales	**100,669**	**43,058**	**10,841**	**19,353**	**12,710**	**6,222**	**801**	**193,655**
Actual Total System Sales (2007)	**105,415**	**39,282**	**11,521**	**19,533**	**12,751**	**6,079**	**813**	**195,393**
Difference	***-4.5%***	***9.6%***	***-5.9%***	***-0.9%***	***-0.3%***	***2.4%***	***-1.4%***	***-0.9%***

The basis for witness Spellman's claim appears to stem from attempting to compare the residential, commercial, and industrial sales values as reported in the latest Ten-Year Site Plans (TYSPs) filed by each FEECA utility filed in April of this year with the bottom-up baselines developed by Itron.[3] However, as Itron described in detail in response to Staff's Third Set of Interrogatories to the FEECA utilities (*see* question 18, Rebuttal Exhibit MR-12),[4] such direct comparisons are invalid for the following reasons.

The methods used by Itron to classify customers as commercial or industrial are fundamentally different from those used by the FEECA utilities in their TYSPs. As described in Chapter 3 of each FEECA utilities' technical potential report, Itron used customer-specific Standard Industrial Classification (SIC) data (as made available from

[1] Bottom-up baseline values are same as those reported in Table ES-1 and Figure 2-2 in each FEECA utility's technical potential report.

[2] Actual sales data are "Total Sales to Ultimate Customers (GWh)" taken from Schedules 2.2 and 2.3 of each FEECA utility's 2009 TYSP. Note that these values exclude sales for resale and utility line losses in order to be strictly comparable to Itron's bottom-up baseline estimates.

[3] Florida Public Utilities Company (FPUC) is a non-generating utility and does not file a Ten-Year Site Plan with the FPSC. The sales data shown above were taken from data provided by FPUC to Itron for this study.

[4] The response of Progress Energy Florida, Inc. (PEF) to question 18 of Staff's Third Set of Interrogatories is provided as an example in MR-12. The other FEECA utilities received the same question and gave similar responses.

each FEECA utilities' customer information systems) as the basis for classifying customers as commercial or industrial. In the TYSPs, the FEECA utilities use customer rate class to categorize customers as either commercial or industrial, as has been standard practice in TYSP filings. This is a common misunderstanding of customer classifications with respect to potential studies. Itron always makes significant efforts to segment customers into true commercial and industrial segments in its potential studies as all of the end-use and measure data to assess potential are developed based on true customer business types not rate classes, which reflect customer size but include both commercial and industrial accounts. A rate-class based analysis of potential would fundamentally misalign bottom-up estimates of potential and utility sales. We spend a great deal of effort on all of our potential studies to disaggregate true commercial and industrial sales, using both utility SIC and North American Industry Classification System (NAICS) classifications when available and secondary business type classifications like Dun and Bradstreet (ZAP data). This commercial and industrial disaggregation is then reconciled to the combined rate class based total nonresidential sales.

In addition, the bottom-up baselines developed by Itron specifically reflect the end-use sectors that were within the analytic scope of the technical potential study and excluded agriculture, construction, transportation, communications, utilities, outdoor and street lighting, and temporary service accounts. The shares of total 2007 actual sales to out-of-scope sectors are shown explicitly in Figure 2-2 in each of the FEECA utilities' technical potential report.

Given these two key differences between Itron's bottom-up baselines and the historical sales data reported for commercial and industrial customers in the utilities'

TYSPs, one must first aggregate Itron's bottom-up baselines for residential, commercial, and industrial customers with sales to the "out of scope" sectors before comparing these totals to "Total Sales to Ultimate Customers" as reported in each utility's TYSP.

Witness Spellman did not acknowledge nor account for these key comparative issues when making the statement that Itron's baselines systematically underestimated total historical sales and did not provide evidence that his claims are accurate or material.

Q: Do you agree with witness Spellman's assertion that Itron's technical potential study lacked the necessary documentation, transparency, and reproducibility required to produce reasonable, defensible estimates of technical potential savings in Florida?

A: No. Itron strives to deliver highly documented, transparent, reproducible, and defensible work products for all its clients. Itron's previous potential study reports have never been criticized by regulators for lacking documentation and transparency, and the technical potential reports produced for the FEECA utilities reflect that same level of documentation and transparency. In fact, documentation and transparency have been key features of Itron staff's potential study reports and a differentiating factor in our selection to conduct potential studies for over two decades. Itron staff pioneered development of systematic methods to develop and organize data to enable more efficient review of our model inputs and results. Our reports provide detailed discussions of utility-specific data sources, the data development process, and key assumptions and include a comprehensive list of key data source citations (Chapter 6) and comprehensive appendices of the final end-use baseline and measure data inputs (Appendix B), the non-

additive measure results (Appendix C), and the final supply-curve adjusted measure results (Appendix D).

Itron also provided witnesses Spellman and Guidry, both formally and informally, with additional measure-specific documentation and detailed explanations and demonstrations of the data development processes and model mechanics to assist in their efforts to review and verify Itron's data and methods. Beginning on March 30, 2009, GDS initiated an informal request for detailed information on Itron's data, methods, assumptions, and modeling equations. In response to this request, Itron organized two conference calls (April 10 and 15, 2009) during which Itron provided both written and verbal responses to 41 itemized questions provided by GDS. Itron also helped GDS refine and correct the spreadsheets GDS had developed to reproduce Itron's technical potential results from the detailed data provided in the appendices to Florida Power & Light Company's (FPL) technical potential report. Based on communications between Itron and GDS following this exercise (*see* Rebuttal Exhibit MR-13), Itron believed that there were no outstanding issues related to GDS' attempts to reproduce Itron's results and received no further communications from GDS in that regard, which runs counter to witness Spellman's statement that GDS was not able to reasonably replicate Itron's technical potential estimates (Spellman Testimony, p 23, lines 7-8).

Witness Spellman inaccurately states that the documentation was not provided for the weather-based adjustments made to the baseline consumption and demand estimates for weather-sensitive end uses in the residential sector (i.e. heating, air conditioning, and ventilation) (Spellman Testimony, p 22, lines 21-22). In fact, Itron provided complete documentation of these weather-based adjustments in response to Staff's Third Set of

Interrogatories along with the weather adjustment factors themselves (*see* question 16, Rebuttal Exhibit MR-12). Witness Spellman did not acknowledge or provide any evidence for invalidating that documentation in his testimony, and thus there is no basis for this statement.

Witness Spellman also incorrectly claims that the sources of the baseline saturation data were not provided in the technical potential studies (Spellman Testimony, p 22, lines 23-24). In fact, sections 3.3.1, 3.3.2, and 3.3.3 of each FEECA utility's technical potential report provide very specific source citations for the baseline equipment saturation estimates developed by Itron for residential, commercial, and industrial customers. Again, witness Spellman has not acknowledged nor attempted to specifically invalidate that documentation in his testimony.

It is important to also note that Itron provided additional detailed documentation and explanation of data development and modeling methods beyond the activities described above. In response to question 20 of Staff's Fifth Set of Interrogatories to FPL, Itron provided measure-specific source documentation of measure costs, energy savings, peak demand savings, and expected useful life for the top 20 energy saving measures in each sector (*see* Rebuttal Exhibit MR-14). In response to Staff's First Request for Production of Documents to Itron, Itron provided GDS with a six hour live walk-through of Itron's data development processes and modeling methods, following an agenda developed by GDS (*see* Rebuttal Exhibit MR-15) and using the actual spreadsheets used to derive the residential HVAC end-use baselines, the residential and commercial end-use load shapes, and the supply-curve calculations and results. Itron also demonstrated the functionality and key equations in DSM ASSYST's penetration module using the actual

model files for FPL's residential and commercial sector achievable potential forecasts. At the conclusion of this session, Itron explicitly asked for and received verbal confirmation from GDS (in the presence of FPSC Staff) that Itron had adequately addressed the key knowledge gaps that GDS was hoping to fill regarding Itron's methods and data sources. Again, witness Spellman did not acknowledge or attempt to invalidate Itron's responses to these discovery requests in his testimony, and thus there is no basis to claim that Itron's work has been anything but transparent.

It appears that at the core of witness Spellman's claims related to documentation and transparency is a subjective preference for documentation that focuses on providing one-to-one linkage between every individual data input (of which there are thousands in this study) and an individual secondary source. The conclusion appears to be that documentation approaches that differ from witness Spellman's preferred approach necessarily introduces uncertainty into the analysis; and therefore any analysis, no matter how intrinsically accurate the empirical inputs and results, is by nature highly uncertain if each of thousands of input data points are not linked to specific sources. While this argument may have some merit in theory, it fails in practice for three important reasons.

First and foremost, the assumption that there is a perfect or optimal secondary source for every data input in a potential study such as this one, with thousands of measure-segment combinations and dozens of parameters per measure-segment, is flawed. For example, data that is derived from a specific report does not necessarily mean that that data is reliable, robust, and appropriate to use for other analysis purposes. Indeed, many secondary sources in the literature related to end use consumption, measure costs, savings, and other key parameters contradict each other. Analysts can introduce

just as much uncertainty choosing to rely on particular secondary sources over others (if they have inaccurately assessed the quality of the available data or, worse, been unduly influenced by preconceived notions or biases) as they can using input values based on professional judgment (in cases where the available data varies widely, is not strictly comparable, or is outdated). Many existing secondary sources in the field are limited or weak because it is difficult in practice to measure much of the data needed for potential studies. This is the case, for example, for end-use consumption (since consumption is measured for the population only at the building level), measure costs (there is a paucity of rigorously derived incremental cost data in the industry), and measure savings (although relatively straightforward to empirically observe for some measures, it can be extremely difficult for others, and thus require estimation approaches). As a result, the quality of the secondary literature in the energy efficiency field is highly variable. Thus, tying a parameter to an individual source may do nothing to increase validity if that source is itself flawed. Because of the many well known weaknesses in individual studies in the efficiency industry, Itron staff is trained to focus on meta-analysis in which they carefully assess the strengths and weaknesses of all available sources related to key parameters. Our expertise in conducting potential studies is fundamentally tied to our ability to develop best estimates of parameters across all available sources, oftentimes in spite of their weaknesses. That said, Itron makes significant efforts to direct reviewers and users of its potential studies to key sources that we have reviewed and used in our analyses; which brings us to the second reason why witness Spellman's arguments related to documentation fails in practice.

The second reason is that even if one agreed with witness Spellman's theoretical ideal with respect to sourcing each and every parameter to individual sources, doing so would be impractical within the time and budget constraints of these types of studies. This is particularly the case given the fact that this level of sourcing would not in and of itself increase the accuracy of the study given, as noted above, the limitations of the individual sources and need for experience and expertise to develop estimates that cut across sources. In fact, the time necessary to source at this level of detail could likely reduce the accuracy of the results due to reduction in staff time available to actually assess the sources, develop best estimates, accurately integrate the data across parameter types, accurately set up the data bases, conduct all of the necessary model runs, and, critically, conduct quality control of model results, which leads us to the third reason why witness Spellman's arguments related to documentation fails in practice.

The third reason is that the most critical question in assessing estimates of technical potential is "are the baseline and measure data themselves reasonable?" The baseline and measure data used in the technical potential study reflect the best available data given the time and resources available. Witness Spellman's testimony provides no direct evidence to demonstrate that baseline and measure data do not reflect the best available data in Florida or evidence that any particular parameter is wrong or inaccurate as demonstrated by presentation of superior sources or other evidence. The focus should be on the reasonableness of the parameter values themselves. A critical skill set upon which Itron is and should be judged is whether our input data and modeling approaches are accurate and unbiased. As noted above, there is uncertainty around many of the parameters in any potential study due to limitations in the data in the energy efficiency

field (as is the case, of course, in most other fields). The key question, however, is whether analysts make purposefully conservative or optimistic assumptions in the face of these uncertainties or whether they have the training and expertise necessary to take an expected value approach in which they make unbiased estimates on average. Itron staff is trained to avoid systematic bias in developing the data and models used in our potential studies. This increases the likelihood that any errors that do remain in individual parameters are random and unbiased in aggregate effect. All of the parameters necessary to assess the accuracy of or technical potential results have been provided to GDS through the study reports, our responses to interrogatories and production of document requests, and our provision of additional information and training as requested informally.

Q: Do you agree with witness Wilson's assertion that a reasonable proxy for the technical potential of energy efficiency savings in the four end-use sectors not considered in the technical potential study is the estimated technical potential of the industrial sector (Wilson Testimony, p 28)?

A: No. There is little to no evidence in the literature or offered by NRDC/SACE that the end-use consumption and energy efficiency opportunities in four end-use sectors not considered in the technical potential study – the Agriculture, Construction, Outdoor/Street Lighting, and Transportation, Communications, and Utilities (TCU) – are sufficiently similar to those in the industrial sector in Florida (or any other jurisdiction) to justify using bottom-up estimates of industrial technical potential as a reasonable proxy.

Q: Do you agree with witness Mosenthal's assertion that Itron's technical potential study does not consider synergies between energy efficiency measures that result in "deep" savings opportunities?

A: No. Witness Mosenthal incorrectly claims that Itron's technical potential study only accounts for interaction between measures that reduce marginal energy savings and ignores measure interactions that can result in "deeper" savings opportunities (Mosenthal Testimony, p 11, lines 1-3; p 11 footnote 6). In fact, as described in response to Staff's Third Set of Interrogatories to the FEECA utilities (*see* question 12, Rebuttal Exhibit MR-12), the commercial new construction analysis explicitly considers measures based on integrated design approaches for key end uses such as lighting and HVAC that witness Mosenthal claims were excluded from the technical potential study.

Q: Do you agree with witness Spellman's assertion that the residential and commercial analyses wrongfully excluded the six residential measures and 24 commercial measures listed on page 25 and Table 2 of his testimony?

A: No. Itron provided its rationale for excluding the six residential measures and 24 commercial measures cited by witness Spellman in response to Staff's Third Set of Interrogatories (*see* questions 13-14, Rebuttal Exhibit MR-12). Again, witness Spellman did not acknowledge or present any arguments against Itron's rationales for excluding these measures. Additionally, witness Spellman did not acknowledge or provide any assessment of the measures included in the technical potential studies for the FEECA utilities that have not been previously assessed in other potential studies in other jurisdictions.

Q: Do you agree with witness Spellman's assertion that these exclusions result in significant underestimates of technical, economic, and achievable potential?

A: No. Witness Spellman states that the six residential measures not included in the study account for 19.6% of the maximum achievable potential in the residential sector in a study GDS recently completed for the New Hampshire Public Utilities Commission. The implication is that these measures should then account for roughly the same share of achievable potential in Florida's residential sector. However, this claim ignores the fact that nearly 90% of that potential is from "smart strips" and refrigerator recycling. As described in Itron's response to Staff's Third Set of Interrogatories (*see* question 13, Rebuttal Exhibit MR-12), Itron did not consider "smart strips" in its analysis for the FEECA utilities because the savings produced by this measure overlap with those produced by the Energy Star home electronics measures already included in the study. Refrigerator recycling was not included in the study because of strong evidence in the evaluation literature which indicates that this measure often has very high levels of free ridership and that these savings will occur over time as older refrigerators are replaced naturally with newer units that meet increasingly stringent federal efficiency requirements.

By his own admission, the 24 commercial measures cited by witness Spellman "may not break into the current list top twenty energy saving measures" (Spellman Testimony, p 26, line 13). However, witness Spellman offers no quantitative evidence or analysis to prove that these exclusions actually do result in any significant underestimation of technical potential in Florida's commercial sector.

Q: Do you agree with witness Wilson's assertion that building retrocommissioning, 19 Season Energy Efficiency Ratio (SEER) heat pumps, and variable-speed pool pumps were wrongfully excluded from the technical potential study?

A: No. In the case of retrocommissioning, Itron believes that the chiller tune-up, direction expansion (DX) tune-up, air handler optimization, and emergency management system (EMS) optimization measures included in the analysis, in addition to the high-efficiency replace-on-burnout measures for chillers, packaged DX units, air handler motors, and lighting, adequately represent the savings potential associated with retrocommissioning activities. It is important to understand that the whole-building savings value quoted and recommended by witness Wilson (15%) is derived from the findings of a Lawrence Berkeley National Laboratory (LBNL) study (Mills et al., 2004) and that the LBNL study explicitly includes significant savings from retrofit measures. Indeed, Mills et al. explicitly acknowledge that equipment retrofit/replacement was by far the most frequent measure included in the 69 individual retrocommissioning projects analyzed in that study.[5] In this sense, one must at least deduct Itron's estimates of the technical potential of high-efficiency chillers, packaged DX units, air handler motors, and lighting (in addition to Itron's estimated potential from the tune-up and optimization measures) in order to properly assess any possible under-representation of building retrocommissioning in the technical potential study. Because witness Wilson makes no such adjustments, his proposed incremental savings estimate for retrocommissioning clearly includes significant double counting of savings.

[5] See Figure 15 and Table 9 in Mills et al., 2004 available at: http://eetd.lbl.gov/ea/emills/pubs/pdf/cx-costs-benefits.pdf

In the case of 19 SEER heat pumps, this measure was ultimately not included in the technical potential study due to a lack of reliable data on the incremental cost of such units. Itron first noted the lack of such cost data from its two primary sources for residential HVAC equipment costs (the California Database for Energy Efficiency Resources and FPL's program tracking database) during a conference call with the Collaborative on July 28, 2008. During that call, NRDC/SACE offered to assess the availability of reliable incremental cost data. In the weeks that followed, NRDC/SACE were not able to identify or provide any reliable incremental cost estimates for 19 SEER heat pumps. Indeed, NRDC/SACE determined that "Nothing is more sensitive or tightly guarded than price data in the HVAC industry. The only resources [the American Council for an Energy Efficiency Economy] [has] had any success with are utility programs that require cost information to be submitted for rebates."[6]

With respect to variable-speed pool pumps, Itron included this measure in its analysis of technical potential in the residential sector (measure number 803). As noted by witness Wilson, this measure was not included in Itron's analysis of technical potential in the commercial sector. The reasons for exclusion were twofold. First, reliably assessing the savings potential of variable-speed pool pumps in commercial building applications requires baseline data such as the share of commercial buildings with pools, the average size (horsepower) of commercial pool pumps, and average hours of pump operation. None of these types of baseline data were readily available for Florida's commercial sector. Second, all of the available performance and savings data on variable-

[6] Source: SACE/NRDC memorandum to Itron entitled "Energy Efficiency Measures List – SACE/NRDC Recommendation, Measure: 19 SEER Split-System HP," sent by Tom Larson 8/1/08.

speed pool pumps are for residential pool applications (i.e. <1 hp pump sizes) not commercial applications (which are necessarily >1 hp pumps and likely face very different operational patterns). Thus, even given the existence of adequate baseline data for commercial pool pumps, it would have been unreasonable to simply apply the cost and savings data from a residential pool pump to a commercial pool pump without introducing significant uncertainty.

Q: Do you believe that the "omissions" to the technical potential analysis asserted by witnesses Wilson, Mosenthal, and Spellman resulted in a systematic underestimate of economic and achievable potential?

A: No. Witnesses Wilson, Mosenthal, and Spellman claim that based on certain perceived "omissions," Itron's technical potential study necessarily underestimates technical potential. However, these witnesses do not consider or acknowledge that some measure savings and feasibility estimates included in Itron's study may be optimistic and could possibly overestimate technical potential. As noted previously, we focus on an expected value approach so that any errors that result are neither systematically conservative nor optimistic and thus tend to cancel in aggregate. Critiques of our technical potential estimates that focus only on areas of underestimation are asymmetric.

There are always some measures that are not included in potential studies. The expectation that any assessment of technical potential will ever be 100% comprehensive of all available and feasible efficiency opportunities is not reasonable given the necessity to prioritize the activities conducted in such studies due to invariable limits on the time and resources available. As witness Mosenthal states, "it is impossible to accurately account for every possible opportunity in every market segment. As a result, for

reasonable resource and other reasons, any analysis is somewhat constrained in its comprehensiveness." (Mosenthal Testimony, p 14).

Perhaps more importantly, however, the Commission should not lose sight of the core purpose and objective of the technical potential study conducted by Itron for the FEECA utilities. As stated in the opening paragraph of the Statewide Technical Potential Report, the primary objective of the technical potential study was to "serve as the foundation for estimating economic and achievable potential for each FEECA utility, the latter of which will provide direct input into each utility's proposed [demand-side management] DSM goals for 2010-2019." (Technical Potential for Electric Energy and Peak Demand in Florida – Final Report, p ES-1). In order to serve in that capacity, therefore, the technical potential study must be grounded in defensible end-use baselines and measure-specific cost and savings data in order to allow for the reliable assessment of measure cost-effectiveness and estimation of future measure adoption in specific customer segments.

Q: **Are the technical potential estimates developed by Itron for the FEECA utilities consistent with results from other technical potential studies?**

A: Yes. Itron's estimates of total technical potential for energy savings in the FEECA utilities are very consistent with and comparable to the results from previous studies by Itron, KEMA, and other leading analysts in the industry.

Witness Spellman claims that Itron's technical potential estimate is only equivalent to 19% of forecasted annual sales in the FEECA utilities in 2019. However, the figure offered by witness Spellman contains two significant flaws and thus significantly misrepresents the relative level of technical potential estimated by Itron

compared to other recent studies. First, the figure offered by witness Spellman uses an inconsistent comparative basis to generate the result. Specifically, witness Spellman normalizes Itron's total technical potential estimate to forecasted sales in 2019, whereas Itron's technical potential estimate is mostly accurately compared to 2007 sales (the base year used to calibrate the bottom-up end-use baselines). As stated in Itron's response to Staff's Sixth Set of Interrogatories to JEA, the Orlando Utilities Commission (OUC), and FPUC (*see* Rebuttal Exhibit MR-16),[7] Itron's technical potential estimates developed for the FEECA utilities are snapshot estimates at a given point in time (2007 in this case). Therefore, these technical potential estimates are most appropriately normalized to 2007 sales, not 2019 sales. Second, the estimate offered by witness Spellman contains a significant calculation or typographical error, which results in Itron's technical potential estimates for TECO's commercial and industrial customers being undercounted by a factor of 10 (this error is documented in Rebuttal Exhibit MR-17). The table below presents the full set of technical potential results produced by Itron (by utility and sector), along with the bottom-up comparative baselines and actual total system sales in 2007.[8]

[7] FPUC's response to question 20 of Staff's Sixth Set of Interrogatories is provided as an example in MR-16. JEA and OUC received the same question and gave similar responses.

[8] The actual total system sales in 2007 reflect the data shown in Schedules 2.2 and 2.3 in each FEECA utility's 2009 TYSP, as filed with the FPSC in April. Note that total system sales is equivalent to "total sales to ultimate customers" and excludes sales for resale and utility line losses.

	Residential	Commercial	Industrial	Total Bottom-Up In-Scope Sales (2007)	Total Bottom-Up System Sales (2007)	Actual Total System Sales (2007)
	Baseline sales (GWh)					
FPL	52,910	34,320	5,493	92,723	100,669	105,415
FPU	334	325	134	793	801	813
Gulf	5,148	3,783	886	9,817	10,841	11,521
JEA	5,274	3,381	1,056	9,710	12,710	12,751
OUC	2,343	3,038	205	5,586	6,222	6,079
PEF	20,645	11,544	2,670	34,859	43,058	39,282
TECO	8,092	8,660	1,433	18,185	19,353	19,533
Total	94,745	65,051	11,877	171,672	193,655	195,393
	Estimated technical potential (GWh)					
FPL	20245	10639	965	31,849		
FPU	132	94	26	252		
Gulf	1968	1210	167	3,345		
JEA	2031	944	184	3,159		
OUC	875	897	36	1,808		
PEF	8232	3648	471	12,351		
TECO	3102	2491	260	5,853		
Total	36584	19924	2108	58,616		
	Technical potential as share of baseline sales					
FPL	38.3%	31.0%	17.6%	34.3%	31.6%	30.2%
FPU	39.5%	28.9%	19.4%	31.8%	31.4%	31.0%
Gulf	38.2%	32.0%	18.9%	34.1%	30.9%	29.0%
JEA	38.5%	27.9%	17.4%	32.5%	24.9%	24.8%
OUC	37.3%	29.5%	17.6%	32.4%	29.1%	29.7%
PEF	39.9%	31.6%	17.6%	35.4%	28.7%	31.4%
TECO	38.3%	28.8%	18.1%	32.2%	30.2%	30.0%
Total	**38.6%**	**30.6%**	**17.7%**	**34.1%**	**30.3%**	**30.0%**

As the table above shows, Itron's estimated technical potential for the FEECA utilities is equivalent to 34% of total in-scope sales and 30% of actual total system sales in 2007 (the two most appropriate and valid comparative baselines). Even if one were to compare Itron's snapshot estimates to forecasted 2018 sales (without accounting for new construction additions and decay of the existing building stock), Itron's estimated

technical potential is equivalent to 26% of total annual sales, well above the 19% value offered by witness Spellman, as shown in Rebuttal Exhibit MR-17.[9]

In light of the normalizations presented above and using the comparative table presented in witness Spellman's Exhibit RFS-9, the technical potential estimates developed by Itron for the FEECA utilities are clearly consistent with results of other potential studies conducted by other authors, no matter how the results are normalized. Indeed, compared to the most recent potential study completed by GDS for the New Hampshire Public Utilities Commission, Itron's estimated technical potential for the FEECA utilities is higher than that estimated by GDS for the state of New Hampshire (30% for Florida versus 27% for New Hampshire).[10] In addition, we note that these estimates of technical potential for Florida are higher than our estimates of technical potential estimated in studies conducted by Itron staff since 2001, e.g. in California (2002 and 2008) and New Mexico (2006). These latter studies estimated technical potential at roughly 20% of total system sales. The higher estimate for Florida is attributable to the larger number of measures included in the study. Note, however, that significant differences in technical potential estimates across studies often do not, in and of itself, result in significant differences in economic and achievable potential.

[9] Note that 2018 is the last forecast year available in the utilities' 2009 TYSP filings, not 2019.

[10] See page 5 in "Additional Opportunities for Energy Efficiency in New Hampshire" prepared by GDS Associates for the New Hampshire Public Utilities Commission (January, 2009). Available at: http://www.puc.state.nh.us/Electric/GDS%20Report/GDS%20Final%20Report.htm

ACHIEVABLE POTENTIAL

Q: Do you agree with witness Mosenthal's claim that the analytic framework used in the DSM ASSYST model is "inherently incompatible" with program designs such as upstream incentives, aggressive marketing and education, and financing mechanisms (Mosenthal Testimony, p 19)?

A: No. Witness Mosenthal's claim that the core equations in the DSM ASSYST model are "inherently incompatible" with a variety of program designs is incorrect. Witness Mosenthal's claims appear to reflect a misunderstanding of how the model works or are based on opinions rather than facts about the model's functionality. With respect to marketing and education, the DSM ASSYST model is one of the only models in the industry that explicitly accounts for program-induced changes in customer awareness and knowledge in the adoption methodology. As stated in my testimony (p 23) and Exhibit MR-11 (p 3), measure adoption is modeled as a function of both measure cost-effectiveness to the customer, stock accounting of the eligible customer market in a given year, and customer awareness. In this respect, forecasted measure adoption increases as a result of increases in the measure benefit/cost (BC) ratio (from utility program incentives) and/or increases in customer awareness (from utility marketing and education efforts). The details of the customer awareness trends modeled in Itron's achievable potential forecasts for the FEECA utilities and their impacts on forecasted measure penetration rates is discussed in further detail later in this rebuttal testimony.

With respect to upstream incentives and financing mechanisms, the overall program costs and savings forecasted in previous achievable potential studies conducted by Itron/KEMA have been shown to be consistent with actual portfolio results, even for

several of the most aggressive portfolios in the country, such as those of the California investor-owned utilities. Perhaps the most relevant case in point is KEMA-XENERGY's 2002 assessment of achievable potential in California that served as the basis for the current savings goals for California's investor-owned utilities. This study, led by Fred Coito and myself and using the DSM ASSYST model, predicted program savings under aggressive and maximum achievable funding scenarios roughly equivalent to 0.66% and 1.0% of load per year, respectively, which is very close to the savings that have been captured by utility programs in the years following that study. In this respect, all of the underlying program features of those actual portfolios, which do vary, are thus reasonably averaged out at the portfolio level in the DSM ASSYST modeling framework.

It should be understood that the intent of Itron's achievable potential forecasts was not to predict or determine specific program designs. Rather, the intent was to estimate overall achievable potential program savings and costs under the scenario criteria established by the FEECA utilities.

In addition, witness Mosenthal's claims imply that superior adoption modeling methods are available in the industry; however, no such models or methodologies are referenced nor is any evidence provided that any alternative models offer superior features or parameters to the DSM ASSYST model.

Q: Is witness Mosenthal's interpretation of how the participant test was used in the achievable potential study accurate?

A: No. Witness Mosenthal claims that the participant test calculations did not include customer incentives (Mosenthal Testimony, p 26, line 19) based on the testimony of witness Sim. For the utilities where Itron conducted the participant test calculations and

screens (JEA, OUC, and FPUC), this claim is incorrect. Indeed, all of the participant test analyses conducted by Itron included measure incentives, as shown explicitly in the files produced by JEA, OUC, and FPUC in response to NRDC/SACE's Production of Documents requests (*see* Rebuttal Exhibit MR-18).[11]

Consistent with the inclusion of incentives in the participant cost tests, no measure that passed the Total Resource Cost (TRC) and/or the Rate Impact Measure (RIM) tests failed the participant test in the analyses conducted by Itron for JEA, OUC, and FPUC, as stated in Itron's response to NRDC/SACE's First Set of Interrogatories to Itron (*see* question 2(a)(ii), Rebuttal Exhibit MR-19).

Q: Is witness Mosenthal's interpretation of how measures were "bundled" and "unbundled" in the achievable potential study accurate?

A: No. Witness Mosenthal postulates that Itron "bundled" measures together across building types for purposes of assessing cost-effectiveness and that this bundling resulted in some measures being inappropriately screened out of the analysis during cost-effectiveness testing (Mosenthal Testimony, p 8, lines 22-23; p 43, lines 6-14). In fact, Itron did not conduct any such measure "bundling" for purposes of assessing cost-effectiveness, nor is such measure "bundling" a part of the DSM ASSYST modeling process.

All of the cost-effectiveness analysis conducted by Itron was done at the measure-level by both building type and vintage, as is standard practice in the DSM ASSYST modeling framework. This level of cost-effectiveness analysis is reflected explicitly in the measure/building type/vintage-specific TRC and RIM ratios that were provided by

[11] JEA's response to question 5 of NRDC/SACE's Second Request for Production of Documents is provided as an example in MR-18. OUC and FPUC received the same question and gave similar responses.

JEA, OUC, and FPUC for all of the measures considered in the technical potential study in response to NRDC/SACE's First Request for Production of Documents (*see* Rebuttal Exhibit MR-20).[12]

For purposes of calculating measure-specific incentive levels for the achievable potential forecasts, Itron did aggregate or "bundle" measure costs and savings across building types. This aggregation was necessary in order to calculate weighted average incentives (under the incentive-setting criteria established by the Collaborative) at a level that is consistent with how utility rebate programs are typically administered, i.e. one incentive level for any given measure, as opposed to several building-type specific incentive levels for the same measure (which is very difficult, if not impossible, to implement in practice). To be clear, however, this aggregation exercise was only conducted for the purpose of calculating the incentive levels that were then used in the achievable potential forecasts and were not used and did not affect the cost-effectiveness analysis in any way.

Witness Mosenthal also describes a concern that even if measures were not "bundled" during the cost-effectiveness analysis, that screening measures based on binary pass-fail TRC or RIM results (as is standard practice in potential studies) inherently produces conservative estimates of true economic potential. Witness Mosenthal argues that, "in the real world, however, many technologies may be cost-effective for one customer and not for another. Thus, measures that fail an overall cost-effectiveness test on average for all customers will likely still offer large and cost-effective potential among

[12] JEA's response to question 2 of NRDC/SACE's First Request for Production of Documents is provided as an example in MR-20. OUC and FPUC received the same question and gave similar responses.

many customers. . . . Thus, the true economic and achievable potential is generally larger than estimated in these types of studies." (Mosenthal Testimony, p 44, lines 7-13). While this dynamic (sometimes referred to as "aggregation bias") is inarguably present in all potential studies that include some level of aggregation and segmentation (as opposed to modeling each decision of every member of the population individually), witness Mosenthal misrepresents this dynamic as necessarily asymmetric towards systematic underestimates of economic and achievable potential. However, the converse is also true, i.e. measures that pass an overall cost-effectiveness test on average for all customers can also be non-cost-effective for a significant portion of the eligible population, thereby overestimating true economic and achievable potential. In reality, there is a distribution of customer-specific cost-effectiveness around a population average for any given measure, and there is little if any evidence to support the claim that these distributions are necessarily or even generally asymmetric towards underestimating economic and achievable potential.

Q: Is witness Mosenthal's interpretation of how naturally-occurring energy efficiency potential was assessed and treated in the technical and achievable potential studies accurate?

A: No. Witness Mosenthal asserts that "the technical potential study only includes the remaining portion not naturally adopted by these measures" (Mosenthal Testimony, p 16, lines 7-9) and that the technical potential analysis "also specifically accounts for estimated base case adoption of naturally-occurring efficiency" (Mosenthal Testimony, p 14, lines 5-7). These assertions support witness Mosenthal's conclusions that the technical potential of measures with paybacks of less than two years are "opportunities

that customers have not and are not expected to adopt on their own" (Mosenthal Testimony, p 14, lines 6-7) and that "100% of the estimated technical potential associated with measures that payback in less than 2 years will not be captured in Florida absent some DSM intervention" (Mosenthal Testimony, p 16, lines 9-11). This interpretation of how naturally-occurring potential was assessed and treated in the technical and achievable potential studies is incorrect and leads to inaccurate conclusions.

In contrast to witness Mosenthal's interpretation, Itron did not specifically account for or attempt to quantify the amount of naturally-occurring energy efficiency potential embedded in the FEECA utilities' load forecasts. Specifically, the technical potential estimates developed by Itron reflect the full, technically feasible savings potential from *all* measures analyzed in the study, regardless of the payback times of any given measure. The achievable potential estimates then reflect the estimated adoption of each measure based on the cost-effectiveness to the customer, stock turnover rates, and customer awareness. In this respect, both of witness Mosenthal's conclusions are inaccurate as demonstrated by Itron's forecasts of naturally-occurring adoption for measures with paybacks of less than two years provided in response to NRDC/SACE's First Set of Interrogatories to Itron (*see* question 2, Rebuttal Exhibit MR-19).

Q: Is witness Mosenthal's interpretation of how customer awareness, customer economics, and market barriers interact in the DSM ASSYST modeling framework accurate?

A: No. Witness Mosenthal argues that the overall adoption modeling methodology used by Itron is problematic because customer awareness is assumed to be static (Mosenthal Testimony, p 46, lines 1-2). In fact, Itron's adoption forecasts for the FEECA utilities

reflect significant increases in customer awareness over the forecast period resulting from explicit utility assumptions about DSM marketing expenditures going forward.

As described in Itron's response to question 5 of NRDC/SACE's First Set of Interrogatories to the FEECA utilities, in the DSM ASSYST modeling framework, starting year awareness (i.e. awareness in year zero of the forecast period) for each measure is estimated as a function of its benefit-cost ratio without incentives such that more cost-effective measures have higher starting awareness levels compared to less cost-effective measures. Going forward in the forecast period, cumulative awareness is estimated as a function of the measure benefit-cost ratio with incentives, awareness decay assumptions, utility program marketing budgets, and marketing effectiveness assumptions. All of the utility marketing budgets assumed in Itron's achievable potential forecasts, along with the marketing effectiveness assumptions, and awareness decay assumptions were provided by Itron in response to NRDC/SACE's First Set of Interrogatories to the FEECA utilities (*see* Rebuttal Exhibit MR-21).[13]

Witness Mosenthal also claims that customer economics is the only parameter that drives customer adoption in the DSM ASSYST model (Mosenthal Testimony, p 46, lines 3-4) and that the resulting penetration rates in Itron's achievable forecasts are constant (Mosenthal Testimony, p 48, lines 17-18). Both claims are incorrect. In fact, measure adoption was modeled as a function of both measure cost-effectiveness to the customer, stock accounting of the eligible customer market in a given year, and customer awareness, as described in my Exhibit MR-11 and Itron's responses to question 5 of

[13] PEF's response to question 5 of NRDC/SACE's First Set of Interrogatories is provided as an example in MR-21. The other FEECA utilities received the same question and gave similar responses.

NRDC/SACE's First Set of Interrogatories to the FEECA utilities. To be clear, in the DSM ASSYST modeling framework, forecasted measure adoption can and does increase as a result of increases in the measure BC ratio (from utility program incentives) and/or increases in customer awareness (from utility marketing and education efforts).

In this respect, the DSM ASSYST model indeed has the flexibility and functionality required to capture the effects of utility efforts to increase customer awareness that witness Mosenthal argues are critical to successful DSM programs (Mosenthal Testimony, p 47, lines 4-6). Furthermore, the impacts of the utility marketing assumptions on forecasted measure penetration rates is evident in the results generated by Itron for the FEECA utilities. As shown in Itron's response to question 26 of NRDC/SACE's Second Set of Interrogatories to FPL (*see* Rebuttal Exhibit MR-22) and Itron's response to question 43 of Staff's Seventh Set of Interrogatories to OUC (*see* Rebuttal Exhibit MR-23), the annual measure penetration rates forecasted by the DSM ASSYST model increase significantly throughout the forecast period and are not, as witness Mosenthal claims, constant over time. These increasing measure penetration rates show the combined effects of utility incentives and utility marketing efforts. Indeed, witness Mosenthal is correct in his assertion that the effect of utility incentives on customer adoption is estimated as a constant effect in the DSM ASSYST modeling framework. Importantly, however, it is only constant within the *eligible and aware* market (as reflected in the outputs voluntarily provided by Itron to NRDC/SACE for review). Therefore, the increasing measure penetration rates in Itron's adoption forecasts explicitly reflect significant growth in the *size of the aware market* resulting from utility marketing expenditures throughout the forecast period.

Finally, witness Mosenthal claims that "the average of the maximum penetration rates for each measure for FPL's analysis of the residential sector ranges from a low of 6.8% (RIM-Low scenario) to a high of 17.1% (TRC-High scenario). For the commercial sector, the figures are 9.3% and 17.9%" (Mosenthal Testimony, p 48, lines 14-17). This characterization of the maximum penetration rates forecasted by Itron is incorrect and misleading. First, the penetration rates quoted by witness Mosenthal are only relative to the *eligible and aware* market and thus ignore the forecasted impacts of utility marketing expenditures as described above. Second, witness Mosenthal characterizes results from the RIM-Low scenarios as being representative of the "maximum" penetration rates forecasted by Itron, when those results are clearly not being presented by either Itron or the FEECA utilities as estimates of "maximum" penetration rates or "maximum" achievable potential. Third, the summary statistics presented by witness Mosenthal are unweighted simple averages across all measures. These simple averages mask both the broad range of measure-specific penetration rates and the relative contributions of each measure to the aggregate achievable potential. In fact, the measure-specific "maximum" penetration rates forecasted by Itron for FPL range from 1% to over 50% in the residential sector and 1% to over 70% in the commercial sector depending on the relative importance of BC ratio among measures (due to market barriers) and measure-specific incentive levels, as shown in Itron's response to question 26 of NRDC/SACE's Second Set of Interrogatories to FPL (Rebuttal Exhibit MR-22). Moreover, when taking into account the differences in per-unit energy savings across measures, the true weighted-average "maximum" penetration rate for FPL is 30.8% for residential and 52.1% for commercial in the TRC-H scenario, in contrast to the 17.1% and 17.9% simple averages

respectively offered by witness Mosenthal. The calculations supporting the weighted-average values reported above are provided in Rebuttal Exhibit MR-24.

Q: Are witnesses Mosenthal and Spellman's characterizations accurate that the achievable penetration rates estimated by Itron do not represent effective and well-designed utility programs?

A: No. Witness Mosenthal argues that the effect of using current program accomplishments in Florida to calibrate the adoption curves used in the analysis is to "arbitrarily limit the achievable potential analysis to no more than what Florida is currently doing" (Mosenthal Testimony, p 51, lines 19-20). Witness Spellman argues that "it is not appropriate to constrain future estimates of market penetration to the achievements made in the past in Florida when the RIM test prevented many energy efficiency programs from being implemented" (Mosenthal Testimony, p 25, lines 5-7). These claims are incorrect with respect to our adoption modeling methods, and the adoption calibration process itself constrained the overall study results.

For measures and incentive levels consistent with current program offerings, the forecasted *first-year* adoptions of those particular measures in those particular incentive scenarios were calibrated to recent program accomplishments. However, for incentive scenarios where the assumed incentive levels exceeded current rebates offered by the FEECA utilities, the adoption forecasts were by definition not constrained by past program accomplishments. This is because the higher incentive levels (compared to the calibration case) necessarily result in higher customer adoption in the DSM ASSYST modeling framework and therefore higher adoption than has been observed in recent programs. Additionally, the impacts of utility marketing expenditures on customer

awareness accumulate going forward in the forecast and result in additional, incremental adoptions beyond those predicted solely as a result of utility incentives (as described earlier).

Witness Mosenthal also claims, "existing program results certainly establish a floor of what can be done, but do not represent the most that can be done" (Mosenthal Testimony, p 49, lines 8-10). The implication of this argument is that the assumption that program delivery will improve dramatically and steadily into the future should drive the forecast results rather than revealed customer preferences and the observed performance of good average industry programs.

As stated earlier in this rebuttal, the overall program costs and savings forecasted in previous achievable potential studies conducted by Itron/KEMA have been shown to be consistent with actual portfolio results, including jurisdictions that have pursued aggressive program funding levels (e.g. California). Indeed, Itron and KEMA have produced achievable potential forecasts in other studies with measure penetrations reaching 60% in 10 years under aggressive programs and up to 80% for particular measures using the same DSM ASSYST model, the same set of adoption curves, and the same calibration processes.

Itron strives to forecast expected-value adoption levels based on good program practices, observed customer preferences, and known measure costs and savings. In all of the potential studies conducted by Itron, Itron's primary objective is to forecast the *most probable* level of adoptions and total program costs and savings given the screening, cost effectiveness, incentives, and other criteria that define each scenario.

TRC COSTS AND BENEFITS

Q: Do you agree with witness Mosenthal's position that it is not reasonable to use discount rates based on the utility's cost of capital when performing the TRC test?

A: The use of the utility's cost of capital as the discount rate when performing the TRC test is standard practice in potential studies. The use of the utility's cost of capital as the discount rate in TRC tests is also standard practice in California and other jurisdictions that use TRC to evaluate the cost-effectiveness of rate-payer funded energy efficiency programs. *See*, for example, the California Public Utilities Commission's Energy Efficiency Policy Manual (CPUC, 2008).[14]

SUMMARY

Q: Have any of NRDC/SACE or Staff's witnesses demonstrated Itron's data inputs, assumptions, methods, and models to be flawed?

A: No. None of the testimonies of witnesses Wilson, Mosenthal, and Spellman have explicitly demonstrated that the data inputs, assumptions, methods, and models used by Itron to estimate potential, given the scope and criteria set for the study by the FEECA utilities, are flawed or produce biased results. The NRDC/SACE or Staff's witnesses have not provided any evidence that alternative models offer superior features or parameters to the DSM ASSYST model or that our input data are inaccurate or biased. Itron staff has used the same models and quality of data in this study as we have in our previous potential studies. We have produced a wide range of efficiency potential estimates within and across studies as a function of differences in project scopes and

[14] See the *Energy Efficiency Policy Manual, Version 4.0* (CPUC, 2008) available at: http://www.cpuc.ca.gov/NR/rdonlyres/F17E8579-3409-4089-8DE4-799832CF682E/0/PolicyRulesV4Final.doc

efficiency scenario definitions. The underlying data and modeling methods we have used are consistent across these studies. Itron staff has been industry leaders in the development and implementation of efficiency potential studies for over twenty years. Our documentation and results have been accepted and used for goal setting in jurisdictions throughout the United States.

Itron strives to produce expected value forecasts of potential savings from energy efficiency that are comprehensive, bottom-up, unbiased, transparent, and internally-consistent. Forecasts with these characteristics form a defensible basis upon which to realistically evaluate the size of the achievable potential resource and the expected costs (to customers and utilities) to acquire that resource over a given time frame for a given set of conditions.

Q: Does that conclude your rebuttal testimony?

A: Yes.

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Commission review of numeric conservation goals (Progress Energy Florida, Inc.).

Docket No. 080408-EG

Submitted for Filing: May 26, 2009

PROGRESS ENERGY FLORIDA'S RESPONSES TO STAFF'S THIRD SET OF INTERROGATORIES (NOS. 12-18)

Progress Energy Florida, Inc. ("PEF"), responds to STAFF's Third Set of Interrogatories to PEF (Nos. 12-18), as follows:

INTERROGATORIES

12. Please explain how the electric energy efficiency and demand response potential for the residential, commercial, and industrial new construction market segments will be addressed in the technical and achievable potential study.

Response:

The residential and commercial new construction market segments were modeled as separate market segments in the achievable potential study, using the same supply-curve and adoption forecasting methodologies (as implemented in KEMA's DSM ASSYST model) that were applied to the residential and commercial existing construction markets. Note that industrial new construction was not modeled separately. However, small growth (0.5% per year) in total industrial load is captured and reflected in the achievable potential results for the industrial sector. The only differences between the new construction and existing construction analyses for the residential and commercial sectors were related to the baseline data, the measure data, and the population data. Each of these differences is described in more detail below.

In the new construction analyses, the baseline end-use energy intensities (kWh/home for residential and kWh/square foot for commercial) were adjusted to reflect minimum code baselines for new construction in Florida. Specifically, the residential heating, ventilation, and air conditioning (HVAC) baselines were adjusted to reflect the 13 SEER federal minimum efficiency standard for central air conditioners and heat pumps. In commercial new construction, the lighting, HVAC, and refrigeration

baselines were adjusted to reflect end-use energy intensities consistent with the 2007 Florida Building Code.

The second key difference in the new construction analyses was the list of energy efficiency measures modeled. In residential new construction, the achievable potential forecast was based on a direct subset of the measures modeled in the existing construction analysis reflecting only those measures that are applicable to residential new construction. For example, the AC Maintenance and Proper Refrigerant Charging measures are not applicable to new construction and were thus removed from the analysis. Similarly, the R-0 to R-19 Ceiling Insulation measure is not applicable to new construction due to minimum code requirements. Specifically, the following measures were removed from the residential new construction analysis (as numbered and shown in Appendix B of each FEECA utility's technical potential report): 110, 112-115, 119-120, 122-127, 252, 408-411. In commercial new construction, the FEECA utilities choose to consider measure "packages" that reflect integrated design approaches with whole-building energy reduction targets rather than a direct subset of the itemized measures considered in the commercial existing construction analysis. These measure "packages" were defined to achieve the following energy reduction targets relative to code: 15% more efficient lighting, 25% more efficient lighting, 10% more efficient cooling and ventilation, 30% more efficient cooling and ventilation, 10% more efficient commercial refrigeration, and 20% more efficient commercial refrigeration.

The third key difference in the new construction analyses was the population data used to estimate the size of the eligible market. For the existing construction analyses, the eligible market is defined by the current residential and commercial building stocks in each FEECA utility. For the new construction analysis, the eligible market is defined by the annual new construction rates expected in each FEECA utility. For this study, Itron developed estimates of annual residential and commercial new construction rates based on the revised load forecasts developed by each FEECA utility for their 2009 Ten-Year Site Plan filings submitted in April 2009.

13. Please explain why the following energy efficiency measures were excluded from the Energy Efficiency Technical Potential Study. As part of this response, please provide an estimated kWh and kW savings potential for each measure based on the Florida market.

Residential Sector:

A. Smart Strips/Phantom Load Switch
B. Second refrigerator turn-in
C. Light Emitting Diode (LED) lighting
D. Programmable thermostats
E. Second freezer turn-in
F. Zero-energy homes
G. T-5 lighting
H. Daylighting/Solar tubes
I. Dimmable CFLs
J. LED Holiday Lighting

Response:

In general, the residential efficiency measures listed below were excluded from the technical potential study due to either: 1) a lack of reliable and readily available cost, savings, or baseline data to support a robust analysis of potential and/or 2) evidence that the incremental energy savings associated with particular measures overlapped and were being captured by other measures in the analysis. Below, we provide explanations specific to each of the measures listed below.

Note that since these measures were not assessed as part of the study, kWh and kW savings potential estimates for those measures in Florida were never produced and are thus not available.

Residential Sector:

A. Smart Strips/Phantom Load Switch

Smart Strips save energy by reducing or eliminating standby power losses from home electronics that draw power in "off" mode. The Energy Star home electronics measures considered in the study are specifically designed to capture those same savings (i.e. reduction or elimination of standby power losses) using power management technology in the end-use device itself, rather than at the plug.

Note that Itron also explored including Green Plugs as a measure in the study but determined that this technology is currently upstream OEM technology, applicable only to DC-powered portable electronics and that currently there are no products commercially available with embedded Green Plug technology.

B. Second refrigerator turn-in

Second refrigerator early retirement was not included as a measure in this study because the evaluation literature indicates that this measure often has very high levels of free ridership. We note, for example, that the long-term saturation of second refrigerators in states with many years of refrigerator retirement programs, such as California, shows little if any reduction.

C. Light Emitting Diode (LED) lighting

LEDs were not included in the study because this lighting technology currently delivers less energy savings per fixture compared to CFLs (30-50% for LEDs compared to 60-75% for CFLs) and costs approximately 10 times as much as a CFL (~$30/lamp for LEDs compared to $2-3/lamp for CFLs). In this respect, the technical potential of LEDs is largely subsumed in the technical potential of CFLs given that the applicability of these technologies to residential lighting applications is similar.

D. Programmable thermostats

This measure was excluded for two reasons. First, ex-post evaluations of energy savings are inconclusive regarding whether material savings result from this measure. Second, evaluation studies indicate very high levels of free ridership because programmable thermostats are standard practice.

E. Second freezer turn-in

Second freezer early retirement was not included as a measure in this study because the evaluation literature indicates that this measure often has very high levels of free ridership.

F. Zero-energy homes

Zero-energy homes are bundles of energy efficiency measures and distributed generation technologies, typically consisting of high levels of insulation, reflective roof surfaces, high-efficiency end-use equipment, solar thermal water heating, and rooftop solar photovoltaic (PV) arrays for generating electricity to displace power from the utility grid. Each of these components of zero-energy homes was included as individual measures in the technical potential study.

G. T-5 lighting

T-5 lighting was not included in the study primarily because this technology exhibits very similar energy savings characteristics as the T-8 measure that was included in the study, i.e. the luminous efficacy (lumens per watt) of T-5 lamps is similar to that of T-8 lamps. In this respect, the technical potential of T-5 lamps is subsumed in that of T-8 lamps.

H. Daylighting/Solar tubes

Residential daylighting was not included in the study due a lack of reliable costs and savings data and reliable estimates of the interactions between increased solar gains from this measure with residential HVAC loads.

I. Dimmable CFLs

Since the luminous efficacy of dimmable CFLs is the same or lower than that of non-dimmable CFLs, the technical potential of dimmable CFLs is subsumed in the technical of non-dimmable CFLs to the extent that the applicability of dimmable and

non-dimmable CFLs overlap significantly. Additionally, the reliability and performance of dimmable-CFLs is currently poor compared to non-dimmable CFLs, which adds significant uncertainty to estimating the costs and savings of current dimmable CFL products.

J. LED Holiday Lighting

LED Holiday Lighting was excluded from the study primarily due to a lack of reliable baseline data on holiday lighting saturation, unit consumption, and usage patterns in Florida. In addition, this is likely a relatively small measure in terms of aggregate savings.

14. Please explain why the following energy efficiency measures were excluded from the Energy Efficiency Technical Potential Study. As part of this response, please provide an estimated kWh and kW savings potential for each measure based on the Florida market.

Commercial Sector:

A. Programmable Thermostat
B. Energy Efficiency "Smart" Power Strip for PC/Monitor/Printer
C. Energy Star Compliant Single-Door Refrigerator
D. Vending Miser for Non-Refrigerated Machines
E. Specialty Lighting
F. Integrated Building Design
G. Energy Efficient Windows
H. High Efficiency Steamer
I. High Efficiency Holding Cabinet
J. Induction Cook-tops
K. Refrigeration Economizer
L. Commercial Reach-In Cooler
M. Commercial Reach-In Freezer
N. Commercial Ice-Maker
O. Zero-Energy Doors – Coolers
P. Zero-Energy Doors – Freezers
Q. Door Heater Controls
R. Discuss Compressor
S. Scroll Compressor
T. Floating Heat Pressure Control
U. Pools – pumps, temperature controls, etc.
V. High Efficiency Hot Tubs/Spas

Response:

In general, the commercial efficiency measures listed below were excluded from the technical potential study due to either: 1) a lack of reliable and readily available cost, savings, or baseline data to support a robust analysis of potential and/or 2) evidence that the incremental energy savings associated with particular measures overlapped and were being captured by other measures in the analysis. Below, we provide explanations specific to each of the measures listed below.

Note that several measures listed below were indeed included in the technical potential study.

For the measures that were not included in the study, kWh and kW savings potential estimates for those measures in Florida were never produced and are thus not available.

Commercial Sector:

A. Programmable Thermostat

This measure was excluded for two reasons. First, ex-post evaluations of energy savings are inconclusive regarding whether material savings result from this measure. Second, evaluation studies indicate very high levels of free ridership because programmable thermostats are standard practice.

B. Energy Efficiency "Smart" Power Strip for PC/Monitor/Printer

Smart Strips save energy by reducing or eliminating standby power losses from office equipment that draw power in "off" mode. The Energy Star office equipment measures considered in the study are specifically designed to capture those same savings (i.e. reduction or elimination of standby power losses) using power management technology in the end-use device itself, rather than at the plug.

C. Energy Star Compliant Single-Door Refrigerator

This measure was not included in the study for two main reasons. First, the commercial refrigeration measures assessed by Itron (see measures 501-517 in Appendix B of each FEECA utilities' technical potential report), focused on measures applicable to remote refrigeration systems, which are the primary type of refrigeration systems used in grocery stores. Second, Itron expects that the 2010 EPACT standards for self-contained, single-door refrigerators will adopt minimum efficiency levels approximating current Energy Star compliant performance levels. This expected change to the baseline for self-contained, single-door commercial refrigerators would result in very little incremental savings, if any, from units compliant with the current Energy Star product specification.

D. Vending Miser for Non-Refrigerated Machines

This measure is included in the study. See measure 901 ("Vending Misers") in Appendix B of each FEECA utility's technical potential report.

E. Specialty Lighting

This does not appear to be a specific energy efficiency measure per se. Note that the technical potential study included efficiency measures applicable to the following commercial lighting types: general service indoor lighting, high-bay indoor lighting, and outdoor lighting.

F. Integrated Building Design

Integrated building design measures were included in the achievable potential analysis for commercial new construction, as indicated in the response to Question 12.

G. Energy Efficient Windows

Advanced windows were not included as a measure in the existing construction analysis primarily because the stock turnover rate for replacement windows in existing commercial buildings is very slow, such that this measure does not represent a significant energy savings opportunity in existing commercial construction. Indeed,

FPL has offered incentives for efficient window replacements in commercial buildings as part of its building envelope program for the past ten years and has experienced zero participation. Note that advanced windows are implicitly included in the integrated design "packages" analyzed in commercial new construction.

H. High Efficiency Steamer

This measure was excluded for two main reasons. First, commercial electric cooking accounts for a very small share of total electricity sales and peak demand from commercial customers in Florida (approximately 2% - see Figures 3-13 to 3-15 in each FEECA utilities' technical potential report). Given the limited time and resources available for this study, Itron focused first and foremost on the largest end uses and the respective efficiency measures applicable to those end uses. Second, in Itron's judgment, there is still a high level of uncertainty regarding both the costs and savings associated with commercial cooking measures, which severely limits the reliability of related estimates of technical potential and cost-effectiveness.

I. High Efficiency Holding Cabinet

This measure was excluded for two main reasons. First, commercial electric cooking accounts for a very small share of total electricity sales and peak demand from commercial customers in Florida (approximately 2% - see Figures 3-13 to 3-15 in each FEECA utilities' technical potential report). Given the limited time and resources available for this study, Itron focused first and foremost on the largest end uses and the respective efficiency measures applicable to those end uses. Second, in Itron's judgment, there is still a high level of uncertainty regarding both the costs and savings associated with commercial cooking measures, which severely limits the reliability of related estimates of technical potential and cost-effectiveness.

J. Induction Cook-tops

This measure was excluded for three main reasons. First, commercial electric cooking accounts for a very small share of total electricity sales and peak demand from commercial customers in Florida (approximately 2% - see Figures 3-13 to 3-15 in each FEECA utilities' technical potential report). Given the limited time and resources available for this study, Itron focused first and foremost on the largest end uses and the respective efficiency measures applicable to those end uses. Second, in Itron's judgment, there is still a high level of uncertainty regarding both the costs and savings associated with commercial cooking measures, which severely limits the reliability of related estimates of technical potential and cost-effectiveness. Third, this particular commercial cooking technology has historically had very high incremental costs.

K. Refrigeration Economizer

Refrigeration economizers (bringing in outside air to provide free cooling for large, walk-in coolers or freezers) were not included in the study due to the limited feasibility of this measure in the Florida climate. Specifically, refrigeration economizers require outside air temperatures to be at or lower than the desired temperature inside walk-in coolers and freezers for a significant period of time in order to derive energy savings benefits. Florida's warm climate, even during the winter season, severely limits the number of hours where refrigeration economizers can be effective energy savings strategies. Additionally, the ambient humidity levels of outside air in Florida pose a significant barrier to the use of outside air

economizers as an efficiency measure due to the additional energy required to remove moisture from any outside air brought into conditioned spaces.

L. Commercial Reach-In Cooler
This does not appear to be a specific energy efficiency measure per se. Note that the commercial refrigeration measures assessed by Itron (see measures 501-517 in Appendix B of each FEECA utilities' technical potential report), focused on measures applicable to remote refrigeration systems. In grocery store settings, these remote refrigeration systems serve many different kinds of refrigerated spaces (e.g. walk-in coolers, display cases, etc.) including reach-in coolers.

M. Commercial Reach-In Freezer
This does not appear to be a specific energy efficiency measure per se. Note that the commercial refrigeration measures assessed by Itron (see measures 501-517 in Appendix B of each FEECA utilities' technical potential report), focused on measures applicable to remote refrigeration systems. In grocery store settings, these remote refrigeration systems serve many different kinds of refrigerated spaces (e.g. walk-in coolers, display cases, etc.) including reach-in freezers.

N. Commercial Ice-Maker
This does not appear to be a specific energy efficiency measure per se.

O. Zero-Energy Doors – Coolers
This measure is included in the study. See measure 513 ("High R Value Glass Doors") in Appendix B of each FEECA utility's technical potential report.

P. Zero-Energy Doors – Freezers
This measure is included in the study. See measure 513 ("High R Value Glass Doors") in Appendix B of each FEECA utility's technical potential report.

Q. Door Heater Controls
This measure is included in the study. See measures 511 ("Anti-sweat Controls") in Appendix B of each FEECA utility's technical potential report.

R. Discus Compressor
This measure is a form of high efficiency compressors for refrigeration systems. High efficiency compressors for commercial refrigeration systems are included in the study (see measure 505 in Appendix B in each FEECA utilities' technical potential report).

S. Scroll Compressor
This measure is a form of high efficiency compressors for refrigeration systems. High efficiency compressors for commercial refrigeration systems are included in the study (see measure 505 in Appendix B in each FEECA utilities' technical potential report).

T. Floating Head Pressure Control
This measure is included in the study. See measure 507 ("Floating Head Pressure Controls") in Appendix B of each FEECA utility's technical potential report.

U. Pools – pumps, temperature controls, etc.

This measure was not included in the study due to a lack of data required to reasonably characterize separate baselines for energy consumption and peak demand associated with swimming pools in commercial facilities. Specifically, the 1996 commercial end-use survey conducted by Regional Economic Research for FPL did not develop or estimate end-use saturations, equipment densities, full load equivalent operating hours, or connected loads for commercial swimming pools, and other independent baseline estimates for this commercial end use were not readily available at the time of the study.

V. High Efficiency Hot Tubs/Spas

This measure was not included in the study due to a lack of data required to reasonably characterize separate baselines for energy consumption and peak demand associated with hot tubs and spas in commercial facilities. Specifically, the 1996 commercial end-use survey conducted by Regional Economic Research for FPL did not develop or estimate end-use saturations, equipment densities, full load equivalent operating hours, or connected loads for commercial hot tubs and spas, and other independent baseline estimates for this commercial end use were not readily available at the time of the study.

16. Please provide the adjustments, equations, and assumptions used to calculate the Base UECs/EUIs for all of the measures as they appear in Appendix C.

Response:

The primary source for the residential end-use UECs shown in Appendix C was evaluation-based end-use estimates previously developed by Itron for FPL. For weather-sensitive end uses, separate estimates were available for each of the three DCA climate zones in Florida.

For the other FEECA utilities, baseline space heating loads were adjusted to take into account significant differences in the number of annual heating degree-days (HDDs) between the FPL's service territory and the service territories of the other FEECA utilities. These adjustments were based on the relative magnitude of HDDs at FPL weather stations and HDDs at representative weather stations in other FEECA utilities. The weather station, HDD data, and resulting indices used to scale space heating loads in the other FEECA utilities are shown in Attachment B.

FPL-based residential water heating UECs were also adjusted to account for significantly higher inlet water temperatures in FPL's service territory compared to those in the service territories of the other FEECA utilities. These water heating adjustments were based on estimates of the average ground water temperature differences in each of the FEECA utilities (see Attachment C). The relative impact of those inlet water temperature differences on water heating loads were then estimated using a residential hot water demand model developed by Itron for FPL that allows inlet water temperatures to be defined as an input.

The primary source of the commercial EUIs used in the study is again the commercial end-use survey conducted by Regional Economic Research for FPL in 1996 (see Attachment D). These end-use level EUIs were then disaggregated into the technology-specific baseline EUIs shown in Appendix B of each FEECA utilities' technical potential reports using data on the relative saturations (shown as applicability factors in Appendix B) and the relative efficiencies of those technologies. This disaggregation results in technology-specific EUIs that, when multiplied by the respective technology saturation levels, sum to the original end-use level EUIs.

18. Please address the percent differences between the residential, commercial, and industrial baseline bottom-up estimates and the 2007 historical sales data obtained from PEF's Ten Year Site Plan filed in April 2009 that fall outside of a 5% range.

2007	10-Yr. Site Plan [GWh]				Bottom-Up Baseline Estimate[1] [GWh]				% Difference[3] [%]			
FEECA Utility	Res.	Com.	Ind.	C&I[2]	Res.	Com.	Ind.	C&I[2]	Res.	Com.	Ind.	C&I[2]
PEF (Progress)	19,912	12,184	3,819	16,003	20,645	11,544	2,670	14,214	4%	-5%	-30%	-11%

Notes:

1. Bottom-Up Baseline Estimates were obtained from PEF's Technical Potential Study. The TOTAL estimates were obtained from the statewide study.
2. C&I is the combined data for the commercial and industrial sectors.
3. % Differences = [Estimate – Historical Data]/[Historical Data]

Response:

There are four main reasons why the residential, commercial, and industrial baseline estimates as developed for the study do not fall within 5% of the 2007 sales data shown in the Ten Year Site Plans (TYSPs) filed by each FEECA utility in April 2009.

First, the bottom-up baselines describe energy consumption as the customer level, without accounting for transmission and distribution losses. In contrast, the sales data shown in the TYSPs are at the generator level and therefore include transmission and distribution losses.

Second, the methods used by Itron to classify customers as commercial or industrial are fundamentally different from those used by the FEECA utilities in their TYSPs. As described in Chapter 3 of each FEECA utilities' technical potential report, Itron used customer-specific Standard Industrial Classification (SIC) data (as made available from each FEECA utilities' customer information systems) as the basis for classifying customers as commercial or industrial. In the TYSPs, the FEECA utilities use customer rate class to categorize customers as either commercial or industrial, as has been standard practice in TYSP filings.

Third, the bottom-up baselines developed by Itron specifically reflect the end-use sectors that were within the analytic scope of the technical potential study. As described in Chapter 2 of each FEECA utilities' technical potential report, the specific sectors that were out-of-scope for purposes of the technical potential analysis were the following: agriculture, construction, transportation, communications, utilities, outdoor and street lighting, and temporary service accounts. The shares of total 2007 actual sales to out-of-scope sectors are shown explicitly in Figure 2-2 in each FEECA utilities' technical potential report.

Fourth, the bottom-up baselines developed by Itron are calibrated to in-scope actual totals as much as possible by making logical, internally-consistent adjustments to the end-use baseline data (e.g. the space heating and water heating scalars described in response to Q16). Generally, these adjustments are conducted until the bottom-up totals come to within 5-7% of actual in-scope total sales and system peak demand. However, in order to minimize systematic bias in the efficiency analysis (due to, for example, particular weather or economic conditions in a particular year), the bottom-up baselines were purposefully not artificially calibrated such that the bottom up totals exactly matched actual in-scope sales totals.

FLA_WaterTemperatures_ALL

Type	FPLorNOT	CityName	Weather	WaterID	January	February	March	April	May	June	July
Normal	FPL	Daytona Beach	Daytona Beach, FL Normal	N12834	65.9	64.0	63.9	64.8	68.4	72.0	75.2
Normal	FPL	Miami	Miami, FL Normal	N12839	73.1	71.9	71.8	72.4	74.8	77.2	79.3
Normal	FPL	Vero Beach	Vero Beach, FL Normal	N12843	65.9	64.0	66.2	66.9	71.2	73.9	78.2
Normal	NonFPL	Gainesville	Gainesville, FL Normal	N12816	59.0	55.0	58.8	60.6	66.3	71.0	76.6
Normal	NonFPL	Jacksonville	Jacksonville, FL Normal	N13889	62.4	60.1	59.9	61.0	65.5	70.0	73.9
Normal	NonFPL	Orlando	Orlando, FL Normal	N12815	63.8	60.7	63.8	65.6	70.1	73.8	78.2
Normal	NonFPL	Pensacola	Pensacola, FL Normal	N13899	61.3	58.7	58.5	59.8	64.8	69.7	74.0
Normal	NonFPL	Tallahassee	Tallahassee, FL Normal	N93805	60.8	58.3	58.1	59.3	64.1	68.9	73.0
Normal	NonFPL	Tampa	Tampa, FL Normal	N12842	67.5	65.5	65.4	66.3	70.0	73.6	76.7

FLA_WaterTemperatures_ALL

August	September	October	November	December	Annual average		
77.2	77.3	75.7	72.7	69.2	70.5	**FPL ave**	**73.0**
80.6	80.7	79.6	77.6	75.3	76.2		
79.2	78.8	78.0	74.9	70.8	72.3		
77.2	76.9	74.9	69.3	64.1	67.5	**Other 5 ave**	**68.3**
76.3	76.5	74.5	70.8	66.4	68.1	**Non-FPL diff**	**4.8**
79.2	79.0	77.4	73.5	68.8	71.2		
76.8	77.0	74.8	70.6	65.8	67.7		
75.6	75.8	73.7	69.7	65.1	66.9		
78.7	78.9	77.3	74.2	70.7	72.1	For TECO use FPL	

These are the ground water temperatures that are used in SitePro to simulate water heating loads.
They are derived from the ground temperatures developed via DOE2 when the weather files are converted to BIN files.
We use an algorithm that utilizes an average of the ground temperature and the air temperature then shifts that temperature to the previous month.

Results for all 4 types of SitePro weather files are here, but your best bet is probably the "Normal" weather files (filtered to show only this)

Original end use EUIs from 1996 FPL CEUS (kWh/sq ft):

	Office	Restaurant	Retail	Food Store	School	College	Health	Other Medi	Warehouse	Hotel/Motel	Miscellaneous
Heating	0.07	0.15	0.09	0.03	0.10	0.06	0.17	0.37	0.00	0.09	0.07
Cooling	6.07	19.03	6.73	15.36	5.99	4.44	15.51	10.77	1.05	6.70	3.40
Ventilation	1.62	4.70	1.41	3.14	1.61	1.82	7.94	2.04	0.24	1.36	1.11
Water Heat	0.14	2.00	0.07	0.28	0.36	0.31	0.18	1.25	0.01	0.47	0.19
Cooking	0.21	12.08	0.15	2.68	0.33	0.21	0.56	0.95	0.04	0.52	0.18
Refrig	0.32	13.85	0.79	29.89	0.58	0.16	0.72	0.94	1.46	0.71	0.40
Outside Light	0.55	2.73	1.43	1.76	0.61	1.20	0.38	0.49	0.34	0.87	1.78
Inside Light	4.48	8.37	6.77	12.36	3.55	3.48	6.29	4.90	1.69	2.73	3.10
Office Equip	1.14	0.36	0.31	0.30	0.19	0.36	0.95	0.20	0.15	0.15	0.26
Misc	0.60	1.24	0.79	1.14	0.44	0.54	2.85	1.62	0.22	0.87	3.08
Motors	0.84	0.64	0.31	0.62	0.09	0.75	3.42	0.60	0.11	1.33	1.75
Air Comp	0.02	0.00	0.13	0.08	0.01	0.06	0.24	0.05	0.01	0.01	0.15
Process	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.14
MISC	2.04	17.10	2.24	2.26	1.47	1.73	7.78	4.48	1.90	3.43	5.75

From: Caroline Guidry [Caroline.Guidry@gdsassociates.com]
Sent: Tuesday, May 05, 2009 8:27 AM
To: Ting, Michael
Subject: RE: Florida Technical Potential Study - Reproducibility of EE Results - Questions
Attachments: image001.png

Mike –

Thank you very much for clearing that up.
Your response just answered so many questions we had.
I appreciate your efforts in helping us clarify this matter.

Although, now that you've sent the FPL commercial data, would it be possible to get the same inputs for the other 6 utilities?
Thanks again.
-Caroline

From: Ting, Michael [mailto:Michael.Ting@itron.com]
Sent: Monday, May 04, 2009 5:56 PM
To: Caroline Guidry
Subject: RE: Florida Technical Potential Study - Reproducibility of EE Results - Questions

Caroline,

So now that I've spent some quality time with your spreadsheet and cross checking all the values you're using, I think I see what's going on. First, the base EUI values you're using from Appendix C already reflect the adjustments for the share of the eligible market that already has a measure installed (notice that they vary by measure and are different from the stock average EUIs shown in Appendix B). Second, those base EUIs also include the line losses. What is driving the difference in results is that the floor area data shown in Table 5-2 looks to be slightly incorrect (and highly rounded). To simply matters, I've attached the input file for FPL commercial with the floor area data that went into the analysis (see the building stock tab). When I plug these data into your spreadsheet, almost all the differences drop to less than a percent. The exceptions look to be rounding errors (most are associated with very small numbers).

Mike

From: Caroline Guidry [mailto:Caroline.Guidry@gdsassociates.com]
Sent: Monday, May 04, 2009 2:09 PM
To: Ting, Michael
Subject: RE: Florida Technical Potential Study - Reproducibility of EE Results - Questions

Thanks for the answers.

However, the "Reported Values" are from Appendix C – the only thing Appendix D was used for in this spreadsheet was to determine the Top 20.

And, now that I know we need the line losses – Are the line loss values for each of the utilities something that you can provide? And if so – could you please email them to me.

Thanks again for all the help.

-Caroline

From: Ting, Michael [mailto:Michael.Ting@itron.com]
Sent: Monday, May 04, 2009 5:02 PM
To: Caroline Guidry
Subject: RE: Florida Technical Potential Study - Reproducibility of EE Results - Questions

1) At the meter
2) Use the method with line losses added

Note that you're currently comparing supply-curve adjusted results (appendix D) with un-adjusted results, so it makes sense that you're getting higher "calculated" values across the board compared to "reported" values.

If you want to compare apples to apples, use the results shown in Appendix C.

From: Caroline Guidry [mailto:Caroline.Guidry@gdsassociates.com]
Sent: Monday, May 04, 2009 1:26 PM
To: Ting, Michael
Subject: RE: Florida Technical Potential Study - Reproducibility of EE Results - Questions

Hi Mike.
Now that I've gone back with these suggestions ... I've come to another question regarding the line loss rate.

1) Are the Base UECs/EUIs at the meter (i.e., customer) level or are they at the utility level?
2) Assuming the Base UECs/EUIs are at the meter – I've recalculated the technical potential estimates for the Top 20 Measures for FPL and now can't reproduce 19 points w/in 10% of the reported potential. I understand that we're still missing the additional adjustment factor for the base to account for energy efficient equipment already installed and included in the stock estimates – but, if you could take a look at the attached spreadsheet and identify which method of calculating savings we should be using (i.e., with or without the avoided line loss adder) we would greatly appreciate it.

Thanks.
-Caroline

From: Ting, Michael [mailto:Michael.Ting@itron.com]
Sent: Monday, May 04, 2009 1:09 PM
To: Caroline Guidry
Subject: RE: Florida Technical Potential Study - Reproducibility of EE Results - Questions

Caroline,

Sorry for taking so long to get back to you. We delivered our review drafts of the EE achievable forecasts to the FEECA utilities last week, so I'm just now getting back to other priorities and took a look at your memo.

There are two small pieces of the tech potential equation that are missing from your formulation. One is an adjustment to the base EUI (which is a stock average) for the estimates of the share of the market with the measure already installed. In the case of air handler optimization in office buildings, this adjustment increases in the base EUI used in the tech potential calculation by ~10%. The second piece is simply the utility line loss rate, since GWH and MW savings are reported at the generator level to ensure apples-to-apples comparisons when the savings estimates are used to estimate avoided cost benefits. FPL's average line loss rate is 6.9%.

However, even given those two small missing pieces, when I just crunch the numbers in the example you provided, I get 42.4 GWh (not 317.9 GWh) which is within 2% of the value reported in Appendix C.2.

$$Technical\ Potential\ Savings\ [GWh] = \frac{(454{,}000{,}000\ s.f.) \cdot (100\%) \cdot \left(1.66 \frac{kWh}{s.f.}\right) \cdot (75\%) \cdot (75\%) \cdot (10\%)}{1{,}000{,}000 \frac{kWh}{GWh}}$$

Am I missing something?

Mike

From: Caroline Guidry [mailto:Caroline.Guidry@gdsassociates.com]
Sent: Friday, April 24, 2009 7:31 AM
To: Ting, Michael
Subject: Florida Technical Potential Study - Reproducibility of EE Results - Questions

Good Morning Mike.
I've attached a quick memo regarding the reproducibility of energy efficiency results.
We are still unable to reproduce all of the savings estimates for the top 20 measures within a 10% range and would appreciate some feedback or advice on how we can reconcile these differences.
I've provided an example for one measure and building-type in particular.
Thanks for your help.
-Caroline

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Engineer

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$$\textit{Technical Potential Savings [GWh]} = \frac{(454{,}000{,}000\ s.f.) \cdot (100\%) \cdot \left(1.66\ \frac{kWh}{s.f.}\right) \cdot (75\%) \cdot (75\%) \cdot (10\%)}{1{,}000{,}000\ \frac{kWh}{GWh}}$$

From: Caroline Guidry [Caroline.Guidry@gdsassociates.com]
Sent: Monday, May 04, 2009 1:36 PM
To: Ting, Michael
Subject: RE: Florida Technical Potential Study - Reproducibility of EE Results - Questions
Attachments: memo - baseline estimates.docx; image001.png

Mike -
Thanks so much for helping me out here – this one was a miscalculation on my part, and I've cleaned it up. No almost all (with the exception of about 6 data points out of the 220 for each utility) fall within 10% of the reported potential estimates.

Two quick questions though I have after reading your response –
After our last conversation, I was under the impression that the Base EUIs in Appendix C were already adjusted from the stock estimates ... is that not the case?
Also, are all estimates at the generator level and not the meter level? – If so, can you please indicated where in the report this is stated.
Thanks.

I've also attached another memo – this one regarding the baseline estimates by sector (residential and combined C&I). The residential estimates for the 5 utilities reported are within the desired 5% range ... however, none of the combined C&I estimates falls within this range. Most of these estimates are within 20% of the historical sales data as reported in the 10-yr. site plans.

If you could please provide some insight into these differences, we would greatly appreciate it.

Thanks.
-Caroline

From: Ting, Michael [mailto:Michael.Ting@itron.com]
Sent: Monday, May 04, 2009 1:09 PM
To: Caroline Guidry
Subject: RE: Florida Technical Potential Study - Reproducibility of EE Results - Questions

Caroline,

Sorry for taking so long to get back to you. We delivered our review drafts of the EE achievable forecasts to the FEECA utilities last week, so I'm just now getting back to other priorities and took a look at your memo.

There are two small pieces of the tech potential equation that are missing from your formulation. One is an adjustment to the base EUI (which is a stock average) for the estimates of the share of the market with the measure already installed. In the case of air handler optimization in office buildings, this adjustment increases in the base EUI used in the tech potential calculation by ~10%. The second piece is simply the utility line loss rate, since GWH and MW savings are reported at the generator level to ensure apples-to-apples comparisons when the savings estimates are used to estimate avoided cost benefits. FPL's average line loss rate is 6.9%.

However, even given those two small missing pieces, when I just crunch the numbers in the example you provided, I get 42.4 GWh (not 317.9 GWh) which is within 2% of the value reported in Appendix C.2.

$$Technical\ Potential\ Savings\ [GWh] = \frac{(454{,}000{,}000\ s.f.) \cdot (100\%) \cdot \left(1.66 \frac{kWh}{s.f.}\right) \cdot (75\%) \cdot (75\%) \cdot (10\%)}{1{,}000{,}000 \frac{kWh}{GWh}}$$

Am I missing something?

Mike

From: Caroline Guidry [mailto:Caroline.Guidry@gdsassociates.com]
Sent: Friday, April 24, 2009 7:31 AM
To: Ting, Michael
Subject: Florida Technical Potential Study - Reproducibility of EE Results - Questions

Good Morning Mike.
I've attached a quick memo regarding the reproducibility of energy efficiency results.
We are still unable to reproduce all of the savings estimates for the top 20 measures within a 10% range and would appreciate some feedback or advice on how we can reconcile these differences.
I've provided an example for one measure and building-type in particular.
Thanks for your help.
-Caroline

GDS Associates, Inc.
Engineers and Consultants

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Engineer

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GDS Associates, Inc.

To: Mike Ting

From: Caroline Guidry

Date: 5/4/2009

Re: Baseline Estimates

Concern: GDS is verifying the bottom-up baseline estimates for the seven FEECA utilities used in the individual technical potential reports. Comparing the bottom-up baselines to 2007 sales data as reported n each utilities April 2009 10-Year Site Plan, there are differences between several of the estimated baselines and actual sales outside of a 5% range. We are trying to reconcile these differences.

Request: It is our understanding that the baseline estimates were considered accurate for this study as long as they were within a 5% range of the 2007 historical data. Therefore, we ask that you please review the comparison of reported estimates to the data reported by the utilities in their individual 10-yr. site plans and help to clarify the situations where the estimates do not agree with the historical data (i.e., those that differ by more than 5%). GDS understands that the commercial and industrial estimates should be aggregated so that a standard comparison can be conducted. This is necessary due the differing definitions of commercial and industrial customers by rate tariff as opposed to function. However, it is uncertain if the comparison should be between the utility reported commercial and industrial data or all non-residential data. GDS has compared the bottom-up estimates to both historical aggregates (i.e., C&I and non-residential), but we would appreciate it if Itron would clarify this issue as well. Thank you.

Baseline Comparisons:

	Residential			Commercial & Industrial			Non-Residential		
FEECA Utility	Plan	Itron	%Dif	Plan	Itron	%Dif	Plan	Itron	%Dif
FPL	55,138	52,910	-4%	49,695	39,813	-20%	50,276	39,813	-21%
PEF (Progress)	19,912	20,645	4%	16,003	14,214	-11%	19,370	14,214	-27%
Gulf	5,477	5,148	-6%	6,019	4,669	-22%	6,044	4,669	-23%
TECO (Tampa)	8,871	8,092		8,908	10,093		10,662	10,093	
JEA	5,478	5,274		7,160	4,437		7,273	4,437	
OUC (Orlando)	2,223			3,770			3,856		
FPU (FL Public)									
TOTAL	97,099	94,745	-2%	91,555	76,928	-16%	97,481	76,928	-21%

Notes:
Residential – Residential Sector
Commercial & Industrial – Commercial and Industrial Sectors Aggregated
Non-Residential – All non-residential sectors aggregated
Plan – 2007 data from 2009 10-yr. site plan
Itron – as reported in utility specific technical potential study
%Dif – % difference between historical data and estimate
sdfgadfgd

$$\textit{Technical Potential Savings [GWh]} = \frac{(454{,}000{,}000\ s.f.) \cdot (100\%) \cdot \left(1.66 \frac{kWh}{s.f.}\right) \cdot (75\%) \cdot (75\%) \cdot (10\%)}{1{,}000{,}000 \frac{kWh}{GWh}}$$

Florida Power & Light Company
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Staff's Fifth Set of Interrogatories
Interrogatory No. 20
Page 1 of 1

Q.
Please reference the measure data (relating to measure kWh/kW savings, measure costs, and measure useful life) in each utility's Technical Potential Study (TPS) report and the Key Measure Data Sources and References listed in Chapter 6 of each TPS report. In order to correlate the measure data with its corresponding source(s), please complete the following three tables containing 20 energy efficiency measures. Each table refers to a specific sector.

a. In completing each of the tables, please provide the specific data source(s) relied upon to provide the measure data in the TPS report and the location within the cited source(s) (page/chapter/section/etc.).

b. In addition, please indicate which, if any, measure data were adjusted, and indicate whether it was adjusted based on the professional judgment of the consultants at Itron and/or KEMA or by consensus of the utilities.

See attachment.

A.
Please see Attachment No. 1 - response provided by Itron.

Response to Staff's 5th Interrogatories, No. 20 (Attachment)

Residential Sector						
	Measure		Savings Source		Cost Source*	Useful Life Source*
	No.	Name	kWh*	kW*		
1	401	Heat Pump Water Heater (EF=2.9)	Itron engineering calculation based on EF differences between baseline technology and measure	Itron professional judgment	DEER 2005 (measure ID D03-935)	a
2	231	CFL (18-Watt integral ballast), 2.5 hr/day	Itron engineering calculation based on wattage differences between baseline technology and measure	Itron professional judgment	DEER 2008 (cost case ID D08-RE-InLt-CFL-Int-18W) adjusted based on Itron professional judgment	a
3	241	CFL (18-Watt integral ballast), 6.0 hr/day	Itron engineering calculation based on wattage differences between baseline technology and measure	Itron professional judgment	DEER 2008 (cost case ID D08-RE-InLt-CFL-Int-18W) adjusted based on Itron professional judgment	a
4	803	Variable-Speed Pool Pump (<1 hp)	Itron professional judgment based on manufacturer claims (Intelliflo VF High Performance Pump)	Itron professional judgment	FPL Conservation R&D data	a
5	301	HE Refrigerator - 18 cuft w/ top mount frzr and no ice)	Energy Star product specification	Itron professional judgment	DEER 2008 (cost case ID ESRefg-TMLrg-452kwh)	a
6	802	High Efficiency One Speed Pool Pump (1.5 hp)	DEER 2005 (measure ID D03-966) adjusted based on Itron professional judgment	Itron professional judgment	DEER 2005 (measure ID D03-966)	FPL professional judgment
7	801	Two Speed Pool Pump (1.5 hp)	DEER 2005 (measure ID D03-967) adjusted based on Itron professional judgment	Itron professional judgment	DEER 2005 (measure ID D03-967)	FPL professional judgment
8	116	Duct Repair	2007 FPL Residential Program impact evaluations (Appendix A)	2007 FPL Residential Program impact evaluations (Appendix A)	DEER 2008 (cost case ID DuctSeal-low) adjusted based on FPL program data and Itron professional judgment	a
9	502	Energy Star CW CEE Tier 2 (MEF=2.0)	Itron engineering calculation based on MEF differences between baseline technology and measure delta	Itron professional judgment	DEER 2008 (cost case ID EffCW-lrg-ElecDHW-ElecCDryer-Elec-2p0mef)	a
10	114	Proper Refrigerant Charging and Air Flow	DEER 2005 (measure ID D03-408) averaged across all CA climate zones	DEER 2005 (measure ID D03-408) averaged across all CA climate zones	DEER 2005 (measure ID D03-408)	a

11	117	**Reflective Roof (100 Base 13 SEER Split-System CAC & Strip Heater)**	FSEC-CR-1220-00 (Table 21, white S-tile roofs); savings from light-colored tile/metal assumed to be half of white tile; assumed 25% white tile applications and 75% light-colored tile/metal applications	FPL program data	FPL program data	a
12	112	**AC Maintenance (Outdoor Coil Cleaning)**	FPL program data	FPL program data	FPL program data	a
13	105	**14 SEER Split-System Heat Pump**	Itron professional judgment based on annual FPL AC program impact evaluations and reports	Itron professional judgment based on annual FPL AC program impact evaluations and reports	FPL program tracking data	a
14	404	**AC Heat Recovery Units**	Itron professional judgment based on 1995 FPL HRU Impact Report	Itron professional judgment based on 1995 FPL HRU Impact Report	FPL program tracking data	a
15	118	**Radient Barrier**	FSEC-CR-1231-01 ("Overall Results" section) and FSEC-EN-15 ("What does a radiant barrier cost?" section) adjusted based on Itron professional judgment	FSEC-CR-1231-01 ("Overall Results" section)	FSEC-CR-1231-01 ("Economics" section)	a
16	113	**AC Maintenance (Indoor Coil Cleaning)**	FPL Estimates for Planning, 2005	FPL Estimates for Planning, 2005	FPL Estimates for Planning, 2005	a
17	121	**Default Window With Sunscreen**	Itron estimate based on RESFEN simulations for Miami, Tampa, Daytona, Jacksonville, and Tallahassee	Itron estimate based on RESFEN simulations for Miami, Tampa, Daytona, Jacksonville, and Tallahassee	DEER 2005 (measure ID D03-442)	a
18	804	**PV-Powered Pool Pumps**	Itron professional judgment	Itron professional judgment	FPL Conservation R&D data	a
19	111	**Sealed Attic w/Sprayed Foam Insulated Roof Deck**	FSEC-CR-1220-00 (Table 21, sealed attic)	Itron professional judgment based on annual FPL ceiling insulation program impact evaluations and reports	Gulf Power professional judgment	a
20	701	**Energy Star DW (EF=0.68)**	Itron engineering calculation based on MEF differences between baseline technology and measure	Itron professional judgment	DEER 2008 (cost case ID EffDW-StdSize-0p68)	a

* Please provide the specific data source(s) relied upon to provide the measure data in the TPS report and the location within the source(s) (page/chapter/section/etc.)

[a] Useful life data reflect Itron professional judgment informed principally by EUL values in DEER 2001-2008.

Note that DEER 2008 and DEER 2005 exist only as electronic databases and thus do not have reference-able page numbers, chapter numbers, or section numbers as requested. Both of these databases are available online at http://www.deeresources.com. In lieu of page/chapter/section number information, the measure ID numbers are provided.

Commercial Sector						
	Measure		Savings Source			Useful Life Source*
	No.	Name	kWh*	kW*	Cost Source*	
1	131	CFL Screw-In 18W	Itron engineering calculation based on wattage differences between baseline technology and measure	2007 FPL Business Program impact evaluation (Appendix A)	DEER 2005 (measure ID D03-806)	a
2	111	Premium T8, Electronic Ballast	Itron engineering calculation based on wattage differences between baseline technology and measure	2007 FPL Business Program impact evaluation (Appendix A)	Itron professional judgment based on DEER 2008 (cost case ID 48in2g32wT8ISREl78w and 48in2g32wT8ISHEl93w)	a
3	322	Hybrid Desiccant-DX System (Trane CDQ)	Itron professional judgment based on results of FPL Conservation R&D (FSEC-CR-1652-06)	Itron professional judgment based on results of FPL Conservation R&D (FSEC-CR-1652-06)	FPL professional judgment based on results of FPL Conservation R&D	a
4	336	Cool Roof - DX	2007 FPL Business Program impact evaluation (Exhibit 2-23)	2007 FPL Business Program impact evaluation (Appendix A)	FPL program data	a
5	141	CFL Hardwired, Modular 18W	Itron engineering calculation based on wattage differences between baseline technology and measure	2007 FPL Business Program impact evaluation (Appendix A)	DEER 2005 (measure ID D03-825)	a
6	404	Electronically Commutated Motors (ECM) on an Air Handler Unit	FPL ECM Program Standards	2007 FPL Business Program impact evaluation (Appendix A)	FPL program data	a
7	201	High Pressure Sodium 250W Lamp	Itron engineering calculation based on wattage differences between baseline technology and measure	Itron professional judgment	Itron professional judgment based on DEER 2005 (measure ID D03-850)	a
8	329	Aerosole Duct Sealing	Itron professional judgment	Itron professional judgment	DEER 2008 (cost case ID DuctSeal-low)	a
9	323	Geothermal Heat Pump, EER=13, 10 Tons	Itron engineering calculation based on EER differences between baseline technology and measure	2007 FPL Business Program impact evaluation (Appendix A)	Gulf Power program data	a
10	112	Premium T8, EB, Reflector	Itron engineering calculation based on wattage differences between baseline technology and measure	2007 FPL Business Program impact evaluation (Appendix A)	Itron professional judgment based on DEER 2008 (cost case ID 48in2g32wT8RSREIrfl54w)	a
11	114	Continuous Dimming	Itron professional judgment	2007 FPL Business Program impact evaluation (Appendix A)	Itron professional judgment based on DEER 2001 (CCIG: BLC-02)	a
12	402	Variable Speed Drive	Itron professional judgment	Itron professional judgment	DEER 2001 (CCIG: CME-02)	a
13	151	PSMH, 250W, Magnetic Ballast	Itron engineering calculation based on wattage differences between baseline technology and measure	2007 FPL Business Program impact evaluation (Appendix A)	Itron professional judgment based on DEER 2008 (cost case ID 250wPSMHMgC288w-Rpl)	a

14	334	**Ceiling Insulation**	2007 FPL Business Program impact evaluation (Appendix A)	2007 FPL Business Program impact evaluation (Appendix A)	FPL program data	a
15	608	**Heat Recovery Unit**	FPL Estimates for Planning, 2005	Itron professional judgment	FPL Estimates for Planning, 2005	a
16	153	**High Bay T5**	Itron engineering calculation based on wattage differences between baseline technology and measure	2007 FPL Business Program impact evaluation (Appendix A)	Itron professional judgment based on DEER 2008 (cost case ID 46in54wT5HO2PSEI234w-Rpl)	a
17	405	**Demand Control Ventilation (DCV)**	Itron professional judgment based on 2007 FPL Business Program impact evaluation	FPL R&D report "Analysis of Carbon Dioxide Ventilation Systems" (UF, 2003), Table 5	Itron professional judgment based on FPL program data	a
18	702	**PC Network Power Management Enabling**	Energy Star calculator	Itron professional judgment	Itron professional judgment	a
19	113	**Occupancy Sensor**	Itron professional judgment	2007 FPL Business Program impact evaluation (Appendix A)	PEF program data	a
20	121	**ROB Premium T8, 1EB**	Itron engineering calculation based on wattage differences between baseline technology and measure	2007 FPL Business Program impact evaluation (Appendix A)	Itron professional judgment based on DEER 2005 (measure ID D03-852)	a
* Please provide the specific data source(s) relied upon to provide the measure data in the TPS report and the location within the source(s) (page/chapter/section/etc.)						

[a] Useful life data reflect Itron professional judgment informed principally by EUL values in DEER 2001-2008.

Industrial Sector						
	Measure		Savings Source			Useful Life Source*
	No.	Name	kWh*	kW*	Cost Source*	
1	302	Pumps - Control	a	a	a	a
2	801	Premium T8, Electronic Ballast	Itron engineering calculation based on wattage differences between baseline technology and measure	2007 FPL Business Program impact evaluation (Appendix A)	Itron professional judgment based on DEER 2008 (cost case ID 48in2g32wT8ISREI78w and 48in2g32wT8ISHEI93w)	b
3	303	Pumps - System Optimization	a	a	a	a
4	101	Compressed Air - O&M	a	a	a	a
5	103	Compressed Air - System Optimization	a	a	a	a
6	202	Fans - Controls	a	a	a	a
7	722	Hybrid Desiccant-DX System (Trane CDQ)	Itron professional judgment based on results of FPL Conservation R&D (FSEC-CR-1652-06)	Itron professional judgment based on results of FPL Conservation R&D (FSEC-CR-1652-06)	FPL professional judgment based on results of FPL Conservation R&D	b
8	301	Pumps - O&M	a	a	a	a
9	304	Pumps - Sizing	a	a	a	a
10	312	Pumps - ASD (100+hp)	a	a	a	a
11	309	Fans - ASD (100+hp)	a	a	a	a
12	104	Compressed Air - Sizing	a	a	a	a
13	203	Fans - System Optimization	a	a	a	a
14	803	CFL Screw-in 18W	Itron engineering calculation based on wattage differences between baseline technology and measure	2007 FPL Business Program impact evaluation (Appendix A)	DEER 2005 (measure ID D03-806)	b
15	212	Fans - ASD (100+ hp)	a	a	a	a
16	805	Occupancy Sensor	Itron professional judgment	2007 FPL Business Program impact evaluation (Appendix A)	PEF program data	b
17	721	DX Packaged System, EER=10.9, 10 tons	Itron engineering calculation based on EER differences between baseline technology and measure	2007 FPL Business Program impact evaluation (Appendix A)	PEF program data	b
18	731	Cool Roof - DX	2007 FPL Business Program impact evaluation (Exhibit 2-23)	2007 FPL Business Program impact evaluation (Appendix A)	FPL program data	b

19	802	**CFL Hardwired, Modular 18W**	Itron engineering calculation based on wattage differences between baseline technology and measure	2007 FPL Business Program impact evaluation (Appendix A)	DEER 2005 (measure ID D03-825)	[b]
20	701	**Centrifugal Chiller, 0.51 kW/ton, 500 tons**	Itron engineering calculation based on kW/ton differences between baseline technology and measure	2007 FPL Business Program impact evaluation (Appendix A)	PEF program data	[b]
* Please provide the specific data source(s) relied upon to provide the measure data in the TPS report and the location within the source(s) (page/chapter/section/etc.)						

[a] Savings, costs, and useful life estimates are based on analyses developed during the mid 2000s by Lawrence Berkeley National Laboratory (LBNL) to assess industrial energy efficiency potential in Connecticut and California. The LBNL analysis relied on a review of numerous information sources that are cited in the Appendix A of each FEECA utility's technical potential report. LBNL did not link any of the specific measure savings, costs, or useful life estimates they derived to specific data sources.

[b] Useful life data reflect Itron professional judgment informed principally by EUL values in DEER 2001-2008

Key Issues to be Addressed at June 25th, 2009 Meeting with Itron (This is not an exhaustive list of the issues) -
Regarding the KEMA DSM ASSYST Model and other Calculations and Assumptions Relating to Potential Savings for the FEECA Utilities

	List of Key Issues for discussion with FPSC Staff and GDS Associates at meeting with ITRON on June 25, 2009		
	Variables:		
	Residential Sector	**Provided to FPSC & GDS**	**Questions/Comments/Concerns -**
1.	Units of Consumption - No. Households	Yes - TPS	#s are from Tech. Pot. assessment of PV potential and are rounded.
2.	Weather Adjustments	Yes - 3rd ROG	HDD, Water Inlet Temp, & Scalars Provided - (1) Please describe method for incorporating adjustments into baseline and saving estimates. (2) Example.
3.	End-Use Technology Saturations - %	Yes - TPS	Tech.Pot. Appendix
4.	Base Technology EUI - kWh/unit	Yes - TPS	Link between stock baselines and adjusted baselines accounting for EE equipment already installed is missing. - Not adjustments based on
4a.	Stock-Base Tech. EUIs	Yes - TPS	Statewide Avg. vs. Utility Specific Survey Samples. Please walk us through an example of the equation and assumptions used to adjust the
4b.	Adjusted-Base Tech. EUIs	Yes - TPS	baseline EUI's.
5.	Incomplete Factor - %	Yes - TPS	Tech.Pot. Appendix
6.	Measure Feasibility - %	Yes - TPS	Tech.Pot. Appendix
7.	Measure Impacts - %	Yes - TPS	Tech.Pot. Appendix
8.	Supply-Curve	Yes	Adjusted savings and Marginal Energy Costs provided in Appendix D. GDS wold like to see the actual supply curve.
8a.	Levelized Cost/Participant Test	NO	(1) Please verify if a levelized cost or participant test ratio was used to rank measures. (2) If Participant Test - Did Itron conduct test for all measure & all utilities? (3) Please explain what was considered in the Participant Cost Tests - all benefits and costs.
8b.	Supply-Curve Adjusted Baselines/Savings	NO	(1) Please walk through the methodology used to adjust the baseline consumptions based on installations of "cheaper" measures. (2) We have developed an example of GDS's attempt to calculate the supply curve adjusted baselines, based in the example provided in the Tech. Pot. Report. We will email this to Mike Ting today (June 24th).
9.	Peak-to-Energy Ratios (Load Shapes)	Yes - 3rd ROG	(1) Please explain sources and method of developing Peak-to-Energy Ratios. (2) Please walk through an example of how a peak to energy ratio number was developed.
10.	Demand Savings	Yes - TPS	(1) Please verify (i.e., check model) if any other adjustments are made between technical potential energy savings and demand savings besides applying Peak-to-Energy Ratio. Were any other factors applied when calculating projected kW demand savings? (2) Please walk through an example of calculating Demand Savings.
11.	Other		The above list of questions is not an all inclusive list. GDS and FPSC staff may have other questions for Itron relating to the above topics base upon the responses provided by Itron to the above issues

Key Issues to be Addressed at June 25th, 2009 Meeting with Itron (This is not an exhaustive list of the issues) -
Regarding the KEMA DSM ASSYST Model and other Calculations and Assumptions Relating to Potential Savings for the FEECA Utilities

	Commercial Sector	Provided to FPSC & GDS	Questions/Comments/Concerns -
1.	Units of Consumption -Sq.Footage	Yes - TPS	#s are from Tech. Pot. assessment of PV potential and are rounded.
2.	Weather Adjustments	Yes - 3rd ROG	HDD, Water Inlet Temp, & Scalars Provided - (1) Please describe method for incorporating adjustments into baseline and saving estimates. (2) Example.
3.	End-Use Technology Saturations - %	Yes - TPS	Tech.Pot. Appendix
4.	Base Technology EUI - kWh/s.f.	Yes - TPS	Link between stock baselines and adjusted baselines accounting for EE equipment already installed is missing. - Not adjustments based on Statewide Avg. vs. Utility Specific Survey Samples.
4a.	Stock-Base Tech. EUIs	Yes - TPS	
4b.	Adjusted-Base Tech. EUIs	Yes - TPS	
5.	Incomplete Factor - %	Yes - TPS	Tech.Pot. Appendix
6.	Measure Feasibility - %	Yes - TPS	Tech.Pot. Appendix
7.	Measure Impacts - %	Yes - TPS	Tech.Pot. Appendix
8.	Supply-Curve	NO	Adjusted savings and Marginal Energy Costs provided in Appendix D.
8a.	Levelized Cost/Participant Test	NO	(1) Please verify if a levelized cost or participant test ratio was used to rank measures. (2) If Participant Test - Did Itron conduct test for all measure & all utilities? (3) Please explain what was considered in the Participant Cost Tests - all benefits and costs.
8b.	Supply-Curve Adjusted Baselines/Savings	NO	(1) Please walk through the methodology used to adjusted the baseline consumptions based on installations of "cheaper" measures. (2) We have provided and example of GDS's attempt to cacluate, based in the exaple provided in the Tech. Pot. Report.
9.	Peak-to-Energy Ratios (Load Shapes)	Yes - 3rd ROG	(1) Please provide sources and method of developing Peak-to-Energy Ratios. (2) Please walk through and example.
10.	Demand Savings	Yes - TPS	(1) Please verify (i.e., check model) if any other adjustments are made between technical savings and demand savings besides applying Peak to-Energy Ratio. (2) Please walk through an example of calculating Demand Savings.
11.	Other		The above list of questions is not an all inclusive list. GDS and FPSC staff may have other questions for Itron relating to the above topics base upon the responses provided by Itron to the above issues

Key Issues to be Addressed at June 25th, 2009 Meeting with Itron (This is not an exhaustive list of the issues) -
Regarding the KEMA DSM ASSYST Model and other Calculations and Assumptions Relating to Potential Savings for the FEECA Utilities

	Industrial Sector	Provided to FPSC & GDS	Questions/Comments/Concerns -
1.	Units of Consumption - kWh/Yr.	Yes - 3rd ROG	
2.	Weather Adjustments	Yes - 3rd ROG	HDD, Water Inlet Temp, & Scalars Provided - Please describe method for incorporating adjustments into baseline and saving estimates.
3.	End-Use Technology Saturations - %	Yes - TPS	Tech.Pot. Appendix
4.	Base Technology EUI - %	Yes - TPS	Link between stock baselines and adjusted baselines accounting for EE equipment already installed is missing. - Not adjustments based on Statewide Avg. vs. Utility Specific Survey Samples.
3a.	Stock-Base Tech. EUIs	Yes	
3b.	Adjusted-Base Tech. EUIs	Yes	
5.	Incomplete Factor - %	Yes - TPS	Tech.Pot. Appendix
6.	Measure Feasibility - %	Yes - TPS	Tech.Pot. Appendix
7.	Measure Impacts - %	Yes - TPS	Tech.Pot. Appendix
8.	Unadjusted Technical Savings Potential	Yes - TPS	Please explain discrepancies between reported and GDS calculated (using given inputs). - GDS Examples Provided
9.	Supply-Curve	NO	
9a.	Levelized Cost/Participant Test	NO	Adjusted savings and Marginal Energy Costs provided in Appendix D.
9b.	Supply-Curve Adjusted Baselines/Savings	NO	(1) Please verify if a levelized cost or participant test ratio was used to rank measures. (2) If Participant Test - Did Itron conduct test for all measure & all utilities? (3) Please explain what was considered in the Participant Cost Tests - all benefits and costs.
10.	Peak-to-Energy Ratios (Load Shapes)	Yes - 3rd ROG	(1) Please walk through the methodology used to adjusted the baseline consumptions based on installations of "cheaper" measures. (2) We have provided and example of GDS's attempt to cacluate, based in the exaple provided in the Tech. Pot. Report.
11.	Demand Savings	Yes - TPS	(1) Please provide sources and method of developing Peak-to-Energy Ratios. (2) Please walk through and example.
			(1) Please verify (i.e., check model) if any other adjustments are made between technical savings and demand savings besides applying Peak to-Energy Ratio. (2) Please walk through an example of calculating Demand Savings.
12.	Other		The above list of questions is not an all inclusive list. GDS and FPSC staff may have other questions for Itron relating to the above topics base upon the responses provided by Itron to the above issues

Key Issues to be Addressed at June 25th, 2009 Meeting with Itron (This is not an exhaustive list of the issues) -
Regarding the KEMA DSM ASSYST Model and other Calculations and Assumptions Relating to Potential Savings for the FEECA Utilities

	Variables:	Provided to FPSC & GDS	Questions/Comments/Concerns -
1.	Line Losses	TBP	Please explain how line losses were incorporated into savings estimates.
2.	Avoided Costs	NO	(1) Please explain how avoided costs for JEA, FPUC, & OUC were developed and incorporated into Benefit/Cost Tests. (2) Are avoided costs inputs or outputs of the KEMA DSM ASSYST Model? (Dick and Caroline now understand that these are inputs. Show us where they are input into the DSM Assyst model.
3.	Benefit-Cost Ratios	TBP	(1) For JEA, OUC, & FPUC - What specific types of costs are included as "utility costs" in the RIM, TRC, and Participant Tests? (2) For JEA, OUC, & FPUC - What specific types of costs are included as "participant costs" in the RIM, TRC, and Participant Tests? (3) For JEA, OUC,& FPUC - What specific types of benefits are included as "utility benefits" in the RIM, TRC, and Participant Tests? (4) For JEA, OUC,& FPUC - What specific types of benefits are included as "participant benefits in the RIM, TRC, and Participant Tests? (5) Are environmental externalities (i.e., avoided cost of GHG emissions) included in the RIM, TRC and Participant Test calculations performe by Itron for JEA, OUC, & FPUC?
4.	2-yr. Payback	NO	(1) Please explain how the Payback Period was calculated. (2) Did Itron conduct this screen for all utilities or just for JEA, OUC, & FPUC?
5.	Market Penetration Model	Equation - Yes Penetrations and Data - NO	
5a.	Inputs to the market penetration model	Variables - Yes Data - NO TBP	(1) Please explain each input variable and how it effects the market penetration model. (2) Please list/provide sources used to obtain data inputs. (3) Awareness & Willingness to Implement Factors & All Factor Associated w/ Customer Decision Making - How where these factors determined (please discuss sources and well as method/assumptions used)?
5b.	Outputs to the market penetration model	TBP	(1) Please explain /provide the market 10-yr market penetration rates projected/estimated by the Market Penetration Model. (2) How do these estimates compare to past program performance (where applicable). (3) Where market penetration calculations done w/ unique information/data for each utility OR where statewide averages used? (4) Did Itron conduct market penetration for ALL seven utilities? (5) For "new" measures (and measure that have not be previously included in programs) how were future market penetrations estimated?
6.	Other		The above list of questions is not an all inclusive list. GDS and FPSC staff may have other questions for Itron relating to the above topics base upon the responses provided by Itron to the above issues

INTERROGATORIES

20. On an annual basis for the years 2010 through 2019, please supply FPUC's projected total technical potential for DSM savings (MW and GWH, residential and commercial/industrial).

The technical potential estimates produced in the DSM ASSYST modeling framework are theoretical estimates that reflect the energy and peak demand savings potential of all technically feasible energy efficiency opportunities if all such opportunities were taken instantaneously. Therefore, the technical potential estimates produced by Itron for FPUC are snapshot estimates and do not change over time. The technical potential estimates produced by Itron for FPUC are shown in the table below.

	Residential	Commercial	Industrial	Total
Summer MW	31	20	3	53
Winter MW	22	10	3	34
Annual GWh	132	94	26	253

21. On an annual basis for the years 2010 through 2019, please supply FPUC's projected economic potential for DSM savings (MW and GWH, residential and commercial/industrial) that is cost-effective using the TRC and Participant tests. As part of this response, please identify which measures are included in the economic potential.

Response to Interrogatory No. 21

The economic potential estimates produced in the DSM ASSYST modeling framework are theoretical estimates that reflect the energy and peak demand savings potential of all technically feasible and cost-effective energy efficiency opportunities if all such opportunities were taken instantaneously. Therefore, the economic potential estimates produced by Itron for FPUC are snapshot estimates and do not change over time. The economic potential estimates produced by Itron for FPUC based on the TRC and Participant tests are shown in the table below. The list of measures included in these economic potential estimates is provided in Attachment A.

Pass TRC & Participant Test	Residential	Commercial	Industrial	Total
Summer MW	15.0	15.5	2.5	32.9
Winter MW	5.4	5.6	2.6	13.6
Annual GWh	71.7	79.8	24.6	176.1

	Residential	C&I	Total System Sales
	Forecasted baseline sales (GWh)[1]		
FPL	55,175	61,820	117,664
FPU	449	543	995
Gulf	7,392	7,266	14,695
JEA	6,194	8,239	14,568
OUC	2,925	3,842	7,510
PEF	23,005	18,083	45,198
TECO	11,339	10,639	24,075
Total	106,479	109,889	224,705
	Estimated technical potential (GWh)[2]		
FPL	20245	11,604	31,849
FPU	132	120	252
Gulf	1968	1,377	3,345
JEA	2031	1,128	3,159
OUC	875	933	1,808
PEF	8232	4,119	12,351
TECO	3102	2,751	5,853
Total	36584	22,032	58,616
	Original GDS calculated shares[3]		
FPL	36.6%	18.3%	26.8%
FPU	39.5%	26.1%	31.8%
Gulf	25.8%	18.6%	22.3%
JEA	32.3%	14.4%	21.9%
OUC	29.8%	18.9%	23.0%
PEF	35.2%	23.4%	30.1%
TECO	23.8%	**2.9%**	5.4%
Total	**33.6%**	**11.3%**	**19.2%**
	Corrected shares		
FPL	36.7%	18.8%	27.1%
FPU	29.4%	22.1%	25.3%
Gulf	26.6%	19.0%	22.8%
JEA	32.8%	13.7%	21.7%
OUC	29.9%	24.3%	24.1%
PEF	35.8%	22.8%	27.3%
TECO	27.4%	25.9%	24.3%
Total	**34.4%**	**20.0%**	**26.1%**

[1] Forecasted sales data are "Total Sales to Ultimate Customers (GWh)" taken from Schedules 2.2 and 2.3 of each FEECA utility's 2009 TYSP. Note that these values exclude sales for resale and utility line losses. Note that FPUC is a non-generating utility and does not file a Ten-Year Site Plan with the FPSC. The forecasted sales data shown above were taken from data provided by FPUC to Itron for this study.

[2] Technical potential values are those reported in Table ES-1 in each FEECA utility's technical potential report.

[3] Results are those reported in Exhibit RFS-9.

5. **Please provide a table of complete copies of the final achievable test results for each measure in Excel format, that include all pertinent and relevant data inputs used to derive the achievable potential test results.**

Response: JEA provided the output of the Excel workbooks used to calculate final achievable test results for each measure as part of JEA's response to NRDC/SACE's POD 1, Question No. 3 as follows:

File name
Economic Test Workbooks for JEA 21JUN2009

Itron considers the formulae embedded in the Excel workbooks used to calculate the final cost-effectiveness test results to be confidential and trade secrets and has asked JEA not to disclose such information. As an alternative to providing the spreadsheets with the trade secret information included, JEA will make such files available for review to SACE and NRDC at the offices of its counsel, Gary Perko of Hopping Green & Sams 123 South Calhoun Street, Tallahassee, FL 32301. Mr. Perko's office can be reached at (850) 222-7500 and all requests to review the requested information should be coordinated through Mr. Perko's office.

The individual providing information in response to this request is Richard Vento, Director of Corporate Data Integration, JEA, 21 West Church St., Jacksonville, FL 32202.

6. **Please provide complete copies of all workpapers and source documents associated with the determination of avoided unit generation benefit for purposes of company positions and filings in this docket.**

Response: Please see Attachment POD-6 on the enclosed disk, which presents the requested workpapers and source documents.

The individual providing information in response to this request is Bradley Kushner, Manager, Black & Veatch Corporation, 11401 Lamar Ave, Overland Park, KS 66211.

7. **Please provide complete copies of all workpapers and source documents associated with any market assessments by JEA to determine current, projected or potential penetration of JEA's energy efficiency programs and DSM measures within its service territory.**

Response: Source documents supplied in response to NRDC/SACE Production of Documents Request No. 1 include JEA's current appliance saturation survey and quadrennial survey (see "Market Research Data" folder).

from 1.7 to 6.1 for residential customers and as high as 14 for Pacific Gas and Electric Company's large commercial and industrial customers. Goldman et al. (2007) used price levels that yielded ratios ranging from 3.3 to 3.8. There is no consensus among experts on what the ideal ratio of critical peak to non-event on-peak prices should be as various states and utilities continue to experiment with their program designs.

The eligible population for CPP tariffs was defined as the subset of the total customer population that is not currently enrolled in any other DR program, has the end-use equipment applicable to DR-enabling technologies, and has access to enabling technologies. The end-use equipment saturations were the same as those developed for the energy efficiency potential analysis based primarily on the equipment saturations reported in the statewide 2006 Home Energy Survey (for residential) and Florida Power & Light's ("FPL") 1996 survey of commercial and industrial customers. (*See* section 3.3 of each FEECA utility's technical potential report). The assumed shares of the customer population that has access to DR-enabling technologies are shown in Tables 4-1 and 4-2 in each FEECA utility's technical potential report.

The DR strategies analyzed and assumed to be available for those customers taking advantage of CPP tariffs and direct load control programs are shown in the table below. Each of these DR strategies and enabling technologies are described in more detail in section 4.2 of each FEECA utility's technical potential report.

Customer Class	**DR-Enabling Technology and Tariff**
Residential	A/C Cycling Switch w/ flat rate
	A/C Shedding Switch w/flat rate
	Smart Thermostats for A/C w/ CPP
	On-Off Switching via low-power wireless networks for water heating w/CPP
	On-Off Switching via low-power wireless networks for pool systems w/CPP
	In-home displays and pre-set control strategies w/CPP
Commercial	Automated control strategies w/CPP – All end-uses
	Direct load control system – HVAC
Industrial	Automated control strategies w/CPP – HVAC and Lighting
	Direct load control system – HVAC

2. *Please refer to Pg. 20, lines 1-8 of witness Rufo's testimony and respond to the following:*

   a) *What portion (%) of energy, and summer and winter demand) of the total technical potential was represented by the following components that were removed for the achievable potential analysis:*

      i) *Measures with customer paybacks less than 2 years.*

RESPONSE: Itron conducted the 2-year payback calculations and screening for JEA, Orlando Utilities Commission ("OUC"), and Florida Public Utilities Company ("FPU").

PEF, TECO and Gulf Power conducted the 2-year payback calculations and screening for their respective analyses and provided Itron with those results for each measure in the analysis.

For these six utilities, the portion of total technical potential (in GWh, summer peak MW, and winter peak MW) represented by those measures screened on the 2-year payback criteria is shown in the table below.

Utility	Share of Total Technical Potential (%)		
	Annual GWh	Summer MW	Winter MW
PEF	36.2%	27.3%	24.7%
TECO	34.9%	21.2%	22.1%
GULF	38.4%	26.7%	26.3%
JEA	41.6%	25.7%	28.2%
OUC	42.1%	26.2%	30.7%
FPU	46.7%	35.2%	31.3%

FPL also conducted the 2-year payback calculations for their analysis and provided Itron with those results. However, FPL provided Itron with that information only recently, and Itron cannot accurately generate the requested metrics within the time allowed for responding to this interrogatory. Itron will provide the requested information related to FPL as a supplemental response.

ii) Measures with participant test values of less than 1.01.

RESPONSE: Itron conducted the participant test screening only for JEA, OUC, and FPU. For these utilities, the participant test results (including incentives) did not remove any measures from the achievable potential analysis. This is because measures with participant values below 1.01 were also measures that failed both the Total Resource Cost ("TRC") and Ratepayer Impact Measure ("RIM") tests.

FPL, PEF, TECO, and Gulf Power conducted the participant test screening for their respective analyses and did not provide Itron with the information necessary to accurately respond to the question as posed.

b) Please provide a list of all measures screened out based on the above criteria, their assumed base-case (naturally occurring penetrations), and their associated energy and demand impacts in the technical potential study.

RESPONSE: A list of all the measures screened based on the 2-year payback criteria, along with their associated per-unit energy and demand impacts, and the estimated naturally-occurring penetration rates through year 2019 are shown in Attachment A for PEF, TECO, Gulf Power, JEA, OUC, and FPU.

Note that FPL also conducted the 2-year payback calculations for their analysis and provided Itron with those results. However, FPL provided Itron with that information

only recently, and Itron cannot accurately generate the requested naturally-occurring forecasts within the time allowed for responding to this interrogatory. Itron will provide the requested information related to FPL as a supplemental response.

3. *Does FPL and Itron maintain that measures with paybacks less than 2 years will be adopted automatically by customers based on natural market forces?*

RESPONSE: No.

a) If yes, does FPL's base case load forecast already incorporate this assumption?

RESPONSE: n/a

4. *Re: Please refer to Pg. 23, line 3-10 of witness Rufo's testimony and respond to the following:*

a) Please describe the program designs assumed (including target markets, incentive designs, marketing strategies, technical services, etc.) that were used to estimate the measure adoption rates.

RESPONSE: In the DSM ASSYST framework, utility programs are modeled as up-front rebate programs, augmented by utility-administered efforts to increase awareness and knowledge (e.g., through marketing, advertising, and technical support activities). In the scope of this study, individual programs were not modeled. Rather, sector/vintage portfolios were the domain of analysis (e.g., residential existing construction, residential new construction, etc.). The key assumption related to marketing programs and strategies is related to effectiveness in terms of the number of homes, commercial square feet, and industrial base load made aware of a given measure per dollar of expenditure for awareness/knowledge building. The marketing budgets and marketing effectiveness parameters (referred to as "ad effectiveness ratios" in the DSM ASSYST model) used in the study were provided previously in response to NRDC-SACE's 1st set of interrogatories to the FEECA utilities (question 5).

With respect to technical services, Itron did not incorporate any direct assumptions about the availability or scope of utility-provided technical services outside of the "ad effectiveness ratios" and marketing budgets assumed in the forecast. However, the ad effectiveness ratios do assume audit-type awareness and knowledge activities (mail or internet for residential and on-site for commercial/industrial).

b) Does Itron believe the program designs and portfolio assumed represent the best possible portfolio of programs that could be delivered in Florida and therefore defines the maximum achievable potential from efficiency that could be captured?

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Commission review of numeric conservation goals (JEA).	DOCKET NO. 080413-EG DATED: JUNE 29, 2009

JEA'S REPONSES TO NRDC'S & SACE'S FIRST REQUEST FOR PRODUCTION OF DOCUMENTS TO JEA (NOS. 1-3)

JEA, by and through its undersigned counsel, pursuant to Rule 1.350, Florida Rules of Civil Procedure and Order No. PSC-08-0816-PCO-EG, hereby responds to NRDC's & SACE's First Request for Production of Documents (Nos. 1-3).

RESPONSES

1. **Please provide complete copies of all workpapers and source documents related to inputs provided by JEA, or JEA specific data utilized in the Technical Potential Study conducted by ITRON, along with the final Technical Potential Study report which supports JEA's analyses and filings in this docket.**

Response: Please see files within folder labeled "SACE/NRDC POD-1" on enclosed disk, which presents the requested workpapers and source documents.

2. **Please provide complete copies of all workpapers and source documents for inputs and calculations associated with any Economic Potential Study conducted by JEA associated with its energy efficiency/DSM programs proposed in this matter, along with the final Economic Potential Study report.**

Response: The utilities did not conduct an Economic Potential Study associated with energy efficiency/DSM programs proposed in this matter, and no report was produced. However, the avoided cost inputs associated with the economic analyses are included in response to Interrogatory No. 13 of NRDC's and SACE's 1st Set of Interrogatories (Nos. 1-23).

3. **Please provide complete copies of all workpapers and source documents associated with inputs and calculations for any Achievable Potential Study conducted by JEA, or conducted by ITRON to generate achievable potential projections for JEA, along with the final Achievable Potential Study report for JEA.**

5. Please describe and provide results of any analysis done by PEF to ascertain the impact of customer awareness on the take rate of the energy efficiency measures offered in its service territory. Please include any analysis which identifies specific factors, whether quantifiable or not, that PEF has identified as having either a significant or insignificant impact on customer awareness.

ANSWER:

As described in witness Rufo's testimony, measure adoption was modeled as a function of both measure cost-effectiveness to the customer, stock accounting of the eligible customer market in a given year, and customer awareness. In this respect, forecasted measure adoption can increase as a result of increases in the measure BC ratio (from utility program incentives) or increases in customer awareness (from utility marketing and education efforts).

In the DSM ASSYST modeling framework, starting year awareness (i.e. awareness in year zero of the forecast period) for each measure is estimated as a function of its benefit-cost ratio without incentives such that more cost-effective measures have higher starting awareness levels compared to less cost-effective measures. Going forward in the forecast period, cumulative awareness is estimated as a function of the measure benefit-cost ratio with incentives, awareness decay assumptions, utility program marketing budgets, and marketing effectiveness assumptions.

Attachment B provides a table of utility marketing budgets assumed in Itron's achievable potential forecast, along with the marketing effectiveness assumptions, and awareness decay assumptions. The utility marketing budgets were developed by Itron in collaboration with each FEECA utility based primarily on current program budgets for audit programs. The marketing effectiveness assumptions and awareness decay assumptions were developed by Itron based on professional judgment and experience with evaluating program marketing efforts in other jurisdictions.

Docket No. 080408-EG
Attachment B
Marketing Budget Assumptions
Page 1 of 1

Utility	Vintage	Segment	Marketing Budget Assumptions
FPL	All	Industrial	$ 300,000
FPL	Existing	Commercial	$ 2,700,000
FPL	Existing	Residential	$ 10,000,000
FPL	New	Commercial	$ 100,000
FPL	New	Residential	$ 500,000
FPU	All	Industrial	$ 7,000
FPU	Existing	Commercial	$ 30,000
FPU	Existing	Residential	$ 60,000
FPU	New	Commercial	$ 15,000
FPU	New	Residential	$ 50,000
GULF	All	Industrial	$ 50,000
GULF	Existing	Commercial	$ 300,000
GULF	Existing	Residential	$ 750,000
GULF	New	Commercial	$ 75,000
GULF	New	Residential	$ 200,000
JEA	All	Industrial	$ 50,000
JEA	Existing	Commercial	$ 200,000
JEA	Existing	Residential	$ 700,000
JEA	New	Commercial	$ 50,000
JEA	New	Residential	$ 125,000
OUC	All	Industrial	$ 20,000
OUC	Existing	Commercial	$ 100,000
OUC	Existing	Residential	$ 200,000
OUC	New	Commercial	$ 20,000
OUC	New	Residential	$ 50,000
PEF	All	Industrial	$ 175,000
PEF	Existing	Commercial	$ 1,000,000
PEF	Existing	Residential	$ 3,250,000
PEF	New	Commercial	$ 150,000
PEF	New	Residential	$ 500,000
Teco	All	Industrial	$ 75,000
Teco	Existing	Commercial	$ 600,000
Teco	Existing	Residential	$ 1,250,000
Teco	New	Commercial	$ 75,000
Teco	New	Residential	$ 100,000

Utility	Vintage	Segment	Ad Effectiveness Ratio	Ad Effectiveness Ratio Units	Aware Decay Rate (%/yr)
All	All	Industrial	0.0025	($/kWh base load made aware)	10%
All	Existing	Commercial	0.03	($/sq ft made aware)	10%
All	Existing	Residential	15	($/household made aware)	5%
All	New	Commercial	0.075	($/sq ft made aware)	0%
All	New	Residential	30	($/household made aware)	0%

Docket No. 080408-EG
Attachment B
Awareness Parameter Assumptions

Florida Power & Light Company
Docket No. 080407-EG
NRDC-SACE's Second Set of Interrogatories
Interrogatory No. 26

Q.
Please refer to Haney Testimony, p. 28, line 9 regarding "maximum annual signups." Please provide the maximum annual signups estimated by Itron for each measure, both in total units and as a percent of all eligible units.

A.
Please see FPL's Response to NRDC-SACE's Third Request for Production of Documents No. 15.

Projected Achievable Potential Measures Passing the TRC and Participants Tests						
Calendar Year	Summer MW		Winter MW		Annual GWh	
	Cumulative	Incremental	Cumulative	Incremental	Cumulative	Incremental
2010	0.9	--	0.1	--	3.7	--
2011	2.4	1.5	0.2	0.1	9.9	6.2
2012	4.4	2.0	0.3	0.1	17.9	8.0
2013	6.8	2.4	0.5	0.2	27.0	9.1
2014	9.4	2.6	0.7	0.2	36.6	9.6
2015	12.1	2.7	0.9	0.2	46.1	9.5
2016	14.7	2.7	1.1	0.2	55.2	9.1
2017	17.3	2.5	1.4	0.2	63.7	8.5
2018	19.7	2.4	1.6	0.2	71.6	7.9
2019	21.9	2.2	1.8	0.2	78.8	7.2

Sponsor: **Mike Ting**
Principal Consultant
Itron, Inc
1111 Broadway, Suite 1800
Oakland, CA 94607

43. **Please supply the estimated annual participation numbers and market penetration rates for each measure used to determine the achievable potential.**

OUC RESPONSE:

Please refer to Attachment Interrogatory No. 43 on the enclosed disk, which presents the requested information.

Sponsor: **Mike Ting**
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1111 Broadway, Suite 1800
Oakland, CA 94607

Respectfully submitted,

W. CHRISTOPHER BROWDER
Office of General Counsel
Orlando Utilities Commission
100 W. Anderson Street
Orlando, FL 32802
(407) 236-9698

Penetration Model Output Filename: O_Saere_FPL_RIM-H.xls Worksheet: 'New Building Stock - Measure'

New Building Stock (with Program) - Measure Specific

Input File: P_Saere_FPL_RIM-H.xls

Segment Number	Segment	Measure Number	Measure	Bldg Typ	Applicable Building	End Use Number	End Use	Units Year Yr Index	Households 2010 1	Households 2011 2	Households 2012 3	Households 2013 4	Households 2014 5	Households 2015 6	Households 2016 7	Households 2017 8	Households 2018 9	Households 2019 10
1	All Existing	115	Electronically Commutated Motors (ECM) on an Air Handler Unit	1	Single Detached	1	HVAC		4720.406957	8600.407382	12233.77085	15633.65365	17918.89909	17560.52111	17209.31069	16865.12447	16527.82198	16197.26554
1	All Existing	146	Window Tinting	3	Mobile Home	1	HVAC		15.49560291	29.29193235	42.43452347	54.96046496	66.90502153	66.37891204	65.0513338	63.75030712	62.47530098	61.22579496
1	All Existing	115	Electronically Commutated Motors (ECM) on an Air Handler Unit	3	Mobile Home	1	HVAC		322.8299045	604.371323	871.5482243	1125.160939	1365.970081	1353.201831	1326.137795	1299.615039	1273.622738	1248.150283
1	All Existing	120	Window Tinting	3	Mobile Home	1	HVAC		135.8993304	257.7055273	373.867171	484.7064349	590.5296909	584.1343901	572.4517023	561.0026683	549.7826149	538.7869626
1	All Existing	114	Proper Refrigerant Charging and Air Flow	3	Mobile Home	1	HVAC		903.4053747	1679.530082	2378.411734	2984.820228	3487.675568	3426.822073	3186.679755	2963.365954	2755.701374	2562.589359
1	All Existing	121	Default Window With Sunscreen	3	Mobile Home	1	HVAC		869.0702977	1654.992825	2390.649076	3070.003992	3688.044075	3604.424379	3459.166868	3319.763202	3185.977474	3057.583281
1	All Existing	140	Proper Refrigerant Charging and Air Flow	3	Mobile Home	1	HVAC		88.88262207	165.9280776	235.924295	297.5493241	349.8080739	347.9020108	325.6861282	304.8888791	285.4196742	267.1937089
1	All Existing	115	Electronically Commutated Motors (ECM) on an Air Handler Unit	2	Multi Attached	1	HVAC		1433.814638	2700.241436	3905.431768	5052.837388	6145.739934	6174.335215	6050.848511	5929.831541	5811.23491	5695.010212
1	*All Existing*	147	*Default Window With Sunscreen*	3	*Mobile Home*	1	*HVAC*		*33.62855267*	*64.40809735*	*93.73188438*	*121.5613732*	*147.8648401*	*154.8335366*	*150.5962835*	*146.4749892*	*142.4664803*	*138.5676703*
1	All Existing	114	Proper Refrigerant Charging and Air Flow	2	Multi Attached	1	HVAC		3703.440154	6943.611843	9910.946447	12557.06828	14844.45799	14921.48455	14051.30098	13231.86432	12460.21516	11733.56665
1	All Existing	140	Proper Refrigerant Charging and Air Flow	2	Multi Attached	1	HVAC		346.2675839	651.6410599	933.3019204	1187.342021	1410.653146	1432.978319	1356.713635	1284.507841	1216.144919	1151.420347
1	All Existing	122	Single Pane Clear Windows to Double Pane Low-E Windows	2	Multi Attached	1	HVAC		1182.315712	2269.594151	3313.847395	4317.615321	5283.316134	5623.10069	5510.638676	5400.425903	5292.417385	5186.569037
1	All Existing	121	Default Window With Sunscreen	1	Single Detached	1	HVAC		3310.721235	6369.961817	9276.650558	12021.18945	14595.27722	14868.31856	14409.48494	13964.81085	13533.85932	13116.20688
1	All Existing	117	Reflective Roof	3	Mobile Home	1	HVAC		72.80215687	140.2610811	204.9582891	267.0568904	326.7121215	321.4168055	314.9884693	308.6887	302.514926	296.4646274
1	All Existing	148	Single Pane Clear Windows to Double Pane Low-E Windows	2	Multi Attached	1	HVAC		117.1113301	225.5135597	329.7678859	430.1212506	526.808943	564.3647191	553.0774247	542.0158762	531.1755587	520.5520475
1	All Existing	147	Default Window With Sunscreen	1	Single Detached	1	HVAC		339.4176552	655.3628305	958.4501334	1248.77447	1526.441266	1632.421111	1593.390686	1555.29346	1518.107122	1481.809891
1	All Existing	143	Reflective Roof	3	Mobile Home	1	HVAC		8.246192339	15.9196534	23.28388654	30.3572413	37.15718341	36.48933739	35.75955065	35.04435963	34.34347244	33.65660299
1	All Existing	191	HE Room Air Conditioner - EER 11	1	Single Detached	1	HVAC		340.1868342	657.2745716	962.050333	1255.249161	1537.570921	1566.581547	1535.249916	1504.544918	1474.454019	1444.964939
1	All Existing	117	Reflective Roof	2	Multi Attached	1	HVAC		276.1702513	534.0278668	781.8208728	1020.150371	1249.588658	1254.604996	1229.512896	1204.922638	1180.824185	1157.207701
1	All Existing	143	Reflective Roof	2	Multi Attached	1	HVAC		32.92762161	63.73122659	93.33581704	121.8131194	149.2314236	148.8733626	145.8958953	142.9779774	140.1184179	137.3160495
1	All Existing	191	HE Room Air Conditioner - EER 11	2	Multi Attached	1	HVAC		514.7977181	999.2521	1466.018391	1916.168731	2350.724451	2449.729357	2400.73477	2352.720075	2305.665673	2259.55236
1	All Existing	117	Reflective Roof	1	Single Detached	1	HVAC		293.7184957	569.1771626	834.1938498	1089.396568	1335.383373	1357.241956	1330.097117	1303.495174	1277.425271	1251.876766
1	All Existing	191	HE Room Air Conditioner - EER 11	3	Mobile Home	1	HVAC		41.92235955	81.5822065	119.8451907	156.7967578	192.518328	203.2083283	199.1441617	195.1612785	191.2580529	187.4328919
1	All Existing	200	Single Pane Clear Windows to Double Pane Low-E Windows	2	Multi Attached	1	HVAC		108.8729713	211.5893999	310.7437209	406.5539508	499.2278721	541.9859187	531.1462004	520.5232764	510.1128108	499.9105546
1	All Existing	143	Reflective Roof	1	Single Detached	1	HVAC		96.81194373	187.7479538	275.2414291	359.4996666	440.7200753	445.1601435	436.2569406	427.5318018	418.9811658	410.6015425
1	All Existing	116	Duct Repair	1	Single Detached	1	HVAC		9767.886124	18908.35964	27425.78066	35182.19169	42060.75954	43304.27699	40887.58263	38605.75743	36451.27471	34417.02784
1	All Existing	196	Reflective Roof	3	Mobile Home	1	HVAC		0.348031258	0.678628049	0.998151719	1.307287125	1.606687156	1.748477206	1.713507662	1.679237509	1.645652759	1.612739704
1	All Existing	196	Reflective Roof	2	Multi Attached	1	HVAC		4.532673941	8.828832684	12.97905381	16.99232829	20.87722642	22.64218605	22.18934233	21.74555549	21.31064438	20.88443149
1	All Existing	142	Duct Repair	1	Single Detached	1	HVAC		3705.939141	7173.36333	10373.12492	13237.45007	15710.52803	15853.54874	14820.65994	13855.06581	12952.38197	12108.5097
1	All Existing	122	Single Pane Clear Windows to Double Pane Low-E Windows	3	Mobile Home	1	HVAC		78.31818928	153.0842477	225.4495596	295.5642261	363.5713943	402.1719305	394.1284919	386.2459221	378.5210036	370.9505836
1	All Existing	148	Single Pane Clear Windows to Double Pane Low-E Windows	3	Mobile Home	1	HVAC		7.367881143	14.42076842	21.25099766	27.87254128	34.29874531	38.04692386	37.28598539	36.54026568	35.80946036	35.09327116

FPL res existing_RIM max annual sign ups

Docket Nos. 080407-EG, 080408-EG, 080409-EG, 080410-EG, 080411-EG, 080412-EG, 080413-EG
Table of weighted-average measure penetration rate calculations
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Segment		Measure		Bldg	Applicable	End Use	End	Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Number	Segment	Number	Measure	Typ	Building	Number	Use	Yr Index	1	2	3	4	5	6	7	8	9	10
1	All Existing	148	Single Pane Clear Windows to Double Pane Low-E Windows	1	Single Detached	1	HVAC		120.5438875	236.1745836	348.201891	456.8531237	562.3451181	625.154537	612.6514463	600.3984173	588.390449	576.62264
1	All Existing	122	Single Pane Clear Windows to Double Pane Low-E Windows	1	Single Detached	1	HVAC		401.8079467	787.2478491	1160.678555	1522.857685	1874.507939	2083.992769	2042.312914	2001.466656	1961.437322	1922.208576
1	All Existing	101	14 SEER Split-System Air Conditioner	1	Single Detached	1	HVAC		325.0976197	637.5787186	940.4646049	1234.363155	1519.854299	1695.802638	1661.886585	1628.648853	1596.075876	1564.154359
1	All Existing	116	Duct Repair	3	Mobile Home	1	HVAC		192.2778404	376.978015	555.052611	726.3588801	890.7643511	977.7476875	952.7702467	928.430877	904.7132783	881.6015669

Penetration Model Output Filename: O_Saere_FPL_RIM-H.xls Worksheet: 'Bld Stock Available - Measure'

Building Stock Available (with Program) - Measure Specific

Input File: P_Saere_FPL_RIM-H.xls

Segment		Measure		Bldg	Applicable	End Use	End	Units	Households	Households	Households	Households	Households	Households	Households	Households	Households	Households
Number	Segment	Number	Measure	Typ	Building	Number	Use	Yr Index	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
									1	2	3	4	5	6	7	8	9	10
1	All Existing	115	Electronically Commutated Motors (ECM) on an Air Handler Unit	1	Single Detached	1	HVAC		57234.76633	56090.071	54968.26958	53868.90419	52791.52611	51735.69559	50700.98167	49686.96204	48693.2228	47719.35834
1	All Existing	146	Window Tinting	3	Mobile Home	1	HVAC		413.4204751	405.1520656	397.0490243	389.1080438	381.3258829	373.6993652	366.2253779	358.9008704	351.722853	344.6883959
1	All Existing	115	Electronically Commutated Motors (ECM) on an Air Handler Unit	3	Mobile Home	1	HVAC		7649.605719	7496.613604	7346.681332	7199.747705	7055.752751	6914.637696	6776.344942	6640.818044	6508.001683	6377.841649
1	All Existing	120	Window Tinting	3	Mobile Home	1	HVAC		3638.100181	3565.338177	3494.031414	3424.150785	3355.66777	3288.554414	3222.783326	3158.327659	3095.161106	3033.257884
1	All Existing	114	Proper Refrigerant Charging and Air Flow	3	Mobile Home	1	HVAC		86236.44873	83626.38249	80307.91536	76370.91355	71918.37145	67062.08197	62362.5547	57992.35744	53928.41166	50149.25608
1	All Existing	121	Default Window With Sunscreen	3	Mobile Home	1	HVAC		204811.5657	199863.8455	194244.4796	188016.754	181247.815	174008.5755	166996.0681	160266.1632	153807.472	147609.0646
1	All Existing	140	Proper Refrigerant Charging and Air Flow	3	Mobile Home	1	HVAC		9799.596446	9516.499548	9163.560041	8749.083031	8282.503033	7774.04106	7277.616268	6812.891537	6377.842604	5970.574472
1	All Existing	115	Electronically Commutated Motors (ECM) on an Air Handler Unit	2	Multi Attached	1	HVAC		41934.09981	41095.41782	40273.50946	39468.03927	38678.67848	37905.10491	37147.00282	36404.06276	35675.98151	34962.46188
1	All Existing	147	Default Window With Sunscreen	3	Mobile Home	1	HVAC		23274.04156	22775.60475	22256.97272	21719.97602	21166.44635	20598.20988	20034.50682	19486.23426	18952.96411	18434.28767
1	All Existing	114	Proper Refrigerant Charging and Air Flow	2	Multi Attached	1	HVAC		472736.5019	459652.4005	443654.6129	425068.7931	404261.4903	381628.6917	359373.063	338415.3268	318679.7932	300095.1865
1	All Existing	140	Proper Refrigerant Charging and Air Flow	2	Multi Attached	1	HVAC		51538.94194	50168.82087	48526.83621	46641.6636	44545.23515	42271.89037	40022.13381	37892.11177	35875.45185	33966.12079
1	All Existing	122	Single Pane Clear Windows to Double Pane Low-E Windows	2	Multi Attached	1	HVAC		26591.42823	26059.59967	25538.40767	25027.63952	24527.08673	24036.545	23555.8141	23084.69781	22623.00386	22170.54378
1	All Existing	121	Default Window With Sunscreen	1	Single Detached	1	HVAC		1532411.282	1498518.55	1462305.616	1423968.386	1383708.253	1341730.716	1300325.15	1260197.351	1221307.89	1183618.55
1	All Existing	117	Reflective Roof	3	Mobile Home	1	HVAC		4869.484805	4772.095109	4676.653207	4583.120142	4491.45774	4401.628585	4313.596013	4227.324093	4142.777611	4059.922059
1	All Existing	148	Single Pane Clear Windows to Double Pane Low-E Windows	2	Multi Attached	1	HVAC		2899.065484	2841.084174	2784.262491	2728.577241	2674.005696	2620.525582	2568.115071	2516.752769	2466.417714	2417.08936
1	All Existing	147	Default Window With Sunscreen	1	Single Detached	1	HVAC		457680.1696	448193.9369	438587.8026	428876.7654	419075.4311	409198.01	399414.2771	389864.4687	380542.9918	371444.3869
1	All Existing	143	Reflective Roof	3	Mobile Home	1	HVAC		553.350546	542.2835351	531.4378644	520.8091071	510.392925	500.1850665	490.1813651	480.3777378	470.7701831	461.3547794
1	All Existing	191	HE Room Air Conditioner - EER 11	1	Single Detached	1	HVAC		5843.764387	5726.8891	5612.351318	5500.104291	5390.102206	5282.300161	5176.654158	5073.121075	4971.658654	4872.22548
1	All Existing	117	Reflective Roof	2	Multi Attached	1	HVAC		26693.85447	26159.97738	25636.77784	25124.04228	24621.56143	24129.13021	23646.5476	23173.61665	22710.14432	22255.94143
1	All Existing	143	Reflective Roof	2	Multi Attached	1	HVAC		2910.232255	2852.02761	2794.987057	2739.087316	2684.30557	2630.619459	2578.007069	2526.446928	2475.917989	2426.39963
1	All Existing	191	HE Room Air Conditioner - EER 11	2	Multi Attached	1	HVAC		10676.03817	10462.51741	10253.26706	10048.20172	9847.237685	9650.292931	9457.287073	9268.141331	9082.778505	8901.122935
1	All Existing	117	Reflective Roof	1	Single Detached	1	HVAC		36433.75034	35705.07533	34990.97383	34291.15435	33605.33126	32933.22464	32274.56015	31629.06894	30996.48756	30376.55781
1	All Existing	191	HE Room Air Conditioner - EER 11	3	Mobile Home	1	HVAC		994.7867808	974.8910452	955.3932243	936.2853598	917.5598526	899.2084595	881.2242903	863.5998045	846.3278084	829.4012523
1	All Existing	200	Single Pane Clear Windows to Double Pane Low-E Windows	2	Multi Attached	1	HVAC		3623.405371	3550.937264	3479.918519	3410.320148	3342.113745	3275.27147	3209.766041	3145.57072	3082.659305	3021.00612
1	All Existing	143	Reflective Roof	1	Single Detached	1	HVAC		10881.54677	10663.91583	10450.63752	10241.62477	10036.79227	9836.056425	9639.335297	9446.548591	9257.617619	9072.465267
1	All Existing	116	Duct Repair	1	Single Detached	1	HVAC		1451758.057	1413150.367	1366357.167	1312152.759	1251431.156	1185182.988	1119041.137	1056590.484	997625.0316	941950.2817
1	All Existing	196	Reflective Roof	3	Mobile Home	1	HVAC		338.9272094	332.1486652	325.5056919	318.9955781	312.6156665	306.3633532	300.2360861	294.2313644	288.3467371	282.5798024
1	All Existing	196	Reflective Roof	2	Multi Attached	1	HVAC		3637.362192	3564.614948	3493.322649	3423.456196	3354.987072	3287.887331	3222.129584	3157.686993	3094.533253	3032.642588
1	All Existing	142	Duct Repair	1	Single Detached	1	HVAC		433591.7396	421288.0844	405832.4267	387550.1157	366826.4124	344093.5666	321675.2175	300717.4664	281125.1526	262809.3152
1	All Existing	122	Single Pane Clear Windows to Double Pane Low-E Windows	3	Mobile Home	1	HVAC		4850.800241	4753.784236	4658.708551	4565.53438	4474.223693	4384.739219	4297.044435	4211.103546	4126.881475	4044.343845
1	All Existing	148	Single Pane Clear Windows to Double Pane Low-E Windows	3	Mobile Home	1	HVAC		551.2273001	540.2027541	529.398699	518.810725	508.4345105	498.2658203	488.3005039	478.5344938	468.963804	459.5845279
1	All Existing	148	Single Pane Clear Windows to Double Pane Low-E Windows	1	Single Detached	1	HVAC		10839.79349	10622.99762	10410.53767	10202.32691	9998.280376	9798.314768	9602.348473	9410.301504	9222.095474	9037.653564
1	All Existing	122	Single Pane Clear Windows to Double Pane Low-E Windows	1	Single Detached	1	HVAC		36293.95142	35568.07239	34856.71094	34159.57672	33476.38519	32806.85748	32150.72033	31507.70593	30877.55181	30260.00077
1	All Existing	101	14 SEER Split-System Air Conditioner	1	Single Detached	1	HVAC		42499.67288	41649.67942	40816.68584	40000.35212	39200.34508	38416.33818	37648.01141	36895.05118	36157.15016	35434.00716
1	All Existing	116	Duct Repair	3	Mobile Home	1	HVAC		194032.0096	189962.9372	185794.24	181534.4036	177191.8838	172775.0971	168361.4024	164060.4595	159869.3881	155785.3813

Penetration Model Output Filename: O_Saere_FPL_RIM-H.xls
Annual adoptions as share of eligible market
Input File: P_Saere_FPL_RIM-H.xls

Segment Number	Segment	Measure Number	Measure	Bldg Typ	Applicable Building	End Use Number	End Use	Units Year Yr Index	% 2010 1	% 2011 2	% 2012 3	% 2013 4	% 2014 5	% 2015 6	% 2016 7	% 2017 8	% 2018 9	% 2019 10
1	All Existing	115	Electronically Commutated Motors (ECM) on an Air Handler Unit	1	Single Detached	1	HVAC		8.2%	15.3%	22.3%	29.0%	33.9%	33.9%	33.9%	33.9%	33.9%	33.9%
1	All Existing	146	Window Tinting	3	Mobile Home	1	HVAC		3.7%	7.2%	10.7%	14.1%	17.5%	17.8%	17.8%	17.8%	17.8%	17.8%
1	All Existing	115	Electronically Commutated Motors (ECM) on an Air Handler Unit	3	Mobile Home	1	HVAC		4.2%	8.1%	11.9%	15.6%	19.4%	19.6%	19.6%	19.6%	19.6%	19.6%
1	All Existing	120	Window Tinting	3	Mobile Home	1	HVAC		3.7%	7.2%	10.7%	14.2%	17.6%	17.8%	17.8%	17.8%	17.8%	17.8%
1	All Existing	114	Proper Refrigerant Charging and Air Flow	3	Mobile Home	1	HVAC		1.0%	2.0%	3.0%	3.9%	4.8%	5.1%	5.1%	5.1%	5.1%	5.1%
1	All Existing	121	Default Window With Sunscreen	3	Mobile Home	1	HVAC		0.4%	0.8%	1.2%	1.6%	2.0%	2.1%	2.1%	2.1%	2.1%	2.1%
1	All Existing	140	Proper Refrigerant Charging and Air Flow	3	Mobile Home	1	HVAC		0.9%	1.7%	2.6%	3.4%	4.2%	4.5%	4.5%	4.5%	4.5%	4.5%
1	All Existing	115	Electronically Commutated Motors (ECM) on an Air Handler Unit	2	Multi Attached	1	HVAC		3.4%	6.6%	9.7%	12.8%	15.9%	16.3%	16.3%	16.3%	16.3%	16.3%
1	All Existing	147	Default Window With Sunscreen	3	Mobile Home	1	HVAC		0.1%	0.3%	0.4%	0.6%	0.7%	0.8%	0.8%	0.8%	0.8%	0.8%
1	All Existing	114	Proper Refrigerant Charging and Air Flow	2	Multi Attached	1	HVAC		0.8%	1.5%	2.2%	3.0%	3.7%	3.9%	3.9%	3.9%	3.9%	3.9%
1	All Existing	140	Proper Refrigerant Charging and Air Flow	2	Multi Attached	1	HVAC		0.7%	1.3%	1.9%	2.5%	3.2%	3.4%	3.4%	3.4%	3.4%	3.4%
1	All Existing	122	Single Pane Clear Windows to Double Pane Low-E Windows	2	Multi Attached	1	HVAC		4.4%	8.7%	13.0%	17.3%	21.5%	23.4%	23.4%	23.4%	23.4%	23.4%
1	All Existing	121	Default Window With Sunscreen	1	Single Detached	1	HVAC		0.2%	0.4%	0.6%	0.8%	1.1%	1.1%	1.1%	1.1%	1.1%	1.1%
1	All Existing	117	Reflective Roof	3	Mobile Home	1	HVAC		1.5%	2.9%	4.4%	5.8%	7.3%	7.3%	7.3%	7.3%	7.3%	7.3%
1	All Existing	148	Single Pane Clear Windows to Double Pane Low-E Windows	2	Multi Attached	1	HVAC		4.0%	7.9%	11.8%	15.8%	19.7%	21.5%	21.5%	21.5%	21.5%	21.5%
1	All Existing	147	Default Window With Sunscreen	1	Single Detached	1	HVAC		0.1%	0.1%	0.2%	0.3%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%
1	All Existing	143	Reflective Roof	3	Mobile Home	1	HVAC		1.5%	2.9%	4.4%	5.8%	7.3%	7.3%	7.3%	7.3%	7.3%	7.3%
1	All Existing	191	HE Room Air Conditioner - EER 11	1	Single Detached	1	HVAC		5.8%	11.5%	17.1%	22.8%	28.5%	29.7%	29.7%	29.7%	29.7%	29.7%
1	All Existing	117	Reflective Roof	2	Multi Attached	1	HVAC		1.0%	2.0%	3.0%	4.1%	5.1%	5.2%	5.2%	5.2%	5.2%	5.2%
1	All Existing	143	Reflective Roof	2	Multi Attached	1	HVAC		1.1%	2.2%	3.3%	4.4%	5.6%	5.7%	5.7%	5.7%	5.7%	5.7%
1	All Existing	191	HE Room Air Conditioner - EER 11	2	Multi Attached	1	HVAC		4.8%	9.6%	14.3%	19.1%	23.9%	25.4%	25.4%	25.4%	25.4%	25.4%
1	All Existing	117	Reflective Roof	1	Single Detached	1	HVAC		0.8%	1.6%	2.4%	3.2%	4.0%	4.1%	4.1%	4.1%	4.1%	4.1%
1	All Existing	191	HE Room Air Conditioner - EER 11	3	Mobile Home	1	HVAC		4.2%	8.4%	12.5%	16.7%	21.0%	22.6%	22.6%	22.6%	22.6%	22.6%
1	All Existing	200	Single Pane Clear Windows to Double Pane Low-E Windows	2	Multi Attached	1	HVAC		3.0%	6.0%	8.9%	11.9%	14.9%	16.5%	16.5%	16.5%	16.5%	16.5%
1	All Existing	143	Reflective Roof	1	Single Detached	1	HVAC		0.9%	1.8%	2.6%	3.5%	4.4%	4.5%	4.5%	4.5%	4.5%	4.5%
1	All Existing	116	Duct Repair	1	Single Detached	1	HVAC		0.7%	1.3%	2.0%	2.7%	3.4%	3.7%	3.7%	3.7%	3.7%	3.7%
1	All Existing	196	Reflective Roof	3	Mobile Home	1	HVAC		0.1%	0.2%	0.3%	0.4%	0.5%	0.6%	0.6%	0.6%	0.6%	0.6%
1	All Existing	196	Reflective Roof	2	Multi Attached	1	HVAC		0.1%	0.2%	0.4%	0.5%	0.6%	0.7%	0.7%	0.7%	0.7%	0.7%
1	All Existing	142	Duct Repair	1	Single Detached	1	HVAC		0.9%	1.7%	2.6%	3.4%	4.3%	4.6%	4.6%	4.6%	4.6%	4.6%
1	All Existing	122	Single Pane Clear Windows to Double Pane Low-E Windows	3	Mobile Home	1	HVAC		1.6%	3.2%	4.8%	6.5%	8.1%	9.2%	9.2%	9.2%	9.2%	9.2%

FPL res existing_RIM annual penetration rates

Docket Nos. 080407-EG, 080408-EG, 080409-EG, 080410-EG, 080411-EG, 080412-EG, 080413-EG
Table of weighted-average measure penetration rate calculations
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Input File: P_Saere_FPL_RIM-H.xls								Units	%	%	%	%	%	%	%	%	%	%
Segment		Measure		Bldg	Applicable	End Use	End	Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Number	Segment	Number	Measure	Typ	Building	Number	Use	Yr Index	1	2	3	4	5	6	7	8	9	10
1	All Existing	148	Single Pane Clear Windows to Double Pane Low-E Windows	3	Mobile Home	1	HVAC		1.3%	2.7%	4.0%	5.4%	6.7%	7.6%	7.6%	7.6%	7.6%	7.6%
1	All Existing	148	Single Pane Clear Windows to Double Pane Low-E Windows	1	Single Detached	1	HVAC		1.1%	2.2%	3.3%	4.5%	5.6%	6.4%	6.4%	6.4%	6.4%	6.4%
1	All Existing	122	Single Pane Clear Windows to Double Pane Low-E Windows	1	Single Detached	1	HVAC		1.1%	2.2%	3.3%	4.5%	5.6%	6.4%	6.4%	6.4%	6.4%	6.4%
1	All Existing	101	14 SEER Split-System Air Conditioner	1	Single Detached	1	HVAC		0.8%	1.5%	2.3%	3.1%	3.9%	4.4%	4.4%	4.4%	4.4%	4.4%
1	All Existing	116	Duct Repair	3	Mobile Home	1	HVAC		0.1%	0.2%	0.3%	0.4%	0.5%	0.6%	0.6%	0.6%	0.6%	0.6%

Penetration Model Output Filename: O_Saere_FPL_TRC-H.xls Worksheet: 'New Building Stock - Measure'																				
New Building Stock (with Program) - Measure Specific																				
Input File: P_Saere_FPL_TRC-H.xls									Units	Households	Households	Households	Households	Households	Households	Households	Households	Households	Households	Households
Segment		Measure		Bldg	Applicable	End Use	End		Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Number	Segment	Number	Measure	Typ	Building	Number	Use		Yr Index	1	2	3	4	5	6	7	8	9	10
1	All Existing	115	Electronically Commutated Motors (ECM) on an Air Handler Unit	1	Single Detached	1	HVAC			4522.442673	8215.515935	11647.96807	14834.02003	17472.3221	17194.34687	16920.75291	16651.47102	16386.43312	16125.57221
1	All Existing	198	Window Tinting	2	Multi Attached	1	HVAC			316.8730526	594.2985017	857.1495187	1106.075948	1158.633182	1145.932101	1133.132593	1120.433851	1107.835103	1095.335612
1	All Existing	199	Default Window With Sunscreen	2	Multi Attached	1	HVAC			433.5071969	801.6868741	1141.658006	1452.563481	1733.918666	1864.398498	1806.756567	1750.828795	1696.566127	1643.920861
1	All Existing	146	Window Tinting	3	Mobile Home	1	HVAC			46.08496251	88.05130073	126.3744263	167.1139261	173.7411341	172.5386937	171.3311907	170.1185482	168.9007082	167.6776322
1	All Existing	115	Electronically Commutated Motors (ECM) on an Air Handler Unit	3	Mobile Home	1	HVAC			302.825392	585.5513542	813.8632996	1048.295531	1269.547831	1310.331698	1292.295629	1274.513748	1256.982307	1239.697615
1	All Existing	120	Window Tinting	3	Mobile Home	1	HVAC			379.5780329	727.6999247	1063.308923	1386.840764	1462.153948	1453.694699	1445.166048	1436.566425	1427.894433	1419.148857
1	All Existing	114	Proper Refrigerant Charging and Air Flow	3	Mobile Home	1	HVAC			971.9393737	1802.574304	2543.237596	3176.954122	3692.061219	3738.717959	3480.488041	3238.849489	3012.818783	2801.46568
1	All Existing	121	Default Window With Sunscreen	3	Mobile Home	1	HVAC			931.5925037	1791.681008	2611.586006	3381.951068	4094.180232	4141.067818	4036.539969	3933.205023	3831.064248	3730.119597
1	All Existing	140	Proper Refrigerant Charging and Air Flow	3	Mobile Home	1	HVAC			111.9980285	208.5386169	294.8523024	368.8514316	429.0645792	432.4340569	402.5406972	374.5403071	348.3244502	323.7902188
1	All Existing	115	Electronically Commutated Motors (ECM) on an Air Handler Unit	2	Multi Attached	1	HVAC			1336.563576	2513.48165	3628.92338	4685.926285	5687.387135	5961.484	5882.741127	5805.083633	5728.495658	5652.961579
1	All Existing	301	HE Refrigerator - Energy Star version of above	2	Multi Attached	3	Refrigeration/ Freezer			4189.326857	7767.888827	11131.5775	14291.55854	17258.38326	17622.9985	17364.60777	17110.04245	16859.24444	16612.15653
1	All Existing	147	Default Window With Sunscreen	3	Mobile Home	1	HVAC			99.53296537	192.5636918	281.9305447	366.6356541	445.7348092	452.3674391	442.5680229	432.8168652	423.1143283	413.4608924
1	All Existing	114	Proper Refrigerant Charging and Air Flow	2	Multi Attached	1	HVAC			3988.674126	7461.126732	10613.86809	13392.4152	15756.49854	16366.39938	15450.73191	14561.99597	13758.01115	12976.68772
1	All Existing	140	Proper Refrigerant Charging and Air Flow	2	Multi Attached	1	HVAC			438.0888914	822.6877594	1172.99845	1482.661934	1746.857755	1808.536804	1708.324098	1613.095724	1522.632871	1436.725035
1	All Existing	301	HE Refrigerator - Energy Star version of above	1	Single Detached	3	Refrigeration/ Freezer			4073.567411	7653.114436	11042.25529	14250.48589	17286.85709	18205.76432	17957.6476	17713.04142	17471.89369	17234.1531
1	All Existing	301	HE Refrigerator - Energy Star version of above	3	Mobile Home	3	Refrigeration/ Freezer			476.1786412	894.6088932	1290.781663	1665.806951	2020.742825	2128.158254	2099.154711	2070.581533	2042.37263	2014.582004
1	All Existing	122	Single Pane Clear Windows to Double Pane Low-E Windows	2	Multi Attached	1	HVAC			3171.575368	6115.030689	8936.927573	11643.41974	12252.98472	12134.28681	12017.88703	11903.76716	11791.90991	11682.29895
1	All Existing	121	Default Window With Sunscreen	1	Single Detached	1	HVAC			3550.682523	6905.747043	10160.78339	13297.86133	16299.55737	17318.67148	17097.53457	16876.92261	16656.78665	16437.07812
1	All Existing	117	Reflective Roof	3	Mobile Home	1	HVAC			94.51935503	186.183674	278.0207813	370.1537904	460.4926016	465.5808568	470.8389536	476.2711313	481.8816428	487.6747373
1	All Existing	148	Single Pane Clear Windows to Double Pane Low-E Windows	2	Multi Attached	1	HVAC			349.078734	675.6186951	989.7815821	1292.212147	1346.063211	1334.949974	1324.093128	1313.492157	1303.146699	1293.05656
1	All Existing	198	Window Tinting	3	Mobile Home	1	HVAC			7.404293701	14.54000249	21.60854668	28.61706548	35.57254094	36.70061658	36.66060817	37.02478596	37.19303038	37.36533327
1	All Existing	147	Default Window With Sunscreen	1	Single Detached	1	HVAC			1034.730318	2021.718237	2985.205562	3919.828453	4820.249838	5126.25774	5075.181606	5023.915234	4972.495983	4920.880915
1	All Existing	143	Reflective Roof	3	Mobile Home	1	HVAC			9.597354108	18.97893289	28.42427444	37.94767488	47.56372829	48.26998187	48.92636659	49.60608982	50.3098753	51.03845799
1	All Existing	191	HE Room Air Conditioner - EER 11	1	Single Detached	1	HVAC			485.2733337	939.1432298	1375.278675	1794.568758	2135.926976	2114.331869	2093.11912	2072.285671	2051.827791	2031.742079
1	All Existing	117	Reflective Roof	2	Multi Attached	1	HVAC			361.102659	714.8391361	1071.027406	1430.228196	1793.016221	1854.643495	1879.431534	1905.150087	1931.83245	1959.513015
1	All Existing	143	Reflective Roof	2	Multi Attached	1	HVAC			38.39350958	76.19551425	114.3964581	153.0621265	192.26043	199.1877287	202.2121625	205.3545644	208.6195554	212.0119262
1	All Existing	191	HE Room Air Conditioner - EER 11	2	Multi Attached	1	HVAC			746.8176897	1452.712403	2134.110573	2792.267616	3428.390087	3434.456161	3404.527455	3375.183696	3346.422026	3318.23985
1	All Existing	117	Reflective Roof	1	Single Detached	1	HVAC			385.2761691	764.86103	1148.152918	1535.813324	1926.52573	2028.776016	2058.225043	2088.850579	2120.701296	2153.826057
1	All Existing	191	HE Room Air Conditioner - EER 11	3	Mobile Home	1	HVAC			61.61818469	120.2276243	176.9767434	231.9614408	285.2760564	293.0302125	290.7567538	288.5357253	286.3610791	284.2347948
1	All Existing	200	Single Pane Clear Windows to Double Pane Low-E Windows	2	Multi Attached	1	HVAC			242.6974407	472.8385633	694.8435844	909.7121951	1117.628875	1130.061087	1120.598386	1111.32599	1102.243222	1093.349495
1	All Existing	143	Reflective Roof	1	Single Detached	1	HVAC			112.9821129	224.828325	338.1671173	453.2130898	570.1894977	600.5579666	610.3775366	620.6046108	631.2573978	642.3549877
1	All Existing	146	Window Tinting	1	Single Detached	1	HVAC			219.3293452	437.5614372	658.7745283	883.2891778	1111.430048	1151.260549	1159.285451	1167.833053	1206.908421	1226.51532
1	All Existing	120	Window Tinting	1	Single Detached	1	HVAC			704.9761496	1407.425531	2120.200385	2844.380504	3581.063201	3723.622524	3783.825898	3845.842847	3909.697481	3975.409122
1	All Existing	116	Duct Repair	1	Single Detached	1	HVAC			35586.98546	69729.63211	100302.762	124766.2312	141032.518	126984.3285	110614.8694	95682.88602	82153.67767	69982.69099
1	All Existing	196	Reflective Roof	3	Mobile Home	1	HVAC			3.25675429	6.808741219	10.11507142	13.79158687	17.65555609	18.73028485	19.36828946	20.04536889	20.76440536	21.52850942
1	All Existing	196	Reflective Roof	2	Multi Attached	1	HVAC			41.96906689	85.00808359	129.9196345	176.8914346	226.1269258	236.6964722	244.4486885	252.8537006	261.3424108	270.5478313
1	All Existing	142	Duct Repair	1	Single Detached	1	HVAC			10410.32764	20605.68609	29919.52553	37549.23464	42784.77078	38481.00164	33715.42905	29286.2139	25203.70568	21474.5104
1	All Existing	122	Single Pane Clear Windows to Double Pane Low-E Windows	3	Mobile Home	1	HVAC			294.1845962	578.9171993	857.8308154	1131.38235	1399.942351	1431.258779	1428.13077	1425.332712	1422.875	1420.768861
1	All Existing	148	Single Pane Clear Windows to Double Pane Low-E Windows	3	Mobile Home	1	HVAC			32.87621847	64.93519679	96.52064899	127.6832718	158.4738845	161.9430127	162.0645796	162.2360462	162.4597959	162.738418
1	All Existing	803	Variable-Speed Pool Pump (<1 hp)	1	Single Detached	8	Pool Pump			1308.870159	2587.042224	3889.572256	5188.162487	6494.533706	6997.610137	7068.260202	7141.205673	7216.498818	7294.192371

Penetration Model Output Filename: O_Saere_FPL_TRC-H.xls Worksheet: 'Bld Stock Available - Measure'																			
Building Stock Available (with Program) - Measure Specific																			
Input File: P_Saere_FPL_TRC-H.xls									Units	Households	Households	Households	Households	Households	Households	Households	Households	Households	Households
Segment		Measure		Bldg	Applicable	End Use	End		Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Number	Segment	Number	Measure	Typ	Building	Number	Use		Yr Index	1	2	3	4	5	6	7	8	9	10
1	All Existing	115	Electronically Commutated Motors (ECM) on an Air Handler Unit	1	Single Detached	1	HVAC			57234.76633	56090.071	54968.26958	53868.90419	52791.52611	51735.69559	50700.98167	49686.96204	48693.2228	47719.35834
1	All Existing	198	Window Tinting	2	Multi Attached	1	HVAC			2717.554028	2663.202948	2609.938889	2557.740111	2506.585309	2456.453603	2407.324531	2359.17804	2311.994479	2265.75459
1	All Existing	199	Default Window With Sunscreen	2	Multi Attached	1	HVAC			152988.2268	149503.6252	145727.8996	141694.5167	137437.1142	132989.1316	128502.2384	124161.5722	119962.5286	115900.6432
1	All Existing	146	Window Tinting	3	Mobile Home	1	HVAC			413.4204751	405.1520656	397.0490243	389.1080438	381.3258829	373.6993652	366.2253779	358.9008704	351.722853	344.6883959
1	All Existing	115	Electronically Commutated Motors (ECM) on an Air Handler Unit	3	Mobile Home	1	HVAC			7649.605719	7496.613604	7346.681332	7199.747705	7055.752751	6914.637698	6776.344942	6640.818044	6508.001683	6377.841649
1	All Existing	120	Window Tinting	3	Mobile Home	1	HVAC			3638.100181	3565.338177	3494.031414	3424.150785	3355.66777	3288.554414	3222.783326	3158.327659	3095.161106	3033.257884
1	All Existing	114	Proper Refrigerant Charging and Air Flow	3	Mobile Home	1	HVAC			86236.44873	83559.21917	80121.51197	76026.70888	71392.75967	66346.68448	61355.80719	56717.81276	52409.38401	48408.63392
1	All Existing	121	Default Window With Sunscreen	3	Mobile Home	1	HVAC			204811.5657	199802.3738	194050.4789	187610.115	180543.6007	172920.432	165403.7769	158139.8922	151122.5535	144345.6594
1	All Existing	140	Proper Refrigerant Charging and Air Flow	3	Mobile Home	1	HVAC			9799.596446	9493.846449	9099.601676	8628.654386	8094.606895	7512.23147	6938.201465	6404.947552	5909.7991	5450.245157
1	All Existing	115	Electronically Commutated Motors (ECM) on an Air Handler Unit	2	Multi Attached	1	HVAC			41934.09981	41095.41782	40273.50946	39468.03927	38678.67848	37905.10491	37147.00282	36404.06276	35675.98151	34962.46188
1	All Existing	301	HE Refrigerator - Energy Star version of above	2	Multi Attached	3	Refrigeration/ Freezer			90042.84307	88241.98621	86477.14648	84747.60355	83052.65148	81391.59845	79763.76648	78168.49115	76605.12133	75073.0189
1	All Existing	147	Default Window With Sunscreen	3	Mobile Home	1	HVAC			23274.04156	22711.01842	22068.08564	21350.43199	20564.12041	19716.01789	18878.37744	18067.09323	17281.59084	16521.30698
1	All Existing	114	Proper Refrigerant Charging and Air Flow	2	Multi Attached	1	HVAC			472736.5019	459372.8712	442873.5096	423614.4506	402017.5947	378535.8743	354926.0854	332685.8464	311741.7734	292024.087
1	All Existing	140	Proper Refrigerant Charging and Air Flow	2	Multi Attached	1	HVAC			51538.94194	50078.83598	48271.02526	46156.06627	43779.93625	41192.41693	38596.20252	36150.12085	33846.28463	31677.17872
1	All Existing	301	HE Refrigerator - Energy Star version of above	1	Single Detached	3	Refrigeration/ Freezer			133921.9196	131243.4812	128618.6115	126046.2393	123525.3145	121054.8082	118633.7121	116261.0378	113935.8171	111657.1007
1	All Existing	301	HE Refrigerator - Energy Star version of above	3	Mobile Home	3	Refrigeration/ Freezer			15654.76906	15341.67368	15034.8402	14734.1434	14439.46053	14150.67132	13867.6579	13590.30474	13318.49864	13052.12867
1	All Existing	122	Single Pane Clear Windows to Double Pane Low-E Windows	2	Multi Attached	1	HVAC			26591.42823	26059.59967	25538.40767	25027.63952	24527.08673	24036.545	23555.8141	23084.69781	22623.00386	22170.54378
1	All Existing	121	Default Window With Sunscreen	1	Single Detached	1	HVAC			1532411.282	1498283.388	1461550.088	1422361.518	1380882.384	1337291.17	1293573.048	1250946.004	1209387.699	1168876.294
1	All Existing	117	Reflective Roof	3	Mobile Home	1	HVAC			4869.484805	4772.095109	4676.653207	4583.120142	4491.45774	4401.628585	4313.596013	4227.324093	4142.777611	4059.922059
1	All Existing	148	Single Pane Clear Windows to Double Pane Low-E Windows	2	Multi Attached	1	HVAC			2899.065484	2841.084174	2784.262491	2728.577241	2674.005696	2620.525582	2568.115071	2516.752769	2466.417714	2417.08936
1	All Existing	198	Window Tinting	3	Mobile Home	1	HVAC			253.220041	248.1556402	243.1925274	238.3286768	233.5621033	228.8908612	224.313044	219.8267831	215.4302474	211.1216425
1	All Existing	147	Default Window With Sunscreen	1	Single Detached	1	HVAC			457680.1696	447512.5305	436580.996	424923.8746	412583.9652	399608.4411	386592.5397	373887.0305	361485.853	349383.0899
1	All Existing	143	Reflective Roof	3	Mobile Home	1	HVAC			553.350546	542.2835351	531.4378644	520.8091071	510.392925	500.1850665	490.1813651	480.3777378	470.7701831	461.3547794
1	All Existing	191	HE Room Air Conditioner - EER 11	1	Single Detached	1	HVAC			5843.764387	5726.8891	5612.351318	5500.104291	5390.102206	5282.300161	5176.654158	5073.121075	4971.658654	4872.22548
1	All Existing	117	Reflective Roof	2	Multi Attached	1	HVAC			26693.85447	26159.97738	25636.77784	25124.04228	24621.56143	24129.13021	23646.5476	23173.61665	22710.14432	22255.94143
1	All Existing	143	Reflective Roof	2	Multi Attached	1	HVAC			2910.232255	2852.02761	2794.987057	2739.087316	2684.30557	2630.619459	2578.007069	2526.446928	2475.917989	2426.39963
1	All Existing	191	HE Room Air Conditioner - EER 11	2	Multi Attached	1	HVAC			10676.03817	10462.51741	10253.26706	10048.20172	9847.237685	9650.292931	9457.287073	9268.141331	9082.778505	8901.122935
1	All Existing	117	Reflective Roof	1	Single Detached	1	HVAC			36433.75034	35705.07533	34990.97383	34291.15435	33605.33126	32933.22464	32274.56015	31629.06894	30996.48756	30376.55781
1	All Existing	191	HE Room Air Conditioner - EER 11	3	Mobile Home	1	HVAC			994.7867808	974.8910452	955.3932243	936.2853598	917.5596526	899.2084595	881.2242903	863.5998045	846.3278084	829.4012523
1	All Existing	200	Single Pane Clear Windows to Double Pane Low-E Windows	2	Multi Attached	1	HVAC			3623.405371	3550.937264	3479.918519	3410.320148	3342.113745	3275.27147	3209.766041	3145.57072	3082.659306	3021.00812
1	All Existing	143	Reflective Roof	1	Single Detached	1	HVAC			10881.54677	10663.91583	10450.63752	10241.62477	10036.79227	9836.056425	9639.335297	9446.548591	9257.617619	9072.465267
1	All Existing	146	Window Tinting	1	Single Detached	1	HVAC			8129.845117	7967.248215	7807.903251	7651.745186	7498.710282	7348.736076	7201.761355	7057.726128	6916.571605	6778.240173

Input File: P_Saere_FPL_TRC-H.xls								Units	Households	Households	Households	Households	Households	Households	Households	Households	Households	Households
Segment Number	Segment	Measure Number	Measure	Bldg Typ	Applicable Building	End Use Number	End Use	Year Yr Index	2010 1	2011 2	2012 3	2013 4	2014 5	2015 6	2016 7	2017 8	2018 9	2019 10
1	All Existing	120	Window Tinting	1	Single Detached	1	HVAC		27220.46356	26676.05429	26142.53321	25619.68254	25107.28889	24605.14311	24113.04025	23630.77945	23158.16386	22695.00058
1	All Existing	116	Duct Repair	1	Single Detached	1	HVAC		1451758.057	1387847.65	1291755.657	1167623.837	1022000.454	863348.5774	721638.9639	598801.8486	493056.5833	402684.8476
1	All Existing	196	Reflective Roof	3	Mobile Home	1	HVAC		338.9272094	332.1486652	325.5056919	318.9955781	312.6156665	306.3633532	300.2360861	294.2313644	288.3467371	282.5798024
1	All Existing	196	Reflective Roof	2	Multi Attached	1	HVAC		3637.362192	3564.614948	3493.322649	3423.456196	3354.987072	3287.887331	3222.129584	3157.686993	3094.533253	3032.642588
1	All Existing	142	Duct Repair	1	Single Detached	1	HVAC		433591.7396	414717.7837	386229.8557	349184.1235	305402.1911	257365.0719	214506.3889	177175.1406	144931.1462	117332.8937
1	All Existing	122	Single Pane Clear Windows to Double Pane Low-E Windows	3	Mobile Home	1	HVAC		4850.800241	4753.784236	4658.708551	4565.53438	4474.223693	4384.739219	4297.044435	4211.103546	4126.881475	4044.343845
1	All Existing	148	Single Pane Clear Windows to Double Pane Low-E Windows	3	Mobile Home	1	HVAC		551.2273001	540.2027541	529.398699	518.810725	508.4345105	498.2658203	488.3005039	478.5344938	468.963804	459.5845279
1	All Existing	803	Variable-Speed Pool Pump (<1 hp)	1	Single Detached	8	Pool Pump		78701.96033	77127.92112	75585.3627	74073.65545	72592.18234	71140.33869	69717.53192	68323.18128	66956.71765	65617.5833

Penetration Model Output Filename: O_Saere_FPL_TRC-H.xls																				
Annual adoptions as share of eligible market																				
Input File: P_Saere_FPL_TRC-H.xls							Units	%	%	%	%	%	%	%	%	%	%			
Segment		Measure		Bldg	Applicable	End Use	End	Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019		
Number	Segment	Number	Measure	Typ	Building	Number	Use	Yr Index	1	2	3	4	5	6	7	8	9	10	weight	kWh savings per house-hold
1	All Existing	115	Electronically Commutated Motors (ECM) on an Air Handler Unit	1	Single Detached	1	HVAC		7.9%	14.6%	21.2%	27.5%	33.1%	33.2%	33.4%	33.5%	33.7%	33.8%	0.056	397
1	All Existing	198	Window Tinting	2	Multi Attached	1	HVAC		11.7%	22.3%	32.8%	43.2%	46.2%	46.6%	47.1%	47.5%	47.9%	48.3%	0.015	76
1	All Existing	199	Default Window With Sunscreen	2	Multi Attached	1	HVAC		0.3%	0.5%	0.8%	1.0%	1.3%	1.4%	1.4%	1.4%	1.4%	1.4%	0.001	97
1	All Existing	146	Window Tinting	3	Mobile Home	1	HVAC		11.1%	21.7%	32.3%	42.9%	45.6%	46.2%	46.8%	47.4%	48.0%	48.6%	0.027	133
1	All Existing	115	Electronically Commutated Motors (ECM) on an Air Handler Unit	3	Mobile Home	1	HVAC		4.0%	7.5%	11.1%	14.6%	18.0%	19.0%	19.1%	19.2%	19.3%	19.4%	0.021	260
1	All Existing	120	Window Tinting	3	Mobile Home	1	HVAC		10.4%	20.4%	30.4%	40.5%	43.6%	44.2%	44.8%	45.5%	46.1%	46.8%	0.024	124
1	All Existing	114	Proper Refrigerant Charging and Air Flow	3	Mobile Home	1	HVAC		1.1%	2.2%	3.2%	4.2%	5.2%	5.6%	5.7%	5.7%	5.7%	5.8%	0.009	378
1	All Existing	121	Default Window With Sunscreen	3	Mobile Home	1	HVAC		0.5%	0.9%	1.3%	1.8%	2.3%	2.4%	2.4%	2.5%	2.5%	2.6%	0.002	140
1	All Existing	140	Proper Refrigerant Charging and Air Flow	3	Mobile Home	1	HVAC		1.1%	2.2%	3.2%	4.3%	5.3%	5.8%	5.8%	5.8%	5.9%	5.9%	0.009	359
1	All Existing	115	Electronically Commutated Motors (ECM) on an Air Handler Unit	2	Multi Attached	1	HVAC		3.2%	6.1%	9.0%	11.9%	14.7%	15.7%	15.8%	15.9%	16.1%	16.2%	0.016	233
1	All Existing	301	HE Refrigerator - Energy Star version of above	2	Multi Attached	3	Refrigeration/ Freezer		4.7%	8.8%	12.9%	16.9%	20.8%	21.7%	21.8%	21.9%	22.0%	22.1%	0.025	264
1	All Existing	147	Default Window With Sunscreen	3	Mobile Home	1	HVAC		0.4%	0.8%	1.3%	1.7%	2.2%	2.3%	2.3%	2.4%	2.4%	2.5%	0.001	128
1	All Existing	114	Proper Refrigerant Charging and Air Flow	2	Multi Attached	1	HVAC		0.8%	1.6%	2.4%	3.2%	3.9%	4.3%	4.4%	4.4%	4.4%	4.4%	0.006	338
1	All Existing	140	Proper Refrigerant Charging and Air Flow	2	Multi Attached	1	HVAC		0.9%	1.6%	2.4%	3.2%	4.0%	4.4%	4.4%	4.5%	4.5%	4.5%	0.006	320
1	All Existing	301	HE Refrigerator - Energy Star version of above	1	Single Detached	3	Refrigeration/ Freezer		3.0%	5.8%	8.6%	11.3%	14.0%	15.0%	15.1%	15.2%	15.3%	15.4%	0.017	264
1	All Existing	301	HE Refrigerator - Energy Star version of above	3	Mobile Home	3	Refrigeration/ Freezer		3.0%	5.8%	8.6%	11.3%	14.0%	15.0%	15.1%	15.2%	15.3%	15.4%	0.017	264
1	All Existing	122	Single Pane Clear Windows to Double Pane Low-E Windows	2	Multi Attached	1	HVAC		11.9%	23.5%	35.0%	46.5%	50.0%	50.5%	51.0%	51.6%	52.1%	52.7%	0.088	397
1	All Existing	121	Default Window With Sunscreen	1	Single Detached	1	HVAC		0.2%	0.5%	0.7%	0.9%	1.2%	1.3%	1.3%	1.3%	1.4%	1.4%	0.001	202
1	All Existing	117	Reflective Roof	3	Mobile Home	1	HVAC		1.9%	3.9%	5.9%	8.1%	10.3%	10.6%	10.9%	11.3%	11.6%	12.0%	0.026	508
1	All Existing	148	Single Pane Clear Windows to Double Pane Low-E Windows	2	Multi Attached	1	HVAC		12.0%	23.8%	35.5%	47.4%	50.3%	50.9%	51.6%	52.2%	52.8%	53.5%	0.081	360
1	All Existing	198	Window Tinting	3	Mobile Home	1	HVAC		2.9%	5.9%	8.9%	12.0%	15.2%	16.0%	16.4%	16.8%	17.3%	17.7%	0.005	70
1	All Existing	147	Default Window With Sunscreen	1	Single Detached	1	HVAC		0.2%	0.5%	0.7%	0.9%	1.2%	1.3%	1.3%	1.3%	1.4%	1.4%	0.001	187
1	All Existing	143	Reflective Roof	3	Mobile Home	1	HVAC		1.7%	3.5%	5.3%	7.3%	9.3%	9.7%	10.0%	10.3%	10.7%	11.1%	0.022	469
1	All Existing	191	HE Room Air Conditioner - EER 11	1	Single Detached	1	HVAC		8.3%	16.4%	24.5%	32.6%	39.6%	40.0%	40.4%	40.8%	41.3%	41.7%	0.074	424
1	All Existing	117	Reflective Roof	2	Multi Attached	1	HVAC		1.4%	2.7%	4.2%	5.7%	7.3%	7.7%	7.9%	8.2%	8.5%	8.8%	0.018	476
1	All Existing	143	Reflective Roof	2	Multi Attached	1	HVAC		1.3%	2.7%	4.1%	5.6%	7.2%	7.6%	7.8%	8.1%	8.4%	8.7%	0.017	457
1	All Existing	191	HE Room Air Conditioner - EER 11	2	Multi Attached	1	HVAC		7.0%	13.9%	20.8%	27.8%	34.8%	35.6%	36.0%	36.4%	36.8%	37.3%	0.054	343
1	All Existing	117	Reflective Roof	1	Single Detached	1	HVAC		1.1%	2.1%	3.3%	4.5%	5.7%	6.2%	6.4%	6.6%	6.8%	7.1%	0.022	746

Segment Number	Segment	Measure Number	Measure	Bldg Typ	Applicable Building	End Use Number	End Use	Year Yr Index	2010 1	2011 2	2012 3	2013 4	2014 5	2015 6	2016 7	2017 8	2018 9	2019 10	weight	kWh savings per house-hold
1	All Existing	191	HE Room Air Conditioner - EER 11	3	Mobile Home	1	HVAC		6.2%	12.3%	18.5%	24.8%	31.1%	32.6%	33.0%	33.4%	33.8%	34.3%	0.043	298
1	All Existing	200	Single Pane Clear Windows to Double Pane Low-E Windows	2	Multi Attached	1	HVAC		6.7%	13.3%	20.0%	26.7%	33.4%	34.5%	34.9%	35.3%	35.8%	36.2%	0.037	245
1	All Existing	143	Reflective Roof	1	Single Detached	1	HVAC		1.0%	2.1%	3.2%	4.4%	5.7%	6.1%	6.3%	6.6%	6.8%	7.1%	0.021	717
1	All Existing	146	Window Tinting	1	Single Detached	1	HVAC		2.7%	5.5%	8.4%	11.5%	14.8%	15.7%	16.2%	16.8%	17.4%	18.1%	0.007	98
1	All Existing	120	Window Tinting	1	Single Detached	1	HVAC		2.6%	5.3%	8.1%	11.1%	14.3%	15.1%	15.7%	16.3%	16.9%	17.5%	0.007	96
1	All Existing	116	Duct Repair	1	Single Detached	1	HVAC		2.5%	5.0%	7.8%	10.7%	13.8%	14.7%	15.3%	16.0%	16.7%	17.4%	0.026	362
1	All Existing	196	Reflective Roof	3	Mobile Home	1	HVAC		1.0%	2.0%	3.1%	4.3%	5.6%	6.1%	6.5%	6.8%	7.2%	7.6%	0.009	284
1	All Existing	196	Reflective Roof	2	Multi Attached	1	HVAC		1.2%	2.4%	3.7%	5.2%	6.7%	7.2%	7.6%	8.0%	8.4%	8.9%	0.012	332
1	All Existing	142	Duct Repair	1	Single Detached	1	HVAC		2.4%	5.0%	7.7%	10.8%	14.0%	15.0%	15.7%	16.5%	17.4%	18.3%	0.024	311
1	All Existing	122	Single Pane Clear Windows to Double Pane Low-E Windows	3	Mobile Home	1	HVAC		6.1%	12.2%	18.4%	24.8%	31.3%	32.6%	33.2%	33.8%	34.5%	35.1%	0.058	390
1	All Existing	148	Single Pane Clear Windows to Double Pane Low-E Windows	3	Mobile Home	1	HVAC		6.0%	12.0%	18.2%	24.6%	31.2%	32.5%	33.2%	33.9%	34.6%	35.4%	0.051	343
1	All Existing	803	Variable-Speed Pool Pump (<1 hp)	1	Single Detached	8	Pool Pump		1.7%	3.4%	5.1%	7.0%	8.9%	9.8%	10.1%	10.5%	10.8%	11.1%	0.042	902
																		weighted average penetration	30.8%	2380.82

Penetration Model Output Filename: O_Saece_FPL_RIM-H.xls Worksheet: 'New Building Stock - Measure'

New Building Stock (with Program) - Measure Specific

Input File: P_Saece_FPL_RIM-H.xls

Segment Number	Segment	Measure Number	Measure	Bldg Typ	Applicable Building	End Use Number	End Use	Units Year	Sq Ft 2010	Sq Ft 2011	Sq Ft 2012	Sq Ft 2013	Sq Ft 2014	Sq Ft 2015	Sq Ft 2016	Sq Ft 2017	Sq Ft 2018	Sq Ft 2019
								Yr Index	1	2	3	4	5	6	7	8	9	10
1	Existing	603	Heat Pump Water Heater (air source)	7	Hospital	6	Water Heating		35368.38216	53461.72471	69082.00392	82522.3035	94042.38287	103872.3731	112216.0705	112961.9924	111832.3725	110714.0488
1	Existing	601	High Efficiency Water Heater (electric)	7	Hospital	6	Water Heating		46810.73716	72772.03633	95317.63284	114843.24	131700.2814	146200.7467	158621.5231	157970.5364	156390.8311	154826.9228
1	Existing	403	Air Handler Optimization	7	Hospital	4	Ventilation		5155249.23	6422124.466	5839550.435	4205121.277	2467230.771	1191848.221	475003.6713	145711.172	43571.34913	13028.94239
1	Existing	334	Ceiling Insulation	7	Hospital	3	Cooling		45480.6109	71745.69491	87426.70203	92707.52564	89409.02373	80184.15981	66510.87896	49501.54438	36842.13672	27420.21597
1	Existing	349	Ceiling Insulation	7	Hospital	3	Cooling		3275.844807	5178.842478	6317.124342	6702.898596	6467.152516	5801.524047	4810.31213	3580.302516	2664.809634	1983.410718
1	Existing	328	Optimize Controls	7	Hospital	3	Cooling		63222.55999	85183.64561	92977.25771	88955.49876	77205.73436	61967.33407	46580.51535	33097.32486	22392.03368	14511.92012
1	Existing	335	Roof Insulation	7	Hospital	3	Cooling		62328.60268	97116.6273	113764.5132	113375.3723	100570.2662	81229.15208	59245.62821	38288.30928	24744.35113	15991.38025
1	Existing	350	Roof Insulation	7	Hospital	3	Cooling		4488.785012	7010.552383	8221.531423	8199.24182	7276.67584	5879.037927	4286.145189	2770.229948	1790.460571	1157.214064
1	Existing	334	Ceiling Insulation	2	Restaurant/ Services	3	Cooling		1003039.759	1631125.517	2015593.066	2155920.646	2091458.727	1883043.44	1553703.587	1157269.843	861987.7691	642048.109
1	Existing	349	Ceiling Insulation	2	Restaurant/ Services	3	Cooling		69002.91877	112431.5852	139055.727	148818.5399	144422.9573	130064.1572	107282.2676	79913.73096	59527.11982	44341.29094
1	Existing	305	Chiller Tune Up/Diagnostics	7	Hospital	3	Cooling		2304409.951	3168206.304	3053163.441	2290084.49	1380250.135	674264.4619	262218.8384	79021.96943	23813.97038	7176.550894
1	Existing	301	Centrifugal Chiller, 0.51 kW/ton, 500 tons	10	Hotel/Motel	3	Cooling		452752.4139	474547.7093	493487.7151	509880.3041	524000.9213	536095.9722	546385.8587	555067.6992	562317.7669	568293.6727
1	Existing	307	EMS Optimization	7	Hospital	3	Cooling		1502479.964	2080351.593	2251163.895	2086232.35	1719154.398	1285542.342	883805.5088	563965.8347	336543.8256	189002.6735
1	Existing	404	Electronically Commutated Motors (ECM) on an Air Handler Unit	7	Hospital	4	Ventilation		333499.3766	538433.3672	717756.6417	874351.1489	1010782.915	1129336.143	1232043.673	1320714.189	1396956.521	1462201.338
1	Existing	328	Optimize Controls	2	Restaurant/ Services	3	Cooling		1010100.895	1427084.671	1652900.77	1704417.184	1620131.268	1446649.824	1227994.114	999267.0257	784433.8811	597020.5819
1	Existing	301	Centrifugal Chiller, 0.51 kW/ton, 500 tons	7	Hospital	3	Cooling		319448.2202	333575.3679	345883.7251	356565.6776	365793.6818	373722.3172	380490.1296	386221.2835	391027.046	395007.1179
1	Existing	335	Roof Insulation	2	Restaurant/ Services	3	Cooling		1377460.898	2212525.128	2629350.653	2644406.782	2360378.634	1914084.093	1388975.515	898907.6781	581748.9257	376492.2926
1	Existing	350	Roof Insulation	2	Restaurant/ Services	3	Cooling		94973.64451	152650.1868	181464.1983	182539.014	162955.0537	132155.765	95890.73568	62060.24332	40165.23362	25994.83833
1	Existing	334	Ceiling Insulation	4	FoodStore	3	Cooling		594248.3633	982552.4145	1223244.788	1314470.524	1279219.669	1154252.198	949929.7844	707970.6864	527641.6225	393244.6459
1	Existing	349	Ceiling Insulation	4	FoodStore	3	Cooling		21432.02081	35500.03182	44231.63836	47553.83703	46294.41462	41781.85593	34376.78788	25622.48845	19097.53513	14234.20871
1	Existing	326	DX Tune Up/ Advanced Diagnostics	7	Hospital	3	Cooling		103538.7795	146291.0015	143157.3407	108538.3742	65897.69219	32305.44038	12472.76996	3770.857007	1140.032455	344.6627642
1	Existing	301	Centrifugal Chiller, 0.51 kW/ton, 500 tons	2	Restaurant/ Services	3	Cooling		14940.37368	15410.71712	15825.67713	16190.49388	16509.92121	16788.27171	17029.45766	17237.02813	17414.20265	17563.90176
1	Existing	301	Centrifugal Chiller, 0.51 kW/ton, 500 tons	3	Retail	3	Cooling		239054.6346	245449.7595	251134.278	256169.854	260612.9976	264515.4873	267924.7579	270884.2572	273433.7746	275609.743
1	Existing	305	Chiller Tune Up/Diagnostics	2	Restaurant/ Services	3	Cooling		113245.9876	161801.657	159317.5165	121317.0124	73878.42936	36274.0694	13967.63598	4229.286832	1280.593733	387.7533907
1	Existing	161	LED Exit Sign	6	College	1	Indoor Lighting		1589214.135	2392821.521	2969781.1	3325560.186	3483295.712	3476649.818	3343498.284	3121084.927	2842805.11	2536467.014
1	Existing	328	Optimize Controls	4	FoodStore	3	Cooling		467733.1071	678839.5882	811650.547	870386.8834	867036.1612	817388.9174	737697.3229	642388.0678	542864.9019	447195.2603
1	Existing	335	Roof Insulation	4	FoodStore	3	Cooling		817472.736	1334459.772	1597834.398	1614740.468	1446162.148	1175402.667	851012.872	551335.714	357187.3935	231406.8014
1	Existing	161	LED Exit Sign	3	Retail	1	Indoor Lighting		4832500.368	7353516.551	9219226.981	10442496.5	11082484.44	11226957.52	10976603.48	10432737.8	9688793.118	8825302.938
1	Existing	307	EMS Optimization	2	Restaurant/ Services	3	Cooling		58684.76998	85416.32489	97851.5871	97361.32541	87513.07937	72552.99505	56207.99637	41067.10048	28496.85758	18887.74469
1	Existing	350	Roof Insulation	4	FoodStore	3	Cooling		29455.74599	48199.94371	57777.14691	58430.37468	52356.91672	42569.46402	30811.76513	19965.36291	12937.12692	8382.980754
1	Existing	301	Centrifugal Chiller, 0.51 kW/ton, 500 tons	4	FoodStore	3	Cooling		21848.46596	22355.3608	22809.33509	23214.5066	23574.70182	23893.47404	24174.12056	24419.69913	24633.04359	24816.77864
1	Existing	334	Ceiling Insulation	8	Other Healthcare	3	Cooling		360062.6938	613244.5752	773530.9304	838062.2164	820326.2652	743292.0521	609433.1229	454960.167	339641.4565	253552.5687
1	Existing	349	Ceiling Insulation	8	Other Healthcare	3	Cooling		13462.18329	22959.39194	28977.67026	31407.05777	30750.93482	27869.10971	22847.14737	17057.93661	12735.64689	9508.576885
1	Existing	603	Heat Pump Water Heater (air source)	6	College	6	Water Heating		367380.8589	631767.725	865056.2665	1070587.262	1251348.344	1410011.028	1509637.907	1494541.528	1479596.113	1464800.152
1	Existing	361	HE PTAC, EER=9.6, 1 ton	7	Hospital	3	Cooling		3395.541837	5475.147048	7297.786449	8892.422836	10284.83769	11497.97509	12552.24891	13465.81718	14254.827	14933.6333

FPL com existing_RIM max annual sign ups

Docket Nos. 080407-EG, 080408-EG, 080409-EG, 080410-EG, 080411-EG, 080412-EG, 080413-EG
Table of weighted-average measure penetration rate calculations
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Input File: P_Saece_FPL_RIM-H.xls								Units	Sq Ft	Sq Ft	Sq Ft	Sq Ft	Sq Ft	Sq Ft	Sq Ft	Sq Ft	Sq Ft	Sq Ft
Segment		Measure		Bldg	Applicable	End Use	End	Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Number	Segment	Number	Measure	Typ	Building	Number	Use	Yr Index	1	2	3	4	5	6	7	8	9	10
1	Existing	361	HE PTAC, EER=9.6, 1 ton	10	Hotel/Motel	3	Cooling		45715.77441	73714.4527	98253.48092	119722.7987	138469.5143	154802.5344	168996.7007	181296.483	191919.2775	201058.3512
1	Existing	161	LED Exit Sign	11	Other	1	Indoor Lighting		5469012.495	8397499.224	10615755.9	12136109.65	13016524.61	13343898.89	13219248.89	12745941.17	12021305.64	11131404.42
1	Existing	326	DX Tune Up/ Advanced Diagnostics	2	Restaurant/ Services	3	Cooling		2286619.141	3349302.626	3343205.338	2570575.844	1576250.364	776946.9393	297660.7675	90512.50248	27522.9859	8369.172567
1	Existing	161	LED Exit Sign	2	Restaurant/ Services	1	Indoor Lighting		2142690.405	3308900.533	4204358.003	4833574.962	5217355.063	5386973.584	5379022.366	5231287.774	4979767.371	4656753.235
1	Existing	402	Variable Speed Drive Control	7	Hospital	4	Ventilation		2217737.273	3343574.938	3934602.872	4022390.042	3723170.619	3187566.952	2557539.63	1940627.774	1402098.54	969815.8232
1	Existing	313	Ceiling Insulation	7	Hospital	3	Cooling		567820.0148	964064.6329	1214372.983	1314531.104	1285895.096	1164583.375	955163.1127	712889.8758	532068.2596	397111.3106
1	Existing	403	Air Handler Optimization	4	FoodStore	4	Ventilation		4105303.447	5787505.122	5656507.493	4284886.867	2599952.114	1274205.891	492229.4333	148771.032	44964.43825	13590.01601
1	Existing	305	Chiller Tune Up/Diagnostics	4	FoodStore	3	Cooling		172080.7101	252661.6048	252532.308	194352.2804	119255.0911	58805.02841	22519.13516	6850.677458	2084.084549	634.011517
1	Existing	161	LED Exit Sign	1	Office	1	Indoor Lighting		6117225.171	9496987.276	12123042.5	14007859.71	15206395.03	15801217.57	15889364.17	15571776.45	14945560.24	14098892.81
1	Existing	307	EMS Optimization	4	FoodStore	3	Cooling		74398.50089	111620.6932	132333.2853	137405.5628	130082.7531	114653.4316	95298.71978	75364.64338	57082.51598	41626.12433
1	Existing	161	LED Exit Sign	8	Other Healthcare	1	Indoor Lighting		607701.8252	950015.4494	1219850.729	1418448.903	1550779.237	1624263.128	1647651.388	1630117.87	1580586.148	1507274.711
1	Existing	161	LED Exit Sign	10	Hotel/Motel	1	Indoor Lighting		3033186.427	4710859.647	6015502.262	6953289.435	7551320.335	7850303.071	7898091.283	7744488.818	7437439.302	7020515.128
1	Existing	335	Roof Insulation	8	Other Healthcare	3	Cooling		497249.5433	834860.3785	1012707.903	1032204.715	930269.4213	759632.6404	548524.9749	356416.6389	231589.857	150480.8026
1	Existing	350	Roof Insulation	8	Other Healthcare	3	Cooling		18592.48029	31258.02941	37940.57896	38687.4807	34878.41204	28488.31735	20569.91317	13368.4893	8688.247963	5646.535743
1	Existing	361	HE PTAC, EER=9.6, 1 ton	2	Restaurant/ Services	3	Cooling		33436.19208	54624.15209	73242.37777	89577.65843	103885.5057	116393.5165	127304.378	136798.5534	145036.6807	152161.7157
1	Existing	328	Optimize Controls	8	Other Healthcare	3	Cooling		146887.7791	224256.6538	283011.9907	323569.7771	347475.6459	356983.6767	354687.6947	343230.9623	325100.4986	302499.2597
1	Existing	401	High Efficiency Fan Motor, 15hp, 1800rpm, 92.4%	7	Hospital	4	Ventilation		988511.9251	1107825.905	1214084.811	1308552.067	1392370.02	1466571.559	1532090.611	1589771.628	1577423.799	1561649.561
1	Existing	334	Ceiling Insulation	10	Hotel/Motel	3	Cooling		1316541.176	2251394.059	2844920.897	3085773.503	3022998.111	2740875.1	2246413.092	1677581.687	1252788.423	935560.3044
1	Existing	336	Cool Roof - DX	7	Hospital	3	Cooling		122098.6627	184736.184	187681.292	146173.3682	90507.91871	44901.03227	17133.41733	5252.233763	1610.067564	493.5647723
1	Existing	326	DX Tune Up/ Advanced Diagnostics	4	FoodStore	3	Cooling		1356258.271	2025137.05	2042723.765	1582565.386	975886.2396	482744.17	184424.5581	56323.35966	17201.18446	5253.251026
1	Existing	349	Ceiling Insulation	10	Hotel/Motel	3	Cooling		7787.275436	13333.84238	16858.43492	18292.26575	17924.91737	16255.42948	13321.42698	9949.347317	7430.848977	5549.863198
1	Existing	351	Cool Roof - DX	7	Hospital	3	Cooling		8818.658459	13350.96757	13568.39395	10570.25267	6546.226296	3248.071831	1239.36453	380.0025106	116.5128617	35.72409804
1	Existing	361	HE PTAC, EER=9.6, 1 ton	3	Retail	3	Cooling		57864.74616	95408.42583	128457.4763	157510.0568	183010.2701	205353.9511	224893.8428	241944.2226	256785.0373	269665.5979
1	Existing	314	Roof Insulation	7	Hospital	3	Cooling		784993.8949	1312970.123	1589861.34	1618544.08	1457376.681	1189197.649	858898.7038	557792.1976	362245.4363	235252.0467
1	Existing	161	LED Exit Sign	5	School	1	Indoor Lighting		2075622.996	3268215.38	4221309.957	4939358.548	5437919.944	5739928.885	5872432.435	5863947.86	5742477.642	5534138.428
1	Existing	313	Ceiling Insulation	2	Restaurant/ Services	3	Cooling		28499.12417	49229.30085	62484.68859	67971.12058	66733.92624	60611.26424	49640.86093	37109.9371	27742.21489	20739.20215
1	Existing	161	LED Exit Sign	7	Hospital	1	Indoor Lighting		558999.8923	886138.3468	1150692.261	1353957.791	1499842.193	1593997.596	1643068.437	1654081.677	1633984.993	1589322.378
1	Existing	161	LED Exit Sign	9	Warehouse	1	Indoor Lighting		3518920.024	5589368.084	7269259.508	8566978.523	9506675.945	10123052.66	10456837.56	10551123.73	10448588.3	10189531.17
1	Existing	301	Centrifugal Chiller, 0.51 kW/ton, 500 tons	11	Other	3	Cooling		220909.3637	221411.7358	222091.8389	222901.5581	223800.4442	224754.6874	225736.2158	226721.907	227692.897	228633.9769
1	Existing	301	Centrifugal Chiller, 0.51 kW/ton, 500 tons	1	Office	3	Cooling		638462.7882	637881.0237	638125.0037	639016.4706	640403.9496	642159.2544	644174.4152	646358.982	648637.6592	650948.232
1	Existing	301	Centrifugal Chiller, 0.51 kW/ton, 500 tons	9	Warehouse	3	Cooling		10125.0836	10126.27603	10138.96551	10160.52581	10188.73175	10221.70649	10257.87521	10295.92444	10334.76648	10373.50818
1	Existing	328	Optimize Controls	10	Hotel/Motel	3	Cooling		448793.3835	692379.3489	882437.3979	1020186.16	1109620.072	1156515.334	1167565.474	1149693.893	1109553.291	1053197.3
1	Existing	301	Centrifugal Chiller, 0.51 kW/ton, 500 tons	5	School	3	Cooling		475246.292	475074.1439	475476.6328	476326.0953	477514.2116	478949.4707	480554.9449	482266.3351	484030.2579	485802.7439
1	Existing	404	Electronically Commutated Motors (ECM) on an Air Handler Unit	6	College	4	Ventilation		230757.3576	391914.8803	534136.7226	659475.4676	769764.9576	866643.3842	951573.9587	1025863.416	1090678.573	1147061.158
1	Existing	305	Chiller Tune Up/Diagnostics	8	Other Healthcare	3	Cooling		239036.6269	362857.0876	369304.3725	288015.7684	178526.3789	88638.64873	33817.79922	10378.18207	3184.910478	977.4018885

Input File: P_Saece_FPL_RIM-H.xls								Units	Sq Ft	Sq Ft	Sq Ft	Sq Ft	Sq Ft	Sq Ft	Sq Ft	Sq Ft	Sq Ft	Sq Ft
Segment		Measure		Bldg	Applicable	End Use	End	Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Number	Segment	Number	Measure	Typ	Building	Number	Use	Yr Index	1	2	3	4	5	6	7	8	9	10
1	Existing	404	Electronically Commutated Motors (ECM) on an Air Handler Unit	3	Retail	4	Ventilation		660228.5381	1124323.702	1534066.851	1895338.286	2213392.581	2492924.559	2738128.356	2952750.301	3140136.246	3303273.944
1	Existing	301	Centrifugal Chiller, 0.51 kW/ton, 500 tons	6	College	3	Cooling		162615.5967	162390.9188	162388.2881	162560.8299	162868.6645	163277.9979	163760.3218	164291.7109	164852.2067	165425.2768
1	Existing	301	Centrifugal Chiller, 0.51 kW/ton, 500 tons	8	Other Healthcare	3	Cooling		22015.0619	21911.28285	21848.80635	21819.87545	21817.84674	21837.04819	21872.65405	21920.57477	21977.36023	22040.11475
1	Existing	161	LED Exit Sign	4	FoodStore	1	Indoor Lighting		483111.5088	772338.9567	1009407.181	1195584.229	1334018.806	1429121.323	1486031.489	1510187.431	1506997.129	1481603.86
1	Existing	603	Heat Pump Water Heater (air source)	5	School	6	Water Heating		487258.7409	860330.7875	1190570.761	1482496.468	1740155.284	1967172.866	2097361.034	2076387.424	2055623.55	2035067.314
1	Existing	335	Roof Insulation	10	Hotel/Motel	3	Cooling		1819254.699	3066017.983	3725716.683	3802011.704	3429759.525	2802778.513	2023555.765	1315631.782	855369.0568	556125.379
1	Existing	403	Air Handler Optimization	8	Other Healthcare	4	Ventilation		3489868.571	5171851.523	5195415.39	4013075.328	2469096.32	1219587.224	466374.3032	142168.4517	43338.29827	13211.14547
1	Existing	401	High Efficiency Fan Motor, 15hp, 1800rpm, 92.4%	4	FoodStore	4	Ventilation		884006.8984	982073.8052	1069773.136	1148071.647	1217846.994	1279895.938	1334941.801	1383641.232	1426590.343	1415051.943
1	Existing	322	Hybrid Dessicant-DX System (Trane CDQ)	7	Hospital	3	Cooling		840.9788937	1424.008988	1938.717523	2392.527239	2792.06812	3143.261217	3451.393691	3721.18597	3956.851843	4162.152242
1	Existing	350	Roof Insulation	10	Hotel/Motel	3	Cooling		10746.79162	18146.21134	22073.83088	22540.49248	20344.03896	16632.11057	12007.47586	7809.465292	5079.148098	3303.394591
1	Existing	403	Air Handler Optimization	2	Restaurant/ Services	4	Ventilation		9879883.705	14516208.04	14514202.57	11173380.11	6857436.296	3381885.664	1294967.952	394017.1472	119886.7602	36477.68978
1	Existing	334	Ceiling Insulation	3	Retail	3	Cooling		1827681.637	3189575.559	4066999.029	4437881.134	4367940.854	3975627.753	3255322.259	2437397.22	1824982.21	1366441.234
1	Existing	349	Ceiling Insulation	3	Retail	3	Cooling		51943.13038	90656.54985	115600.0418	126145.5453	124160.4356	113011.1536	92535.68579	69286.7072	51878.76848	38844.48731
1	Existing	334	Ceiling Insulation	5	School	3	Cooling		592115.4035	1029908.478	1311257.95	1429351.991	1405632.484	1278430.529	1046799.733	783323.7155	586163.7371	438628.2706
1	Existing	349	Ceiling Insulation	5	School	3	Cooling		143900.0894	250529.3374	319102.902	347942.2126	342248.2497	311339.9166	254928.2399	190793.4205	142793.6321	106869.6254
1	Existing	307	EMS Optimization	8	Other Healthcare	3	Cooling		58530.36751	93230.9074	118000.9187	132770.2846	138479.1122	136704.8258	129305.6311	118133.7385	104840.1143	90768.4565
1	Existing	336	Cool Roof - DX	2	Restaurant/ Services	3	Cooling		2151046.455	3331134.424	3427836.612	2696200.137	1683309.349	840766.3229	321023.3085	99358.99131	30752.31266	9518.058925
1	Existing	322	Hybrid Dessicant-DX System (Trane CDQ)	10	Hotel/Motel	3	Cooling		24149.6992	41043.05676	55966.2927	69132.87824	80733.5319	90938.62157	99900.31499	107754.5046	114622.5305	120612.7223
1	Existing	351	Cool Roof - DX	2	Restaurant/ Services	3	Cooling		148359.9682	229863.8345	236601.2208	186141.8279	116235.9341	58066.82932	22172.6733	6864.386666	2125.129599	657.9139594
1	Existing	404	Electronically Commutated Motors (ECM) on an Air Handler Unit	4	FoodStore	4	Ventilation		112034.733	192103.6786	262874.7139	325348.8208	380420.8729	428890.7879	471473.516	508807.9843	541465.1063	569954.9537
1	Existing	601	High Efficiency Water Heater (electric)	6	College	6	Water Heating		480606.0366	856608.0365	1189794.949	1484654.01	1745207.716	1975061.721	2102775.3	2081747.547	2060930.071	2040320.77
1	Existing	402	Variable Speed Drive Control	4	FoodStore	4	Ventilation		1.580785943	2.521846729	3.142965655	3.442537502	3.461219801	3.26445937	2.925553349	2.512645172	2.080926371	1.669669899
1	Existing	404	Electronically Commutated Motors (ECM) on an Air Handler Unit	11	Other	4	Ventilation		665290.6493	1142273.579	1563958.8	1936293.833	2264596.2	2553619.601	2807613.188	3030374.639	3225297.7	3395414.743
1	Existing	334	Ceiling Insulation	1	Office	3	Cooling		2659143.731	4646501.835	5928150.373	6471393.265	6371569.302	5801063.692	4750152.923	3557531.094	2664341.062	1995404.427
1	Existing	314	Roof Insulation	2	Restaurant/ Services	3	Cooling		39337.12705	67010.77851	81842.96877	83817.95405	75832.10601	62124.78652	44855.09863	29226.27736	19042.99209	12407.85965
1	Existing	349	Ceiling Insulation	1	Office	3	Cooling		577325.5437	1009646.37	1288633.451	1407104.298	1385716.775	1261902.631	1033325.92	774023.4552	579790.2654	434297.888
1	Existing	404	Electronically Commutated Motors (ECM) on an Air Handler Unit	10	Hotel/Motel	4	Ventilation		495539.1942	850889.455	1165047.466	1442443.375	1687038.084	1902372.537	2091611.866	2257584.923	2402819.694	2529574.989
1	Existing	313	Ceiling Insulation	4	FoodStore	3	Cooling		44202.572	77026.73363	98150.575	107051.5268	105324.1281	95831.83755	78467.98642	58736.36819	43966.47736	32910.63426
1	Existing	326	DX Tune Up/ Advanced Diagnostics	8	Other Healthcare	3	Cooling		823963.857	1272370.75	1307250.14	1026962.442	640476.0313	319605.971	122005.0887	37711.10319	11656.29499	3602.896798
1	Existing	322	Hybrid Dessicant-DX System (Trane CDQ)	2	Restaurant/ Services	3	Cooling		11741.35196	20128.66958	27548.95706	34106.34141	39893.90442	44994.84424	49483.5157	53426.36176	56882.74761	59905.70747
1	Existing	515	Oversized Air Cooled Condenser	4	FoodStore	5	Refrigeration		132272.6396	221618.4494	298219.3892	362703.7093	415879.4934	458667.6228	492047.3226	517013.4162	534543.9955	545577.0225
1	Existing	350	Roof Insulation	3	Retail	3	Cooling		72084.55741	123729.7122	151675.8317	155766.3025	141267.4659	115993.5182	83807.40194	54727.54628	35737.94501	23337.43791
1	Existing	335	Roof Insulation	3	Retail	3	Cooling		2533507.952	4350601.303	5334444.301	5479260.074	4970033.926	4081477.799	2949137.804	1926137.667	1257996.932	821621.5844
1	Existing	328	Optimize Controls	5	School	3	Cooling		94866.27244	151845.2548	199477.9095	238152.4698	268474.9938	291191.7461	307125.0847	317122.8871	322020.5239	322613.8127

Input File: P_Saece_FPL_RIM-H.xls								Units	Sq Ft	Sq Ft	Sq Ft	Sq Ft	Sq Ft	Sq Ft	Sq Ft	Sq Ft	Sq Ft	Sq Ft
Segment		Measure		Bldg	Applicable	End Use	End	Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Number	Segment	Number	Measure	Typ	Building	Number	Use	Yr Index	1	2	3	4	5	6	7	8	9	10
1	Existing	335	Roof Insulation	5	School	3	Cooling		820355.833	1404445.245	1719446.964	1764084.34	1598474.736	1311394.372	947199.8809	618011.6856	403228.9819	263091.4845
1	Existing	350	Roof Insulation	5	School	3	Cooling		199627.708	341862.2452	418598.6855	429512.5328	389228.1806	319353.2644	230671.2058	150517.8014	98216.02339	64088.01591
1	Existing	404	Electronically Commutated Motors (ECM) on an Air Handler Unit	8	Other Healthcare	4	Ventilation		33786.47947	59712.88825	82744.80605	103187.2098	121313.2864	137367.7277	151569.6859	164115.4239	175180.6912	184922.8551
1	Existing	335	Roof Insulation	1	Office	3	Cooling		3686807.843	6338473.831	7776414.962	7991189.194	7251564.866	5957555.845	4305545.929	2813237.659	1838165.533	1201054.776
1	Existing	328	Optimize Controls	3	Retail	3	Cooling		240940.9944	388833.1534	513770.9635	616856.935	699608.2719	763802.2511	811350.4222	844200.3028	864261.8187	873355.023
1	Existing	336	Cool Roof - DX	4	FoodStore	3	Cooling		1179950.287	1845591.371	1909924.278	1509252.942	946292.7569	474551.2608	181556.525	56534.78391	17604.33448	5481.803783
1	Existing	322	Hybrid Dessicant-DX System (Trane CDQ)	3	Retail	3	Cooling		17045.187	29454.56715	40448.25522	50177.81895	58778.81922	66372.48744	73067.22823	78959.96546	84137.348	88676.8296
1	Existing	351	Cool Roof - DX	4	FoodStore	3	Cooling		42657.4251	66749.84563	69093.41648	54609.96229	34246.83608	17177.58559	6572.683077	2047.271817	637.6881186	198.6283065
1	Existing	350	Roof Insulation	1	Office	3	Cooling		801045.6316	1377849.232	1690840.879	1737875.294	1577308.412	1296072.77	936756.922	612189.0871	400077.6184	261458.5985
1	Existing	322	Hybrid Dessicant-DX System (Trane CDQ)	4	FoodStore	3	Cooling		5414.786979	9341.539079	12819.33203	15896.28939	18615.44784	21015.29062	23130.2254	24991.01233	26625.14736	28057.20565
1	Existing	328	Optimize Controls	1	Office	3	Cooling		323563.3443	523878.4263	693740.6011	834693.4883	948771.8656	1038313.709	1105808.222	1153777.615	1184688.92	1200891.45
1	Existing	404	Electronically Commutated Motors (ECM) on an Air Handler Unit	1	Office	4	Ventilation		687080.055	1196433.756	1647785.639	2047311.701	2400538.838	2712412.594	2987357.877	3229333.366	3441880.268	3628165.998
1	Existing	404	Electronically Commutated Motors (ECM) on an Air Handler Unit	9	Warehouse	4	Ventilation		504720.0708	877368.8409	1207487.901	1499611.344	1757796.275	1985672.628	2186487.819	2363146.75	2518247.66	2654114.241
1	Existing	305	Chiller Tune Up/Diagnostics	10	Hotel/Motel	3	Cooling		2679459.292	4155105.996	4278996.332	3367756.03	2103732.964	1051277.949	401477.906	124351.9421	38516.20543	11929.83443
1	Existing	326	DX Tune Up/ Advanced Diagnostics	10	Hotel/Motel	3	Cooling		3014139.475	4675563.388	4815905.626	3791001.328	2368559.187	1183855.272	452186.3484	140102.9975	43408.76273	13449.53866
1	Existing	314	Roof Insulation	4	FoodStore	3	Cooling		61211.3449	105010.874	128695.2327	132139.1436	119817.5334	98363.77843	71064.33302	46397.71247	30292.94206	19778.18064
1	Existing	403	Air Handler Optimization	1	Office	4	Ventilation		37174904.56	56393402.44	57374837.68	44734353.77	27723198.82	13762884.45	5251339.462	1611307.408	494409.3947	151703.299
1	Existing	361	HE PTAC, EER=9.6, 1 ton	1	Office	3	Cooling		46985.87662	80317.94737	109852.4579	135999.2252	159124.4733	179555.4288	197584.4351	213472.6362	227453.2739	239734.6395
1	Existing	361	HE PTAC, EER=9.6, 1 ton	5	School	3	Cooling		30284.47013	51724.8373	70719.71409	87533.17089	102401.1752	115534.5554	127121.6539	137330.7027	146311.9496	154199.5614
1	Existing	403	Air Handler Optimization	5	School	4	Ventilation		13892410.75	21082689.89	21454183.07	16730213.16	10369548.23	5148356.541	1964368.601	602822.4951	184993.2647	56770.45608
1	Existing	361	HE PTAC, EER=9.6, 1 ton	8	Other Healthcare	3	Cooling		11556.91422	19794.4699	27095.98821	33562.33656	39283.6647	44340.53359	48804.9261	52741.15205	56206.65835	59252.75428
1	Existing	603	Heat Pump Water Heater (air source)	3	Retail	6	Water Heating		828592.9866	1505376.807	2106325.593	2639286.252	3111301.838	3528693.629	3746400.285	3708936.282	3671846.919	3635128.45
1	Existing	307	EMS Optimization	10	Hotel/Motel	3	Cooling		395757.5318	652089.3265	853727.8856	1000062.632	1094149.1	1141587.272	1149464.312	1125458.849	1077151.155	1011543.624
1	Existing	603	Heat Pump Water Heater (air source)	10	Hotel/Motel	6	Water Heating		489943.0013	889191.2482	1243664.474	1557998.908	1836355.55	2082468.719	2211278.466	2189165.682	2167274.025	2145601.285
1	Existing	313	Ceiling Insulation	8	Other Healthcare	3	Cooling		62251.20869	110048.2568	141183.0356	154763.9282	152946.3693	139752.614	114583.1819	86104.7196	64704.28397	48622.70481
1	Existing	361	HE PTAC, EER=9.6, 1 ton	6	College	3	Cooling		11370.95034	19451.66586	26612.63052	32953.04734	38561.57118	43517.42038	47891.37201	51746.65294	55139.73751	58121.06163
1	Existing	334	Ceiling Insulation	6	College	3	Cooling		260088.6705	458219.2726	586867.3997	642463.3338	634123.8011	578695.1313	474170.0853	355871.8494	267087.227	200453.0197
1	Existing	732	Copier Power Management Enabling	8	Other Healthcare	7	Office Equipment		53068.44181	90609.23466	123445.4902	151929.6995	176419.3104	197267.7505	214817.7584	229396.6333	241313.0453	250855.0913
1	Existing	403	Air Handler Optimization	6	College	4	Ventilation		5957586.202	9071028.153	9247584.188	7221234.399	4480757.08	2226543.679	849472.055	260991.0084	80186.63601	24636.46788
1	Existing	603	Heat Pump Water Heater (air source)	8	Other Healthcare	6	Water Heating		89157.17527	160639.8747	224057.4802	280249.1296	329967.5879	373888.1031	397429.8816	393455.5828	389521.027	385625.8167
1	Existing	362	Occupancy Sensor (hotels)	7	Hospital	3	Cooling		3252.83277	5453.32538	7358.920789	8988.407591	10362.56497	11503.15618	12432.14252	13171.0891	13740.73289	14160.68482
1	Existing	362	Occupancy Sensor (hotels)	10	Hotel/Motel	3	Cooling		43794.76399	73421.23408	99077.32874	121016.0085	139517.035	154873.4199	167380.8413	177329.6436	184999.0217	190653.0097
1	Existing	349	Ceiling Insulation	6	College	3	Cooling		15884.98369	28004.38387	35878.33629	39286.98197	38785.90114	35403.62981	29011.90259	21778.68532	16348.84622	12272.76894
1	Existing	601	High Efficiency Water Heater (electric)	5	School	6	Water Heating		645195.1075	1171917.7	1639609.02	2054378.145	2421708.243	2746520.49	2916063.673	2886903.036	2858034.006	2829453.666
1	Existing	404	Electronically Commutated Motors (ECM) on an Air Handler Unit	5	School	4	Ventilation		207079.7106	362631.4602	500600.3548	622851.133	731053.1608	826700.7701	911131.4905	985542.3917	1051004.732	1108477.086
1	Existing	603	Heat Pump Water Heater (air source)	2	Restaurant/ Services	6	Water Heating		301411.7282	549482.3094	769833.7404	965327.7347	1138533.42	1291757.163	1370787.397	1357079.523	1343508.728	1330073.641
1	Existing	404	Electronically Commutated Motors (ECM) on an Air Handler Unit	2	Restaurant/ Services	4	Ventilation		129931.2369	227975.0228	314965.0328	392071.9502	460343.9357	520719.3709	574038.2826	621052.584	662435.2551	698788.5718

Input File: P_Saece_FPL_RIM-H.xls								Units	Sq Ft	Sq Ft	Sq Ft	Sq Ft	Sq Ft	Sq Ft	Sq Ft	Sq Ft	Sq Ft	Sq Ft
Segment		Measure		Bldg	Applicable	End Use	End	Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Number	Segment	Number	Measure	Typ	Building	Number	Use	Yr Index	1	2	3	4	5	6	7	8	9	10
1	Existing	401	High Efficiency Fan Motor, 15hp, 1800rpm, 92.4%	11	Other	4	Ventilation		4467176.512	4801396.14	5105371.764	5381372.67	5631514.527	5857768.033	6061967.313	6245818.033	6410905.201	6558700.655
1	Existing	402	Variable Speed Drive Control	11	Other	4	Ventilation		1987763.117	3330215.346	4347071.103	5027646.161	5391814.346	5480651.706	5347024.116	5047459.641	4635998.136	4160173.69
1	Existing	305	Chiller Tune Up/Diagnostics	5	School	3	Cooling		4513491.058	7119357.339	7403945.773	5875794.732	3699616.367	1863326.649	715076.07	224166.4278	70273.06527	22029.63107
1	Existing	328	Optimize Controls	6	College	3	Cooling		17207.20772	28517.46199	38312.35691	46696.62432	53782.31647	59684.23116	64516.40448	68389.51498	71409.04658	73674.06826
1	Existing	322	Hybrid Dessicant-DX System (Trane CDQ)	9	Warehouse	3	Cooling		3027.361364	5312.236993	7341.805626	9143.10214	10740.33052	12155.15843	13406.98132	14513.15909	15489.22834	16349.0925
1	Existing	335	Roof Insulation	6	College	3	Cooling		361071.3665	625471.3859	770410.0186	794284.2026	723056.5338	595957.6601	431557.4563	282987.6632	185565.1347	121681.6975
1	Existing	350	Roof Insulation	6	College	3	Cooling		22077.32047	38251.8931	47121.39497	48586.6005	44234.1685	36462.70391	26406.27212	17317.72898	11357.29178	7448.325161
1	Existing	362	Occupancy Sensor (hotels)	2	Restaurant/ Services	3	Cooling		23245.7504	39627.66766	53971.75353	66434.2575	77172.06275	86339.16518	94084.09107	100548.0881	105863.9419	110155.2886
1	Existing	314	Roof Insulation	8	Other Healthcare	3	Cooling		86554.37704	150354.9951	185487.9306	191505.5473	174586.1317	144123.2472	104492.1318	68644.52034	45094.97598	29624.46016
1	Existing	326	DX Tune Up/ Advanced Diagnostics	5	School	3	Cooling		1358179.95	2147290.198	2236330.82	1777132.008	1120533	565249.9676	217229.492	68269.63661	21455.38913	6742.87642
1	Existing	305	Chiller Tune Up/Diagnostics	3	Retail	3	Cooling		1621540.064	2572660.743	2685009.79	2137774.271	1350598.741	682768.607	262865.8663	82892.27843	26139.30032	8242.782489
1	Existing	336	Cool Roof - DX	8	Other Healthcare	3	Cooling		1010100.433	1614730.193	1693487.799	1354798.955	860493.6273	437703.2852	169559.1958	54004.44407	17200.36454	5478.299896
1	Existing	326	DX Tune Up/ Advanced Diagnostics	3	Retail	3	Cooling		4193903.042	6655428.707	6947426.264	5532740.897	3498496.669	1768262.954	681100.6939	214916.096	67815.12448	21398.542
1	Existing	351	Cool Roof - DX	8	Other Healthcare	3	Cooling		37838.1054	60504.13235	63467.03548	50783.66393	32262.09703	16414.95616	6360.683818	2026.743416	645.7935959	205.7731458
1	Existing	313	Ceiling Insulation	10	Hotel/Motel	3	Cooling		717484.8355	1270059.716	1630486.822	1788322.888	1768275.396	1616635.945	1325924.042	996957.8905	749609.3321	563628.7711
1	Existing	211	Outdoor Lighting Controls (Photocell/Timeclock)	6	College	2	Outdoor Lighting		17025.06116	28325.40547	38177.64311	46697.75613	54001.46957	60201.73588	65406.92075	69719.5622	73235.58883	76043.89843
1	Existing	402	Variable Speed Drive Control	1	Office	4	Ventilation		2893723.951	4909606.1	6480787.002	7592433.604	8266285.112	8550154.383	8507432.396	8207890.789	7720473.197	7108268.955
1	Existing	305	Chiller Tune Up/Diagnostics	1	Office	3	Cooling		6047205.107	9604105.596	10029982.61	7990627.865	5051615.783	2555636.89	984600.2817	310852.516	98140.62468	30984.41131
1	Existing	307	EMS Optimization	5	School	3	Cooling		345857.8557	587321.2886	789470.4826	952799.9303	1079174.799	1171429.743	1233014.789	1267699.446	1279337.901	1271692.421
1	Existing	326	DX Tune Up/ Advanced Diagnostics	1	Office	3	Cooling		6102745.387	9698556.574	10133243.99	8076816.591	5109048.965	2586525.094	997288.1143	315224.7615	99636.854	31493.41006
1	Existing	403	Air Handler Optimization	3	Retail	4	Ventilation		17617182.23	27380550.93	28232976.82	22244101.11	13908862.6	6957068.688	2658197.236	824511.0622	255744.1872	79325.90876
1	Existing	603	Heat Pump Water Heater (air source)	11	Other	6	Water Heating		913567.2633	1679595.673	2360608.032	2965332.898	3501610.722	3976483.986	4214793.427	4172645.493	4130919.038	4089609.847
1	Existing	732	Copier Power Management Enabling	3	Retail	7	Office Equipment		287216.6522	490388.7295	668098.3973	822253.2114	954787.6667	1067614.578	1162588.968	1241482.335	1305965.375	1357597.449
1	Existing	506	Compressor VSD retrofit	4	FoodStore	5	Refrigeration		25653.20255	43754.05403	59692.1714	73660.13531	85840.57561	96405.04514	105513.4087	113313.6309	119941.8653	125522.7669
1	Existing	732	Copier Power Management Enabling	2	Restaurant/ Services	7	Office Equipment		148497.2025	253541.4806	345421.1378	425122.4195	493645.5003	551979.3466	601083.0457	641872.5016	675211.501	701906.2692
1	Existing	732	Copier Power Management Enabling	6	College	7	Office Equipment		94200.52381	160836.2933	219120.9678	269680.1807	313148.4015	350152.9901	381302.3519	407177.4989	428326.3821	445260.4376
1	Existing	362	Occupancy Sensor (hotels)	3	Retail	3	Cooling		32406.41472	55844.7096	76478.93603	94543.12133	110263.5978	123856.3771	135525.3969	145461.4643	153841.7437	160829.6637
1	Existing	501	High-efficiency fan motors	4	FoodStore	5	Refrigeration		52457.56587	91438.77476	125888.8317	156208.2949	182775.6866	205945.7437	226048.5798	243389.5492	258249.64	270886.2522
1	Existing	732	Copier Power Management Enabling	9	Warehouse	7	Office Equipment		403651.9495	689188.0411	938939.4419	1155587.006	1341849.453	1500415.037	1633890.794	1744766.378	1835389.777	1907952.512
1	Existing	732	Copier Power Management Enabling	1	Office	7	Office Equipment		584662.7812	998242.4818	1359990.441	1673789.69	1943578.109	2173249.454	2366579.844	2527175.378	2658436.963	2763538.873
1	Existing	732	Copier Power Management Enabling	4	FoodStore	7	Office Equipment		58274.77959	99497.28569	135553.5943	166830.7367	193721.2111	216613.1177	235882.8316	251889.7816	264972.9445	275448.7082
1	Existing	732	Copier Power Management Enabling	10	Hotel/Motel	7	Office Equipment		268140.7816	457818.623	623725.1469	767641.2068	891372.8114	996705.7336	1085371.794	1159024.841	1219224.612	1267426.91

Input File: P_Saece_FPL_RIM-H.xls								Units	Sq Ft	Sq Ft	Sq Ft	Sq Ft	Sq Ft	Sq Ft	Sq Ft	Sq Ft	Sq Ft	Sq Ft
Segment		Measure		Bldg	Applicable	End Use	End	Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Number	Segment	Number	Measure	Typ	Building	Number	Use	Yr Index	1	2	3	4	5	6	7	8	9	10
1	Existing	334	Ceiling Insulation	11	Other	3	Cooling		571315.7385	1014470.73	1304519.398	1432834.249	1418798.425	1299091.209	1066598.286	803285.1967	604976.6965	455624.982
1	Existing	732	Copier Power Management Enabling	7	Hospital	7	Office Equipment		61890.19557	105670.1242	143963.335	177180.8692	205739.575	230051.6307	250516.7626	267516.6997	281411.4501	292537.0318
1	Existing	732	Copier Power Management Enabling	11	Other	7	Office Equipment		359147.0461	613200.6478	835414.9743	1028175.283	1193900.533	1334982.582	1453741.031	1552391.043	1633021.738	1697583.02
1	Existing	403	Air Handler Optimization	10	Hotel/Motel	4	Ventilation		16377139.27	25523262.14	26358860.05	20794110.8	13017527.39	6518477.837	2492005.725	774260.6524	240561.0676	74741.79023
1	Existing	322	Hybrid Dessicant-DX System (Trane CDQ)	1	Office	3	Cooling		6935.797649	12297.86613	17069.31079	21312.20974	25082.17844	28429.03892	31397.42004	34027.29577	36354.46797	38410.99928
1	Existing	349	Ceiling Insulation	11	Other	3	Cooling		15139.61747	26896.70035	34596.482	38008.98968	37646.44582	34479.80908	28315.15154	21331.59439	16070.43913	12106.87814
1	Existing	732	Copier Power Management Enabling	5	School	7	Office Equipment		218624.0317	373274.1629	508542.7105	625881.6478	726763.4665	812644.1662	884935.762	944986.6972	994068.6882	1033368.708
1	Existing	307	EMS Optimization	1	Office	3	Cooling		356659.9965	611520.6124	828096.7245	1007341.78	1151188.624	1262252.844	1343578.047	1398426.303	1430112.79	1441881.014
1	Existing	402	Variable Speed Drive Control	5	School	4	Ventilation		1113063.912	1907835.144	2540565.564	3006193.863	3311405.021	3471403.864	3506724.644	3440417.077	3295792.46	3094786.059
1	Existing	307	EMS Optimization	3	Retail	3	Cooling		93291.66587	160077.8084	216893.0536	263996.0831	301893.6763	331265.2383	352898.1421	367634.6104	376329.8357	379820.3816
1	Existing	401	High Efficiency Fan Motor, 15hp, 1800rpm, 92.4%	1	Office	4	Ventilation		6364334.329	6706191.207	7022205.087	7313656.279	7581821.06	7827960.755	8053312.931	8259084.414	8446445.856	8616527.611
1	Existing	321	DX Packaged System, EER=10.9, 10 tons	10	Hotel/Motel	3	Cooling		241353.242	237794.3342	235124.7869	233200.6015	231897.2506	231107.2692	230738.1288	230710.3619	230955.9097	231416.665
1	Existing	322	Hybrid Dessicant-DX System (Trane CDQ)	8	Other Healthcare	3	Cooling		757.6784383	1347.550533	1872.723706	2339.983356	2755.409698	3124.450682	3451.987402	3742.392771	3999.584141	4227.0705
1	Existing	322	Hybrid Dessicant-DX System (Trane CDQ)	11	Other	3	Cooling		1483.299622	2597.433591	3606.834634	4504.602613	5302.474473	6010.965294	6639.494829	7196.500969	7689.541526	8125.385495
1	Existing	322	Hybrid Dessicant-DX System (Trane CDQ)	5	School	3	Cooling		1289.467759	2293.572449	3187.558688	3982.974523	4690.167914	5318.410824	5876.010531	6370.409471	6808.274789	7195.578656
1	Existing	313	Ceiling Insulation	3	Retail	3	Cooling		436525.1152	779469.3283	1005680.643	1108142.365	1101106.147	1012112.401	833752.6879	630733.9988	477150.3385	360964.2828
1	Existing	401	High Efficiency Fan Motor, 15hp, 1800rpm, 92.4%	3	Retail	4	Ventilation		3017923	3164788.861	3301322.493	3427915.963	3544982.871	3652950.653	3752254.15	3843330.289	3926613.706	4002533.189
1	Existing	314	Roof Insulation	10	Hotel/Motel	3	Cooling		995649.3482	1732993.792	2140439.919	2212304.757	2019213.052	1669046.269	1211412.825	797048.3135	524417.4412	345040.1287
1	Existing	328	Optimize Controls	11	Other	3	Cooling		17111.205	29146.04761	39728.38468	48982.74412	57028.83593	63980.33208	69944.08231	75019.67461	79299.26296	82867.59785
1	Existing	313	Ceiling Insulation	5	School	3	Cooling		1210772.323	2158912.597	2782914.459	3063613.434	3041006.312	2791932.803	2297415.51	1735575.404	1311135.043	990492.8922
1	Existing	601	High Efficiency Water Heater (electric)	3	Retail	6	Water Heating		1113188.325	2059175.382	2900679.795	3648386.145	4311895.688	4899835.983	5189125.177	5137233.926	5085861.586	5035002.97
1	Existing	321	DX Packaged System, EER=10.9, 10 tons	7	Hospital	3	Cooling		6688.501312	6571.156268	6481.149419	6414.163563	6366.458808	6334.801593	6316.402006	6308.858469	6310.108944	6318.387935
1	Existing	322	Hybrid Dessicant-DX System (Trane CDQ)	6	College	3	Cooling		516.0392183	919.8984652	1279.60234	1599.774106	1884.557164	2137.664622	2362.423761	2561.81592	2738.512285	2894.905979
1	Existing	601	High Efficiency Water Heater (electric)	10	Hotel/Motel	6	Water Heating		657885.1281	1216187.049	1712794.983	2154020.449	2545534.799	2892434.025	3063468.333	3032833.65	3002505.314	2972480.261
1	Existing	402	Variable Speed Drive Control	6	College	4	Ventilation		532129.6312	921317.9695	1237215.64	1477868.833	1645914.192	1747360.19	1790401.357	1784371.169	1738890.289	1663227.759
1	Existing	401	High Efficiency Fan Motor, 15hp, 1800rpm, 92.4%	5	School	4	Ventilation		2275468.366	2383227.648	2483570.552	2576750.958	2663043.524	2742737.393	2816130.912	2883527.226	2945230.637	3001543.606
1	Existing	335	Roof Insulation	11	Other	3	Cooling		794183.4392	1385787.136	1714269.43	1774541.621	1622398.792	1343609.755	976898.9908	644246.0631	424867.8663	280192.1722
1	Existing	601	High Efficiency Water Heater (electric)	8	Other Healthcare	6	Water Heating		119281.4787	219526.848	308655.8471	387809.0176	458010.9227	520181.9133	551277.425	545764.6507	540307.0042	534903.9342
1	Existing	350	Roof Insulation	11	Other	3	Cooling		21068.88316	36770.02909	45491.07929	47095.96745	43063.74661	35669.10002	25937.59756	17108.4882	11284.79104	7443.469429
1	Existing	313	Ceiling Insulation	1	Office	3	Cooling		1625683.855	2904767.149	3749420.829	4133330.247	4109250.101	3779418.84	3115196.051	2358352.385	1785385.535	1351622.23
1	Existing	402	Variable Speed Drive Control	3	Retail	4	Ventilation		477283.9843	829673.1128	1117790.471	1340086.742	1498783.304	1598881.52	1647206.312	1651562.429	1620045.07	1560517.523
1	Existing	351	Cool Roof - DX	10	Hotel/Motel	3	Cooling		33883.52435	54526.49148	67454.85289	46195.21898	29516.48528	15125.02089	5907.719169	1904.382718	613.8872603	197.8896179
1	Existing	601	High Efficiency Water Heater (electric)	2	Restaurant/ Services	6	Water Heating		405603.4293	751827.1489	1059872.244	1333637.748	1576627.832	1791991.72	1897263.712	1878291.074	1859508.164	1840913.082
1	Existing	305	Chiller Tune Up/Diagnostics	6	College	3	Cooling		1524039.772	2444339.301	2569375.196	2060382.23	1312271.278	669758.8736	260409.0933	83396.45772	26707.85828	8553.237314
1	Existing	326	DX Tune Up/ Advanced Diagnostics	6	College	3	Cooling		597526.5004	958555.096	1007828.003	808442.8659	515137.5131	263080.8101	102373.0408	32819.58347	10521.56946	3373.090457
1	Existing	336	Cool Roof - DX	10	Hotel/Motel	3	Cooling		5706977.946	9189988.799	9688390.679	7794105.025	4983509.84	2555925.792	999354.1133	322611.7674	104145.6187	33620.31704
1	Existing	401	High Efficiency Fan Motor, 15hp, 1800rpm, 92.4%	10	Hotel/Motel	4	Ventilation		2705645.268	2822457.882	2931870.585	3034027.272	3129113.709	3217348.209	3298973.709	3374251.067	3443453.408	3506861.394

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Segment		Measure		Bldg	Applicable	End Use	End	Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Number	Segment	Number	Measure	Typ	Building	Number	Use	Yr Index	1	2	3	4	5	6	7	8	9	10
1	Existing	401	High Efficiency Fan Motor, 15hp, 1800rpm, 92.4%	8	Other Healthcare	4	Ventilation		420571.5462	427533.5045	434729.8473	442030.1706	449327.0586	456532.8781	463576.9766	470403.2346	476967.9313	483237.8859
1	Existing	603	Heat Pump Water Heater (air source)	1	Office	6	Water Heating		1682210.028	3120716.085	4400697.341	5538334.706	6548171.198	7443277.432	7879661.989	7800865.369	7722856.716	7645628.149
1	Existing	402	Variable Speed Drive Control	9	Warehouse	4	Ventilation		2756113.084	4819011.615	6522905.838	7860756.496	8844502.599	9500130.448	9862974.412	9973584.093	9874331.726	9806808.806
1	Existing	307	EMS Optimization	6	College	3	Cooling		49901.73195	87132.18077	119471.992	147168.1039	170520.017	189859.9321	205536.6398	217902.8301	227305.413	234078.4149
1	Existing	321	DX Packaged System, EER=10.9, 10 tons	3	Retail	3	Cooling		249233.7438	243207.271	238436.6023	234732.1432	231929.1245	229884.5859	228474.7101	227592.4673	227145.5358	227054.4659
1	Existing	321	DX Packaged System, EER=10.9, 10 tons	2	Restaurant/ Services	3	Cooling		125631.5439	122708.1952	120401.4868	118617.8312	117275.9262	116305.2599	115644.79	115241.7764	115050.7509	115032.6086
1	Existing	513	High R-Value Glass Doors	4	FoodStore	5	Refrigeration		20390.98074	35970.59198	49823.94054	62119.86961	73012.62	82642.72475	91137.93015	98614.11898	105176.2178	110919.0752
1	Existing	402	Variable Speed Drive Control	10	Hotel/Motel	4	Ventilation		131459.2649	230525.7935	312754.3659	377858.7555	426393.7774	459537.5593	478885.5156	486269.5592	483609.4671	472798.2201
1	Existing	401	High Efficiency Fan Motor, 15hp, 1800rpm, 92.4%	6	College	4	Ventilation		896625.6074	928722.7137	959191.82	987989.1711	1015094.793	1040508.343	1064245.541	1086335.093	1106816.072	1125735.663
1	Existing	603	Heat Pump Water Heater (air source)	4	FoodStore	6	Water Heating		154010.9212	286060.7425	403572.3697	508028.5691	600762.1213	682970.9661	722892.6984	715663.7714	708507.1337	701422.0623
1	Existing	403	Air Handler Optimization	11	Other	4	Ventilation		21291836.92	33791109.89	35275259.43	28093471.35	17754909.11	8979560.551	3458923.765	1091528.955	344452.6509	108698.5628
1	Existing	314	Roof Insulation	3	Retail	3	Cooling		606948.3191	1064941.401	1322589.153	1374980.668	1263430.773	1052513.506	789829.3497	511465.6513	339811.8201	225767.0144
1	Existing	402	Variable Speed Drive Control	8	Other Healthcare	4	Ventilation		259972.6513	461322.9168	631597.8251	770676.2675	879621.9561	960376.1212	1015476.118	1047811.969	1060426.134	1056356.855
1	Existing	351	Cool Roof - DX	3	Retail	3	Cooling		144225.4509	234016.6731	248254.0182	201215.5949	129900.1585	67462.89291	26786.49699	8827.625472	2909.188592	958.7378046
1	Existing	336	Cool Roof - DX	1	Office	3	Cooling		5730622.058	9293636.465	9854545.915	7982726.311	5149524.86	2671661.586	1059436.671	348558.0939	114676.741	37729.01898
1	Existing	351	Cool Roof - DX	1	Office	3	Cooling		1245798.056	2020753.842	2143075.936	1736378.506	1120423.762	581511.6745	230704.6245	75949.26256	25002.92526	8231.103903
1	Existing	314	Roof Insulation	5	School	3	Cooling		1681610.159	2947065.704	3656712.214	3797578.209	3485083.331	2898916.889	2116961.494	1403790.386	930875.4337	617278.1075
1	Existing	211	Outdoor Lighting Controls (Photocell/Timeclock)	9	Warehouse	2	Outdoor Lighting		16605.14672	28965.26378	39934.77839	49649.29408	58233.03453	65799.43723	72451.79942	78283.95045	83380.93073	87819.66236
1	Existing	336	Cool Roof - DX	3	Retail	3	Cooling		5059785.576	8218279.025	8726459.177	7081486.408	4578962.221	2383132.885	948803.7286	313785.312	103774.0674	34319.82519
1	Existing	314	Roof Insulation	1	Office	3	Cooling		2265874.683	3976302.99	4938952.769	5135371.481	4719609.275	3932577.304	2877037.369	1912004.86	1270669.136	844453.9476
1	Existing	336	Cool Roof - DX	5	School	3	Cooling		2076823.517	3369030.157	3573259.454	2895450.966	1868587.706	969992.614	384915.9354	126754.4524	41740.77956	13745.416
1	Existing	351	Cool Roof - DX	5	School	3	Cooling		505431.4388	820066.0452	869924.8749	705060.0433	455141.336	236354.8468	93835.8006	30919.7089	10188.31184	3357.136982
1	Existing	321	DX Packaged System, EER=10.9, 10 tons	4	FoodStore	3	Cooling		67751.12227	66001.11495	64608.46669	63519.70502	62688.32877	62073.96308	61641.61253	61361.00107	61205.98905	61154.05869
1	Existing	401	High Efficiency Fan Motor, 15hp, 1800rpm, 92.4%	9	Warehouse	4	Ventilation		3628619.662	3734518.034	3836800.889	3934962.746	4028629.819	4117539.455	4201522.289	4280486.798	4354405.959	4423305.747
1	Existing	601	High Efficiency Water Heater (electric)	11	Other	6	Water Heating		1233853.567	2298406.51	3246017.275	4088590.745	4836829.592	5500355.484	5819610.285	5761414.182	5703800.04	5646762.039
1	Existing	401	High Efficiency Fan Motor, 15hp, 1800rpm, 92.4%	2	Restaurant/ Services	4	Ventilation		1301718.941	1336155.26	1369733.162	1402222.988	1433447.532	1463274.104	1491607.64	1518384.712	1543568.349	1567143.551
1	Existing	362	Occupancy Sensor (hotels)	5	School	3	Cooling		7918.969155	14133.40714	19668.4193	24589.79466	28957.68081	32826.92683	36247.43623	39264.52079	41919.24847	44248.78045
1	Existing	362	Occupancy Sensor (hotels)	1	Office	3	Cooling		12075.97474	21568.34565	30024.40075	37544.65112	44220.93686	50136.96744	55368.87366	59985.75796	64050.23321	67618.94281
1	Existing	313	Ceiling Insulation	6	College	3	Cooling		408685.4697	732834.1219	948460.8474	1048707.458	1046291.966	966308.1007	799854.7683	608602.0602	463079.6519	352353.0038
1	Existing	362	Occupancy Sensor (hotels)	6	College	3	Cooling		2879.718166	5146.52788	7166.16156	8962.625147	10557.84326	11971.79155	13222.63104	14326.8415	15299.35153	16153.66388
1	Existing	362	Occupancy Sensor (hotels)	8	Other Healthcare	3	Cooling		2853.260529	5104.671936	7111.089801	8896.361847	10482.25114	11888.57299	13133.33255	14232.86052	15201.94469	16053.95619
1	Existing	305	Chiller Tune Up/Diagnostics	11	Other	3	Cooling		1913620.619	3097935.53	3279856.659	2651795.732	1706349.182	882360.88	348450.4156	114017.755	37308.17318	12207.74595
1	Existing	326	DX Tune Up/ Advanced Diagnostics	11	Other	3	Cooling		1314103.518	2127898.488	2253862.056	1823107.322	1174049.395	607786.4713	240386.9757	78805.93105	25834.90537	8469.44293
1	Existing	211	Outdoor Lighting Controls (Photocell/Timeclock)	7	Hospital	2	Outdoor Lighting		1654.626509	2921.094133	4048.21161	5049.829851	5938.543303	6725.781327	7421.897666	8036.256821	8577.31651	9052.705664
1	Existing	307	EMS Optimization	11	Other	3	Cooling		25914.44343	46244.0677	64203.31257	79974.73148	93738.14376	105667.7385	115930.0894	124682.7964	132073.6456	138240.179
1	Existing	402	Variable Speed Drive Control	2	Restaurant/ Services	4	Ventilation		0.771387822	1.385364719	1.913375354	2.356573465	2.71838042	3.003872483	3.219241143	3.371336661	3.467296426	3.514253857
1	Existing	321	DX Packaged System, EER=10.9, 10 tons	9	Warehouse	3	Cooling		57845.71549	56016.89374	54540.93093	53366.40416	52448.50666	51748.25214	51231.77086	50869.68719	50636.56948	50510.44411
1	Existing	342	Geothermal Heat Pump, EER=13, 10 tons	7	Hospital	3	Cooling		0.123302716	0.227306668	0.320532598	0.404081814	0.478943463	0.546005935	0.6060671	0.659843515	0.707978691	0.751050525
1	Existing	314	Roof Insulation	6	College	3	Cooling		568592.4768	1001888.89	1249064.766	1304675.434	1205878.242	1011745.471	745853.6928	500116.1779	335342.164	224856.4872

Input File: P_Saece_FPL_RIM-H.xls								Units	Sq Ft	Sq Ft	Sq Ft	Sq Ft	Sq Ft	Sq Ft	Sq Ft	Sq Ft	Sq Ft	Sq Ft
Segment		Measure		Bldg	Applicable	End Use	End	Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Number	Segment	Number	Measure	Typ	Building	Number	Use	Yr Index	1	2	3	4	5	6	7	8	9	10
1	Existing	601	High Efficiency Water Heater (electric)	1	Office	6	Water Heating		2277606.291	4264348.904	6033692.185	7607695.669	9006197.712	10247038.85	10834479.38	10726134.58	10618873.24	10512684.5
1	Existing	211	Outdoor Lighting Controls (Photocell/Timeclock)	8	Other Healthcare	2	Outdoor Lighting		930.7151994	1662.258072	2314.825315	2896.358023	3414.042546	3874.374287	4283.217674	4645.862179	4967.074385	5251.146153
1	Existing	321	DX Packaged System, EER=10.9, 10 tons	11	Other	3	Cooling		45352.3984	43861.70139	42655.74891	41693.24745	40938.20301	40359.28484	39929.26226	39624.50673	39424.5517	39311.70367
1	Existing	342	Geothermal Heat Pump, EER=13, 10 tons	10	Hotel/Motel	3	Cooling		0.288396682	0.532689831	0.751726133	0.948082762	1.124074732	1.281781512	1.423070948	1.549620758	1.662937844	1.764375649
1	Existing	601	High Efficiency Water Heater (electric)	4	FoodStore	6	Water Heating		208545.5078	390724.1838	552978.2255	697328.5104	825592.5128	939404.7507	993169.7569	983238.0593	973405.6787	963671.6219
1	Existing	313	Ceiling Insulation	11	Other	3	Cooling		506188.2719	911273.035	1183923.261	1315342.758	1320152.836	1228004.303	1024513.802	786584.0207	603910.2846	463660.1079
1	Existing	351	Cool Roof - DX	6	College	3	Cooling		65863.12811	107827.0862	115461.8669	94782.3006	62268.7986	33115.66599	13562.16375	4647.717089	1592.760162	545.8346294
1	Existing	336	Cool Roof - DX	6	College	3	Cooling		1074883.045	1760485.21	1886123.963	1549483.245	1019044.841	542742.4132	222708.5309	76505.70066	26281.53582	9028.335396
1	Existing	321	DX Packaged System, EER=10.9, 10 tons	6	College	3	Cooling		17861.23902	17253.56924	16760.96972	16366.82447	16056.64528	15817.81654	15639.36944	15511.78224	15426.80371	15377.29714
1	Existing	342	Geothermal Heat Pump, EER=13, 10 tons	2	Restaurant/ Services	3	Cooling		1.628495314	3.020748561	4.269793685	5.3901991	6.395055014	7.296123179	8.103971495	8.828094988	9.477024552	10.05842468
1	Existing	321	DX Packaged System, EER=10.9, 10 tons	1	Office	3	Cooling		170432.9681	164561.5348	159798.4914	155984.0352	152978.8107	150661.4589	148926.4481	147682.1553	146849.1706	146358.7979
1	Existing	342	Geothermal Heat Pump, EER=13, 10 tons	3	Retail	3	Cooling		1.036922413	1.929205174	2.730036109	3.448898553	4.093535588	4.672045147	5.190965504	5.656352135	6.073646806	6.447739676
1	Existing	211	Outdoor Lighting Controls (Photocell/Timeclock)	3	Retail	2	Outdoor Lighting		2397.342718	4338.354626	6073.816293	7624.536157	9009.281284	10244.96629	11346.82691	12328.57896	13202.56378	13979.88073
1	Existing	321	DX Packaged System, EER=10.9, 10 tons	8	Other Healthcare	3	Cooling		20001.18359	19297.27739	18725.5765	18267.05286	17905.12724	17625.35836	17415.18543	17263.70042	17161.44669	17100.24108
1	Existing	514	Multiplex Compressor System	4	FoodStore	5	Refrigeration		1284.767603	2354.695493	3313.274261	4171.805376	4940.460613	5628.392121	6243.832271	6794.184154	7286.103498	7725.572787
1	Existing	321	DX Packaged System, EER=10.9, 10 tons	5	School	3	Cooling		34115.82872	32914.43943	31938.62791	31155.95893	30538.14168	30060.53337	29701.69996	29443.02756	29268.37887	29163.78959
1	Existing	504	Evaporator fan controller for MT walk-ins	4	FoodStore	5	Refrigeration		3022.109649	5496.100637	7710.218824	9690.867685	11461.8253	13044.49577	14458.13828	15720.0755	16845.88293	17849.56062
1	Existing	342	Geothermal Heat Pump, EER=13, 10 tons	4	FoodStore	3	Cooling		0.397169115	0.738787703	1.045384663	1.320515578	1.567375867	1.788837209	1.987480306	2.165624317	2.325353332	2.468540156
1	Existing	314	Roof Insulation	11	Other	3	Cooling		707285.9114	1251139.508	1566808.313	1646426.385	1533598.92	1299115.521	968381.1444	657540.2134	446476.1987	303161.6803
1	Existing	211	Outdoor Lighting Controls (Photocell/Timeclock)	1	Office	2	Outdoor Lighting		2867.347993	5243.825057	7372.135697	9277.442776	10982.40467	12507.41669	13870.83061	15089.15409	16177.2316	17148.4083
1	Existing	603	Heat Pump Water Heater (air source)	9	Warehouse	6	Water Heating		877645.0546	1650088.974	2338274.142	2950727.582	3495119.784	3978350.654	4204115.319	4162074.166	4120453.424	4079248.89
1	Existing	351	Cool Roof - DX	11	Other	3	Cooling		61505.11624	101275.5477	109291.0783	90757.5826	60615.14076	32979.15524	13924.4612	4952.806799	1761.669254	626.6100592
1	Existing	336	Cool Roof - DX	11	Other	3	Cooling		2312672.131	3809625.818	4113599.799	3419139.082	2286581.737	1246346.041	527526.5984	188193.8956	67137.73757	23951.23281
1	Existing	517	LED Display Lighting	4	FoodStore	5	Refrigeration		1546.881696	2852.21471	4022.723428	5072.084027	6012.599609	6855.335803	7610.243366	8286.268965	8891.455204	9433.030911
1	Existing	211	Outdoor Lighting Controls (Photocell/Timeclock)	4	FoodStore	2	Outdoor Lighting		241.1040109	442.192248	622.357278	783.7205002	928.1916095	1057.489163	1173.159247	1276.592407	1369.038977	1451.622956
1	Existing	211	Outdoor Lighting Controls (Photocell/Timeclock)	5	School	2	Outdoor Lighting		1063.524593	1947.83656	2739.975338	3449.28681	4084.185329	4652.243887	5160.276031	5614.410198	6020.157096	6382.470725
1	Existing	342	Geothermal Heat Pump, EER=13, 10 tons	9	Warehouse	3	Cooling		0.182908373	0.342595267	0.48604535	0.614898942	0.730630896	0.834567272	0.927900337	1.011702053	1.086936201	1.15446929
1	Existing	342	Geothermal Heat Pump, EER=13, 10 tons	1	Office	3	Cooling		3.436001055	6.452888057	9.163977854	11.600105	13.78899861	15.75559489	17.52231826	19.10933412	20.5347763	21.81495154
1	Existing	342	Geothermal Heat Pump, EER=13, 10 tons	8	Other Healthcare	3	Cooling		0.065879962	0.123827414	0.175906958	0.222709922	0.26476811	0.302559789	0.336515076	0.367020782	0.394424769	0.419039869
1	Existing	342	Geothermal Heat Pump, EER=13, 10 tons	11	Other	3	Cooling		0.089047084	0.167283598	0.237592761	0.300773741	0.357545232	0.408553556	0.454379943	0.495547082	0.532525014	0.565736429
1	Existing	342	Geothermal Heat Pump, EER=13, 10 tons	5	School	3	Cooling		0.728721401	1.369734673	1.945839297	2.463576204	2.928827914	3.346884769	3.7225045	4.059965818	4.363116601	4.635417253
1	Existing	342	Geothermal Heat Pump, EER=13, 10 tons	6	College	3	Cooling		0.07427834	0.139696944	0.19849576	0.251341599	0.298834175	0.341512849	0.379862704	0.414319999	0.445277083	0.473086809

Input File: P_Saece_FPL_RIM-H.xls								Units	Sq Ft	Sq Ft	Sq Ft	Sq Ft	Sq Ft	Sq Ft	Sq Ft	Sq Ft	Sq Ft	Sq Ft
Segment		Measure		Bldg	Applicable	End Use	End	Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Number	Segment	Number	Measure	Typ	Building	Number	Use	Yr Index	1	2	3	4	5	6	7	8	9	10
1	Existing	601	High Efficiency Water Heater (electric)	9	Warehouse	6	Water Heating		1177600.9	2220871.656	3150603.192	3978263.311	4714169.918	5367606.224	5669938.24	5613238.857	5557106.469	5501535.404
1	Existing	349	Ceiling Insulation	9	Warehouse	3	Cooling		14635.39361	26663.8762	35274.0335	40207.61007	41722.21861	40430.35723	35375.58171	28615.02415	23146.4634	18722.98849
1	Existing	211	Outdoor Lighting Controls (Photocell/Timeclock)	11	Other	2	Outdoor Lighting		459.8343629	856.7235529	1213.082414	1533.006335	1820.179111	2077.913976	2309.190597	2516.668429	2702.816762	2869.741801
1	Existing	350	Roof Insulation	9	Warehouse	3	Cooling		21747.79657	38919.29701	49662.52401	53632.87272	51803.55509	45921.07971	36131.52139	26042.41756	18770.52186	13529.17755
1	Existing	334	Ceiling Insulation	9	Warehouse	3	Cooling		437424.0777	800139.8429	1066253.566	1228368.387	1292474.95	1274000.841	1137260.923	940101.5695	777122.4201	642397.8806
1	Existing	335	Roof Insulation	9	Warehouse	3	Cooling		673279.6502	1209745.466	1555323.007	1698542.793	1665197.422	1503789.439	1209764.01	893375.3538	659731.5806	487192.4848
1	Existing	328	Optimize Controls	9	Warehouse	3	Cooling		138.7920483	260.0091351	368.9217265	466.7694701	554.6675996	633.6193493	704.5271418	768.202668	825.3759676	876.7036077
1	Existing	305	Chiller Tune Up/Diagnostics	9	Warehouse	3	Cooling		77830.89332	130232.8335	144577.9913	125560.3542	89494.89498	53277.08586	25377.20934	10410.3229	4270.557157	1751.882108
1	Existing	307	EMS Optimization	9	Warehouse	3	Cooling		22.15672243	41.61953418	59.1044464	74.80956645	88.91332117	101.5763844	112.9434208	123.1446623	132.2973323	140.5069327
1	Existing	211	Outdoor Lighting Controls (Photocell/Timeclock)	2	Restaurant/ Services	2	Outdoor Lighting		50.01743822	94.02466707	133.5819549	169.1371694	201.0931942	229.8124351	255.6208762	278.8117315	299.6487318	318.3690831
1	Existing	403	Air Handler Optimization	9	Warehouse	4	Ventilation		20115762.53	33552598.3	37042260.25	31890611.71	22446906.38	13134980.26	6115794.05	2442787.029	975704.6137	389718.5803
1	Existing	211	Outdoor Lighting Controls (Photocell/Timeclock)	10	Hotel/Motel	2	Outdoor Lighting		78.57768888	147.926704	210.2740847	266.3239786	316.7098348	362.0014863	402.7115268	439.3010487	472.1848089	501.7358771
1	Existing	313	Ceiling Insulation	9	Warehouse	3	Cooling		11166.71157	20685.24407	28224.62269	33657.507	37040.75839	38568.97582	36709.01977	32517.84657	28805.19153	25516.42088
1	Existing	326	DX Tune Up/ Advanced Diagnostics	9	Warehouse	3	Cooling		1127629.097	1917346.014	2200060.088	2014699.316	1549803.316	1023191.849	558082.9145	267555.7458	128271.4007	61495.79101
1	Existing	314	Roof Insulation	9	Warehouse	3	Cooling		20442.78103	37213.76529	49061.20369	55615.53292	57283.36062	54998.26256	47584.57385	38032.6386	30398.12026	24296.12432
1	Existing	351	Cool Roof - DX	9	Warehouse	3	Cooling		40920.80199	70178.18399	81922.55452	77082.41302	61611.4151	42802.49165	24917.46741	12862.42438	6639.597768	3427.367751
1	Existing	336	Cool Roof - DX	9	Warehouse	3	Cooling		1233422.834	2135367.612	2541833.494	2466080.936	2057508.198	1512269.21	945298.354	528571.1462	295554.7901	165261.8282

Penetration Model Output Filename: O_Saece_FPL_RIM-H.xls Worksheet: 'Bld Stock Available - Measure'

Building Stock Available (with Program) - Measure Specific

Input File: P_Saece_FPL_RIM-H.xls

Segment		Measure		Bldg	Applicable	End Use	End	Units	Sq Ft	Sq Ft	Sq Ft	Sq Ft	Sq Ft	Sq Ft	Sq Ft	Sq Ft	Sq Ft	Sq Ft
Number	Segment	Number	Measure	Typ	Building	Number	Use	Yr Index	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
									1	2	3	4	5	6	7	8	9	10
1	Existing	603	Heat Pump Water Heater (air source)	7	Hospital	6	Water Heating		242879.8214	240451.0232	238046.513	235666.0478	233309.3873	230976.2935	228666.5305	226379.8652	224116.0666	221874.9059
1	Existing	601	High Efficiency Water Heater (electric)	7	Hospital	6	Water Heating		242879.8214	240451.0232	238046.513	235666.0478	233309.3873	230976.2935	228666.5305	226379.8652	224116.0666	221874.9059
1	Existing	403	Air Handler Optimization	7	Hospital	4	Ventilation		26484423.68	21115882.7	14546820.65	8620197.516	4370925.476	1884657.758	685881.4417	208768.9927	62427.24249	18667.33443
1	Existing	334	Ceiling Insulation	7	Hospital	3	Cooling		764697.9195	712025.1355	633876.6462	540985.4447	443795.1399	350842.255	267951.5142	199426.2289	148425.4377	110467.4679
1	Existing	349	Ceiling Insulation	7	Hospital	3	Cooling		55280.14148	51484.2537	45842.35711	39129.98044	32102.81103	25379.30193	19382.0001	14425.97109	10737.21189	7991.678233
1	Existing	328	Optimize Controls	7	Hospital	3	Cooling		630875.7836	561976.6913	472025.1153	375257.379	283438.8614	204170.7958	140781.4271	93258.90263	59559.96199	36796.24904
1	Existing	335	Roof Insulation	7	Hospital	3	Cooling		764697.9195	695345.6236	592246.7063	473697.3713	356718.779	253587.0276	170634.2968	110274.7819	71266.60789	46057.03419
1	Existing	350	Roof Insulation	7	Hospital	3	Cooling		55280.14148	50283.4429	42840.16161	34272.44389	25812.47005	18350.43626	12346.68435	7979.933773	5157.606787	3333.474754
1	Existing	334	Ceiling Insulation	2	Restaurant/ Services	3	Cooling		17750689.9	16580173.64	14799557.64	12656124.93	10395202.24	8220706.074	6274286.008	4673376.597	3480945.687	2592768.338
1	Existing	349	Ceiling Insulation	2	Restaurant/ Services	3	Cooling		1225188.762	1144623.985	1021870.475	873986.6009	717916.3804	567758.4889	433317.3884	322774.7696	240432.4283	179096.2554
1	Existing	305	Chiller Tune Up/Diagnostics	7	Hospital	3	Cooling		13526240.15	11109611.9	7861991.537	4760739.815	2445948.772	1055041.651	376969.4168	113603.0725	34235.29209	10317.10849
1	Existing	301	Centrifugal Chiller, 0.51 kW/ton, 500 tons	10	Hotel/Motel	3	Cooling		2111324.795	2090211.547	2069309.432	2048616.338	2028130.174	2007848.873	1987770.384	1967892.68	1948213.753	1928731.616
1	Existing	307	EMS Optimization	7	Hospital	3	Cooling		13526240.15	11903522.58	9724939.282	7399037.633	5259677.229	3505117.603	2197379.509	1300438.26	729107.7011	388638.2367
1	Existing	404	Electronically Commutated Motors (ECM) on an Air Handler Unit	7	Hospital	4	Ventilation		3138894.658	3107505.711	3076430.654	3045666.348	3015209.684	2985057.587	2955207.012	2925654.941	2896398.392	2867434.408
1	Existing	328	Optimize Controls	2	Restaurant/ Services	3	Cooling		14644319.16	13497876.09	11950083.5	10194210.9	8404895.782	6716916.869	5217564.374	3949674.558	2920903.457	2115104.88
1	Existing	301	Centrifugal Chiller, 0.51 kW/ton, 500 tons	7	Hospital	3	Cooling		1532973.884	1517644.145	1502467.703	1487443.026	1472568.596	1457842.91	1443264.481	1428831.836	1414543.518	1400398.083
1	Existing	335	Roof Insulation	2	Restaurant/ Services	3	Cooling		17750689.9	16209496.71	13857001.86	11115374.7	8386258.238	5965620.808	4011021.348	2595825.375	1679948.52	1087217.598
1	Existing	350	Roof Insulation	2	Restaurant/ Services	3	Cooling		1225188.762	1118912.966	956600.1514	767384.5936	578997.1239	411881.6495	276928.6256	179227.511	115995.595	75072.05781
1	Existing	334	Ceiling Insulation	4	FoodStore	3	Cooling		10816815.02	10120340.99	9046410.69	7744934.244	6366159.083	5036070.02	3842999.644	2864139.161	2134606.789	1590895.515
1	Existing	349	Ceiling Insulation	4	FoodStore	3	Cooling		391309.62	366178.8232	327372.0035	280308.9615	230427.5732	182291.827	139104.8714	103680.8027	77277.73106	57598.39397
1	Existing	326	DX Tune Up/ Advanced Diagnostics	7	Hospital	3	Cooling		630875.7836	522063.6341	372014.9062	226568.9898	116850.3095	50443.09113	17956.27424	5428.669231	1641.234102	496.18963
1	Existing	301	Centrifugal Chiller, 0.51 kW/ton, 500 tons	2	Restaurant/ Services	3	Cooling		79411.52755	78617.41227	77831.23815	77052.92577	76282.39651	75519.57254	74764.37682	74016.73305	73276.56572	72543.80006
1	Existing	301	Centrifugal Chiller, 0.51 kW/ton, 500 tons	3	Retail	3	Cooling		1325613.432	1312357.298	1299233.725	1286241.388	1273378.974	1260645.184	1248038.732	1235558.345	1223202.762	1210970.734
1	Existing	305	Chiller Tune Up/Diagnostics	2	Restaurant/ Services	3	Cooling		700689.9489	581569.5217	415570.186	253690.1429	131049.3992	56599.2601	20121.93879	6092.759783	1844.838221	558.6020429
1	Existing	161	LED Exit Sign	6	College	1	Indoor Lighting		45754457.49	43723590.92	40917461.71	37568203.8	33900217.18	30112752.25	26369741.41	22795980.7	19478146.81	16468988.28
1	Existing	328	Optimize Controls	4	FoodStore	3	Cooling		8923872.392	8371577.892	7615810.921	6736118.77	5807074.568	4890638.022	4032516.614	3261871.098	2593288.2	2029919.065
1	Existing	335	Roof Insulation	4	FoodStore	3	Cooling		10816815.02	9899348.862	8479240.199	6812591.743	5145872.762	3662713.508	2462437.732	1595310.612	1033535.149	669584.2777
1	Existing	161	LED Exit Sign	3	Retail	1	Indoor Lighting		160173734.3	153787821.6	144969962	134393227.7	122711223.9	110512452	98292639.58	86442875.74	75250036.56	64905631.01
1	Existing	307	EMS Optimization	2	Restaurant/ Services	3	Cooling		700689.9489	635585.1272	544667.1143	442347.3719	341536.186	251482.8756	177140.5817	119723.2595	77869.59742	48879.01244
1	Existing	350	Roof Insulation	4	FoodStore	3	Cooling		391309.62	358235.3353	306935.0377	246666.3119	186353.5778	132656.6945	89186.35816	57790.8471	37447.22935	24265.0014
1	Existing	301	Centrifugal Chiller, 0.51 kW/ton, 500 tons	4	FoodStore	3	Cooling		125320.3198	124067.1166	122826.4454	121598.181	120382.1991	119178.3772	117986.5934	116806.7274	115638.6602	114482.2736
1	Existing	334	Ceiling Insulation	8	Other Healthcare	3	Cooling		6900142.91	6474679.414	5802820.491	4978996.665	4099525.104	3246406.85	2478083.65	1849964.022	1381053.817	1030998.236
1	Existing	349	Ceiling Insulation	8	Other Healthcare	3	Cooling		258614.3746	242700.6694	217543.8647	186680.5325	153720.74	121740.1071	92932.2874	69384.28863	51803.0885	38676.7672

FL com existing_RIM annual eligible stock

Segment		Measure		Bldg	Applicable	End Use	End	Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Number	Segment	Number	Measure	Typ	Building	Number	Use	Yr Index	1	2	3	4	5	6	7	8	9	10
1	Existing	603	Heat Pump Water Heater (air source)	6	College	6	Water Heating		3236869.014	3204500.323	3172455.32	3140730.767	3109323.459	3078230.225	3047447.922	3016973.443	2986803.709	2956935.672
1	Existing	361	HE PTAC, EER=9.6, 1 ton	7	Hospital	3	Cooling		57542.32007	56966.89686	56397.2279	55833.25562	55274.92306	54722.17383	54174.95209	53633.20257	53096.87055	52565.90184
1	Existing	361	HE PTAC, EER=9.6, 1 ton	10	Hotel/Motel	3	Cooling		774715.7429	766968.5855	759298.8996	751705.9106	744188.8515	736746.963	729379.4934	722085.6985	714864.8415	707716.1931
1	Existing	161	LED Exit Sign	11	Other	1	Indoor Lighting		205977806	198503705.6	188205144.3	175813494.5	162040611	147533845.5	132848047.2	118432510.3	104629703.5	91682313.84
1	Existing	326	DX Tune Up/ Advanced Diagnostics	2	Restaurant/ Services	3	Cooling		14644319.16	12234123.02	8795972.193	5398239.186	2799386.708	1210904.981	429618.4609	130638.1165	39724.35783	12079.35821
1	Existing	161	LED Exit Sign	2	Restaurant/ Services	1	Indoor Lighting		87844192.05	84844486.63	80720230.23	75750713.51	70207967.16	64340705.98	58364195.07	52455320.98	46751792.87	41354305.24
1	Existing	402	Variable Speed Drive Control	7	Hospital	4	Ventilation		30250353.69	27752290.25	24164628.16	20027725.03	15845281.64	12000889.91	8725189.73	6105973.599	4123692.367	2694377.888
1	Existing	313	Ceiling Insulation	7	Hospital	3	Cooling		10820992.12	10150640.38	9094709.994	7801533.641	6422132.512	5084875.042	3881088.751	2896666.382	2161938.741	1613571.776
1	Existing	403	Air Handler Optimization	4	FoodStore	4	Ventilation		24937732.33	20624104.6	14688233.48	8941408.728	4609956.642	1989904.483	708541.6058	214149.0508	64724.23858	19562.20233
1	Existing	305	Chiller Tune Up/Diagnostics	4	FoodStore	3	Cooling		1105767.527	924349.9492	664971.4609	408314.7614	211822.8562	91642.08741	32508.68841	9889.657722	3008.590461	915.2608531
1	Existing	161	LED Exit Sign	1	Office	1	Indoor Lighting		272106708.5	263329588.5	251294275.2	236779520.4	220543944.1	203284173.6	185608126.4	168021574.6	150925300.2	134619942.6
1	Existing	307	EMS Optimization	4	FoodStore	3	Cooling		1105767.527	1021055.336	900340.2966	760326.9412	616692.1646	481743.3173	363418.9869	265439.0644	188173.6768	129780.2492
1	Existing	161	LED Exit Sign	8	Other Healthcare	1	Indoor Lighting		30190608.17	29287077.28	28053691.21	26565502.08	24895582.64	23111355.37	21272221.32	19428324.23	17620224.3	15879241.77
1	Existing	161	LED Exit Sign	10	Hotel/Motel	1	Indoor Lighting		135748856.2	131388513	125410876.9	118201420.8	110135650.1	101558486.5	92771101.56	84024280.17	75516993.44	67398758.59
1	Existing	335	Roof Insulation	8	Other Healthcare	3	Cooling		6900142.91	6338864.433	5448964.014	4391893.55	3326091.947	2371864.3	1596109.343	1037108.525	673884.967	437872.1589
1	Existing	350	Roof Insulation	8	Other Healthcare	3	Cooling		258614.3746	237621.6754	204300.0095	164695.8362	124748.272	88971.16134	59878.01555	38915.02135	25291.06673	16436.79057
1	Existing	361	HE PTAC, EER=9.6, 1 ton	2	Restaurant/ Services	3	Cooling		686465.8946	679601.2356	672805.2233	666077.171	659416.3993	652822.2353	646294.013	639831.0729	633432.7621	627098.4345
1	Existing	328	Optimize Controls	8	Other Healthcare	3	Cooling		5692617.901	5490272.821	5213356.005	4881040.574	4511896.089	4122776.239	3728134.637	3339712.473	2966516.695	2615002.035
1	Existing	401	High Efficiency Fan Motor, 15hp, 1800rpm, 92.4%	7	Hospital	4	Ventilation		3138894.658	3107505.711	3076430.654	3045666.348	3015209.684	2985057.587	2955207.012	2925654.941	2896398.392	2867434.408
1	Existing	334	Ceiling Insulation	10	Hotel/Motel	3	Cooling		25414942.81	23857417.62	21389963.32	18359592	15121080.32	11977101.38	9143864.02	6828476.419	5099385.785	3808131.388
1	Existing	336	Cool Roof - DX	7	Hospital	3	Cooling		818637.1617	689573.114	499788.5607	308986.1961	161184.6996	69970.01305	24818.29097	7608.024908	2332.233233	714.9440125
1	Existing	326	DX Tune Up/ Advanced Diagnostics	4	FoodStore	3	Cooling		8923872.392	7491937.98	5412132.921	3335715.064	1735618.181	752134.6223	266696.5477	81449.26973	24874.65097	7596.731842
1	Existing	349	Ceiling Insulation	10	Hotel/Motel	3	Cooling		150676.7056	141460.5359	126845.4265	108887.1217	89688.9074	71046.35013	54243.01147	40512.36865	30257.39112	22598.27672
1	Existing	351	Cool Roof - DX	7	Hospital	3	Cooling		59179.41839	49857.15233	36141.12292	22347.00168	11658.98152	5061.627667	1795.420278	550.4951907	168.7877533	51.75214272
1	Existing	361	HE PTAC, EER=9.6, 1 ton	3	Retail	3	Cooling		1364975.229	1351325.477	1337812.222	1324434.1	1311189.759	1298077.861	1285097.082	1272246.112	1259523.65	1246928.414
1	Existing	314	Roof Insulation	7	Hospital	3	Cooling		10820992.12	9935638.243	8536441.438	6877114.298	5205984.515	3711121.756	2496704.866	1621428.101	1052999.544	683846.5667
1	Existing	161	LED Exit Sign	5	School	1	Indoor Lighting		116235271.2	113018051.7	108652338	103386717.7	97462885.57	91104715.97	84511139.22	77852319.72	71268488.14	64870750.39
1	Existing	313	Ceiling Insulation	2	Restaurant/ Services	3	Cooling		560551.9592	526732.3066	472727.9757	406140.8543	334788.0363	265373.569	202714.6817	151543.0826	113288.814	84691.13314
1	Existing	161	LED Exit Sign	7	Hospital	1	Indoor Lighting		35193817.21	34288469.15	33068307.49	31598439.08	29942036.48	28157772.34	26298137	24406517.87	22526891.84	20683977.77
1	Existing	161	LED Exit Sign	9	Warehouse	1	Indoor Lighting		229541933	223762782.9	215991680.7	206635196.9	196087536.2	184715051.7	172846079	160765349.1	148712083.1	136880859.8
1	Existing	301	Centrifugal Chiller, 0.51 kW/ton, 500 tons	11	Other	3	Cooling		1629651.183	1613354.671	1597221.125	1581248.913	1565436.424	1549782.06	1534284.239	1518941.397	1503751.983	1488714.463
1	Existing	301	Centrifugal Chiller, 0.51 kW/ton, 500 tons	1	Office	3	Cooling		4952532.929	4903007.6	4853977.524	4805437.749	4757383.371	4709809.538	4662711.442	4616084.328	4569923.485	4524224.25
1	Existing	301	Centrifugal Chiller, 0.51 kW/ton, 500 tons	9	Warehouse	3	Cooling		77237.98994	76465.61004	75700.95394	74943.9444	74194.50496	73452.55991	72718.03431	71990.85397	71270.94543	70558.23597

Segment		Measure		Bldg	Applicable	End Use	End	Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Number	Segment	Number	Measure	Typ	Building	Number	Use	Yr Index	1	2	3	4	5	6	7	8	9	10
1	Existing	328	Optimize Controls	10	Hotel/Motel	3	Cooling		20967327.82	20313349.09	19424760.04	18356899.42	17163346.13	15893188.79	14589306.73	13287523.84	12016451.65	10797829.37
1	Existing	301	Centrifugal Chiller, 0.51 kW/ton, 500 tons	5	School	3	Cooling		3653514.855	3616979.707	3580809.91	3545001.811	3509551.793	3474456.275	3439711.712	3405314.595	3371261.449	3337548.834
1	Existing	404	Electronically Commutated Motors (ECM) on an Air Handler Unit	6	College	4	Ventilation		4777719.33	4729942.137	4682642.716	4635816.289	4589458.126	4543563.545	4498127.909	4453146.63	4408615.164	4364529.012
1	Existing	305	Chiller Tune Up/Diagnostics	8	Other Healthcare	3	Cooling		1610306.544	1357557.218	984753.1288	609294.2687	318065.7153	138143.943	49010.24135	15040.51771	4615.712282	1416.493786
1	Existing	404	Electronically Commutated Motors (ECM) on an Air Handler Unit	3	Retail	4	Ventilation		14567369.26	14421695.57	14277478.61	14134703.83	13993356.79	13853423.22	13714888.99	13577740.1	13441962.7	13307543.07
1	Existing	301	Centrifugal Chiller, 0.51 kW/ton, 500 tons	6	College	3	Cooling		1271293.423	1258580.489	1245994.684	1233534.737	1221199.39	1208987.396	1196897.522	1184928.547	1173079.261	1161348.469
1	Existing	301	Centrifugal Chiller, 0.51 kW/ton, 500 tons	8	Other Healthcare	3	Cooling		182501.4083	180676.3942	178869.6303	177080.934	175310.1246	173557.0234	171821.4532	170103.2386	168402.2062	166718.1842
1	Existing	161	LED Exit Sign	4	FoodStore	1	Indoor Lighting		35466997.1	34634046.73	33523090.7	32186546.68	30683032.83	29055523.88	27350138.53	25605465.97	23854325.76	22123855.34
1	Existing	603	Heat Pump Water Heater (air source)	5	School	6	Water Heating		4512475.496	4467350.741	4422677.233	4378450.461	4334665.956	4291319.297	4248406.104	4205922.043	4163862.822	4122224.194
1	Existing	335	Roof Insulation	10	Hotel/Motel	3	Cooling		25414942.81	23359731.23	20090776.11	16201408.84	12275403.16	8757187.201	5894864.601	3832595.748	2491794.327	1620061.017
1	Existing	403	Air Handler Optimization	8	Other Healthcare	4	Ventilation		22719355.87	19037192.43	13726687.5	8445959.385	4388555.217	1900264.308	673870.3134	205421.0501	62620.07241	19088.9564
1	Existing	401	High Efficiency Fan Motor, 15hp, 1800rpm, 92.4%	4	FoodStore	4	Ventilation		2955583.091	2926027.26	2896766.988	2867799.318	2839121.325	2810730.112	2782622.81	2754796.582	2727248.616	2699976.13
1	Existing	322	Hybrid Dessicant-DX System (Trane CDQ)	7	Hospital	3	Cooling		84966.4355	84116.77114	83275.60343	82442.84739	81618.41892	80802.23473	79994.21238	79194.27026	78402.32756	77618.30428
1	Existing	350	Roof Insulation	10	Hotel/Motel	3	Cooling		150676.7056	138530.6148	119178.5795	96133.7011	72857.27654	51988.10521	35002.43469	22765.00924	14805.98851	9629.57201
1	Existing	403	Air Handler Optimization	2	Restaurant/ Services	4	Ventilation		63547691.28	53131129.5	38228772.24	23477423.98	12181003.43	5270331.465	1869561.344	568847.4575	173082.0072	52663.29456
1	Existing	334	Ceiling Insulation	3	Retail	3	Cooling		36688912.7	34512618.76	31009812.76	26673385.6	22013149.42	17468756.48	13358197.44	10001846.43	7488804.716	5607184.281
1	Existing	349	Ceiling Insulation	3	Retail	3	Cooling		1042902.55	981049.8252	881489.3426	758230.4078	625764.0139	496587.5425	379740.625	284332.6918	212895.5247	159406.5887
1	Existing	334	Ceiling Insulation	5	School	3	Cooling		11805271.68	11101024.71	9970405.07	8572555.648	7071771.621	5609477.745	4287736.745	3208527.642	2400951.887	1796640.268
1	Existing	349	Ceiling Insulation	5	School	3	Cooling		2874444.886	2703239.348	2428182.911	2087989.209	1722646.526	1366594.294	1044701.833	781875.8574	585171.6126	437954.2007
1	Existing	307	EMS Optimization	8	Other Healthcare	3	Cooling		1610306.544	1536258.415	1426597.232	1297490.35	1153072.865	1004447.815	859065.5596	722462.3292	598285.3048	488510.7386
1	Existing	336	Cool Roof - DX	2	Restaurant/ Services	3	Cooling		14924513.8	12645732.68	9221452.269	5735679.501	3009084.57	1312517.469	467033.6349	144550.2231	44739.31949	13847.13676
1	Existing	322	Hybrid Dessicant-DX System (Trane CDQ)	10	Hotel/Motel	3	Cooling		2823882.535	2795643.709	2767687.272	2740010.399	2712610.295	2685484.192	2658629.351	2632043.057	2605722.626	2579665.4
1	Existing	351	Cool Roof - DX	2	Restaurant/ Services	3	Cooling		1030120.333	872942.7612	636648.1375	396046.4475	207805.5735	90653.94292	32261.24246	9987.68347	3092.063835	957.2648944
1	Existing	404	Electronically Commutated Motors (ECM) on an Air Handler Unit	4	FoodStore	4	Ventilation		2955583.091	2926027.26	2896766.988	2867799.318	2839121.325	2810730.112	2782622.81	2754796.582	2727248.616	2699976.13
1	Existing	601	High Efficiency Water Heater (electric)	6	College	6	Water Heating		3236869.014	3204500.323	3172455.32	3140730.767	3109323.459	3078230.225	3047447.922	3016973.443	2986803.709	2956935.672
1	Existing	402	Variable Speed Drive Control	4	FoodStore	4	Ventilation		33.25030978	31.3528286	28.54267205	25.14570933	21.48614011	17.8446711	14.43440962	11.3937677	8.792311307	6.644271086
1	Existing	404	Electronically Commutated Motors (ECM) on an Air Handler Unit	11	Other	4	Ventilation		18214837.54	18032689.16	17852362.27	17673838.65	17497100.26	17322129.26	17148907.96	16977418.88	16807644.7	16639568.25
1	Existing	334	Ceiling Insulation	1	Office	3	Cooling		53523459.38	50355672.49	45252078.95	38930689.29	32134703.06	25505502.42	19507394.35	14609669.01	10941616.54	8194502.718
1	Existing	314	Roof Insulation	2	Restaurant/ Services	3	Cooling		560551.9592	516002.6838	444501.9862	359032.4273	272462.3285	194663.9202	131213.7424	85495.05732	55706.09216	36296.46907
1	Existing	349	Ceiling Insulation	1	Office	3	Cooling		11641395.27	10953429.03	9844344.834	8470154.269	6992419.471	5550635.67	4245845.708	3180394.591	2382307.424	1784491.987

Segment		Measure		Bldg	Applicable	End Use	End	Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Number	Segment	Number	Measure	Typ	Building	Number	Use	Yr Index	1	2	3	4	5	6	7	8	9	10
1	Existing	404	Electronically Commutated Motors (ECM) on an Air Handler Unit	10	Hotel/Motel	4	Ventilation		13599566.83	13463571.16	13328935.45	13195646.1	13063689.63	12933052.74	12803722.21	12675684.99	12548928.14	12423438.86
1	Existing	313	Ceiling Insulation	4	FoodStore	3	Cooling		884614.0219	832007.3354	747430.7958	642787.4186	530378.5328	420803.8607	321722.3029	240821.7733	180264.5511	134935.093
1	Existing	326	DX Tune Up/ Advanced Diagnostics	8	Other Healthcare	3	Cooling		5692617.901	4819967.504	3512120.786	2182821.939	1144300.902	498786.6217	177388.8443	54829.91803	16947.62669	5238.418381
1	Existing	322	Hybrid Dessicant-DX System (Trane CDQ)	2	Restaurant/ Services	3	Cooling		1972298.877	1952575.889	1933050.13	1913719.628	1894582.432	1875636.608	1856880.242	1838311.439	1819928.325	1801729.042
1	Existing	515	Oversized Air Cooled Condenser	4	FoodStore	5	Refrigerati on		22166873.19	21814254.54	21376709.73	20867705.44	20299951.71	19685231.5	19034298.23	18356828.4	17661416.84	16955604.11
1	Existing	350	Roof Insulation	3	Retail	3	Cooling		1042902.55	961109.8124	829006.2992	670557.1629	509642.9517	364691.731	246211.2307	160779.7904	104991.7217	68561.23894
1	Existing	335	Roof Insulation	3	Retail	3	Cooling		36688912.7	33813850.7	29168616.91	23595830.88	17935405.1	12835717.46	8666697.265	5660383.866	3696903.738	2414517.737
1	Existing	328	Optimize Controls	5	School	3	Cooling		9739349.133	9548038.032	9302230.849	9011725.41	8685837.211	8333188.595	7961576.88	7577907.278	7188176.547	6797494.462
1	Existing	335	Roof Insulation	5	School	3	Cooling		11805271.68	10875066.68	9375915.225	7579903.578	5757661.046	4117594.447	2778138.074	1812628.811	1182670.954	771647.5528
1	Existing	350	Roof Insulation	5	School	3	Cooling		2874444.886	2648069.006	2283144.693	1845900.547	1402224.135	1002865.994	676677.6026	441546.3329	288118.2462	188003.2006
1	Existing	404	Electronically Commutated Motors (ECM) on an Air Handler Unit	8	Other Healthcare	4	Ventilation		2692664.4	2665737.756	2639080.378	2612689.574	2586562.679	2560697.052	2535090.081	2509739.181	2484641.789	2459795.371
1	Existing	335	Roof Insulation	1	Office	3	Cooling		53523459.38	49338285.02	42569813.08	34445464.13	26189732.19	18748785.65	12663317.51	8274193.862	5406346.641	3532499.298
1	Existing	328	Optimize Controls	3	Retail	3	Cooling		30268352.98	29727137.87	29044921.67	28245839.19	27352692.44	26386553.32	25366523.56	24309621.41	23230766.89	22142840.02
1	Existing	336	Cool Roof - DX	4	FoodStore	3	Cooling		8313785.997	7062497.352	5164736.921	3222264.517	1695881.459	742092.815	264866.1386	82476.51752	25682.31627	7997.201978
1	Existing	322	Hybrid Dessicant-DX System (Trane CDQ)	3	Retail	3	Cooling		4076545.656	4035780.397	3995422.593	3955468.367	3915913.684	3876754.547	3837987.001	3799607.131	3761611.06	3723994.95
1	Existing	351	Cool Roof - DX	4	FoodStore	3	Cooling		300759.9218	255521.4717	186883.9098	116612.5884	61382.59987	26864.40615	9589.952356	2987.096587	930.4265221	289.8110215
1	Existing	350	Roof Insulation	1	Office	3	Cooling		11641395.27	10731946.14	9260555.942	7494017.912	5698581.192	4080060.052	2756147.409	1801196.582	1177117.42	769269.4036
1	Existing	322	Hybrid Dessicant-DX System (Trane CDQ)	4	FoodStore	3	Cooling		1201868.336	1189849.652	1177951.156	1166171.644	1154509.928	1142964.828	1131535.18	1120219.828	1109017.63	1097927.454
1	Existing	328	Optimize Controls	1	Office	3	Cooling		44156853.99	43394957.74	42442368.52	41331141.64	40091483.67	38751284.68	37335841.26	35867732.71	34366815.55	32850305.36
1	Existing	404	Electronically Commutated Motors (ECM) on an Air Handler Unit	1	Office	4	Ventilation		29652969.17	29356439.48	29062875.09	28772246.34	28484523.87	28199678.64	27917681.85	27638505.03	27362119.98	27088498.78
1	Existing	404	Electronically Commutated Motors (ECM) on an Air Handler Unit	9	Warehouse	4	Ventilation		20472571.73	20267846.01	20065167.55	19864515.88	19665870.72	19469212.01	19274519.89	19081774.69	18890956.95	18702047.38
1	Existing	305	Chiller Tune Up/Diagnostics	10	Hotel/Motel	3	Cooling		18629336.43	15790378.37	11518919.65	7167524.082	3761770.372	1641457.034	584277.2935	180971.3937	56053.25705	17361.6811
1	Existing	326	DX Tune Up/ Advanced Diagnostics	10	Hotel/Motel	3	Cooling		20967327.82	17773656.46	12967112.14	8069694.451	4235906.191	1848673.534	658170.0798	203923.8942	63182.6877	19576.18572
1	Existing	314	Roof Insulation	4	FoodStore	3	Cooling		884614.0219	815168.6502	703056.1985	568617.3562	432113.4305	309172.9381	208701.0681	136260.3677	88964.02872	58084.3758
1	Existing	403	Air Handler Optimization	1	Office	4	Ventilation		250196927.4	210891802.6	152953416.2	94622792.72	49389554.56	21449692.18	7609939.649	2335014.185	716469.7089	219839.711
1	Existing	361	HE PTAC, EER=9.6, 1 ton	1	Office	3	Cooling		1974692.565	1954945.639	1935396.183	1916042.221	1896881.799	1877912.981	1859133.851	1840542.513	1822137.088	1803915.717
1	Existing	361	HE PTAC, EER=9.6, 1 ton	5	School	3	Cooling		1254676.629	1242129.863	1229708.564	1217411.479	1205237.364	1193184.99	1181253.14	1169440.609	1157746.203	1146168.741
1	Existing	403	Air Handler Optimization	5	School	4	Ventilation		93552538.2	78863526.17	57203027.92	35391356.4	18474531.8	8023933.739	2846821.426	873628.2968	268097.7436	82273.43414
1	Existing	361	HE PTAC, EER=9.6, 1 ton	8	Other Healthcare	3	Cooling		502368.9323	497345.2429	492371.7905	487448.0726	482573.5919	477747.856	472970.3774	468240.6736	463558.2669	458922.6842
1	Existing	603	Heat Pump Water Heater (air source)	3	Retail	6	Water Heating		8119171.148	8037979.437	7957599.642	7878023.646	7799243.41	7721250.975	7644038.466	7567598.081	7491922.1	7417002.879
1	Existing	307	EMS Optimization	10	Hotel/Motel	3	Cooling		18629336.43	18051243.11	17225162.24	16207720.02	15055580.81	13821817.39	12553427.82	11289923.87	10062820.37	8895812.526
1	Existing	603	Heat Pump Water Heater (air source)	10	Hotel/Motel	6	Water Heating		4790324.932	4742421.682	4694997.466	4648047.491	4601567.016	4555551.346	4509995.832	4464895.874	4420246.915	4376044.446
1	Existing	313	Ceiling Insulation	8	Other Healthcare	3	Cooling		1288245.235	1213734.086	1092648.971	941951.2761	779315.4744	620105.414	475549.272	357356.4292	268539.1925	201796.5595

Segment		Measure		Bldg	Applicable	End Use	End	Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Number	Segment	Number	Measure	Typ	Building	Number	Use	Yr Index	1	2	3	4	5	6	7	8	9	10
1	Existing	361	HE PTAC, EER=9.6, 1 ton	6	College	3	Cooling		483833.235	478994.9026	474204.9536	469462.904	464768.275	460120.5922	455519.3863	450964.1925	446454.5505	441990.005
1	Existing	334	Ceiling Insulation	6	College	3	Cooling		5334500.694	5023667.903	4519794.144	3893597.477	3218622.802	2558654.01	1960159.29	1471129.313	1104104.889	828647.4854
1	Existing	732	Copier Power Management Enabling	8	Other Healthcare	7	Office Equipment		19993033.17	19740565.08	19453456.29	19136710.69	18794933.18	18432328.73	18052710.37	17659513.68	17255815.88	16844357.81
1	Existing	403	Air Handler Optimization	6	College	4	Ventilation		40312006.85	34010876.44	24690449.81	15288436.96	7986530.537	3470715.722	1231730.323	378435.685	116270.2298	35722.75786
1	Existing	603	Heat Pump Water Heater (air source)	8	Other Healthcare	6	Water Heating		858884.5489	850295.7034	841792.7464	833374.8189	825041.0707	816790.66	808622.7534	800536.5259	792531.1606	784605.849
1	Existing	362	Occupancy Sensor (hotels)	7	Hospital	3	Cooling		776821.3209	765832.8032	752775.6831	737962.5947	721684.4452	704208.6614	685778.4502	666612.8446	646907.338	626834.939
1	Existing	362	Occupancy Sensor (hotels)	10	Hotel/Motel	3	Cooling		10458662.53	10310719.09	10134924.88	9935489.071	9716328.332	9481043.184	9232908.066	8974871.953	8709566.886	8439322.186
1	Existing	349	Ceiling Insulation	6	College	3	Cooling		326348.1554	307358.54	276560.6145	238275.4555	196998.5888	156630.5607	120014.6616	90092.73144	67630.90567	50769.23885
1	Existing	601	High Efficiency Water Heater (electric)	5	School	6	Water Heating		4512475.496	4467350.741	4422677.233	4378450.461	4334665.956	4291319.297	4248406.104	4205922.043	4163862.822	4122224.194
1	Existing	404	Electronically Commutated Motors (ECM) on an Air Handler Unit	5	School	4	Ventilation		11087708.23	10976831.15	10867062.84	10758392.21	10650808.29	10544300.2	10438857.2	10334468.63	10231123.94	10128812.7
1	Existing	603	Heat Pump Water Heater (air source)	2	Restaurant/ Services	6	Water Heating		2975098.98	2945347.99	2915894.51	2886735.565	2857868.21	2829289.527	2800996.632	2772986.666	2745256.799	2717804.231
1	Existing	404	Electronically Commutated Motors (ECM) on an Air Handler Unit	2	Restaurant/ Services	4	Ventilation		7531578.226	7456262.444	7381699.819	7307882.821	7234803.993	7162455.953	7090831.394	7019923.08	6949723.849	6880226.61
1	Existing	401	High Efficiency Fan Motor, 15hp, 1800rpm, 92.4%	11	Other	4	Ventilation		18214837.54	18032689.16	17852362.27	17673838.65	17497100.26	17322129.26	17148907.96	16977418.88	16807644.7	16639568.25
1	Existing	402	Variable Speed Drive Control	11	Other	4	Ventilation		71224686.85	68544554.5	64562195.76	59612973.41	54039473.98	48161183.04	42253726.02	36537634.88	31175273.49	26273882.6
1	Existing	305	Chiller Tune Up/Diagnostics	5	School	3	Cooling		32236895.78	27446170.68	20123545.2	12592403.44	6649442.618	2920327.989	1046431.326	328041.7038	102836.5232	32237.8234
1	Existing	328	Optimize Controls	6	College	3	Cooling		4400963.072	4339918.306	4268286.835	4187674.734	4099588.328	4005328.152	3906187.481	3803254.366	3697516.203	3589846.084
1	Existing	322	Hybrid Dessicant-DX System (Trane CDQ)	9	Warehouse	3	Cooling		1511664.342	1496547.699	1481582.222	1466766.399	1452098.735	1437577.748	1423201.971	1408969.951	1394880.251	1380931.449
1	Existing	335	Roof Insulation	6	College	3	Cooling		5334500.694	4923695.034	4255241.411	3449983.079	2629141.888	1887024.5	1278156.172	838132.7282	549593.6143	360388.1948
1	Existing	350	Roof Insulation	6	College	3	Cooling		326348.1554	301228.1265	260346.4711	211092.8254	160881.1626	115480.5242	78227.64207	51303.15626	33645.573	22065.39841
1	Existing	362	Occupancy Sensor (hotels)	2	Restaurant/ Services	3	Cooling		9267289.577	9151603.388	9020855.963	8877215.368	8722673.299	8559046.224	8387979.988	8210956.938	8029304.762	7844206.411
1	Existing	314	Roof Insulation	8	Other Healthcare	3	Cooling		1288245.235	1189673.949	1028925.765	835003.4558	637062.9294	457852.0298	310591.4948	204038.3694	134039.9105	88055.4852
1	Existing	326	DX Tune Up/ Advanced Diagnostics	5	School	3	Cooling		9739349.133	8297357.491	6088566.62	3813713.442	2016215.619	886725.7932	318261.0674	100021.2596	31434.10677	9878.930464
1	Existing	305	Chiller Tune Up/Diagnostics	3	Retail	3	Cooling		11696589.11	9974298.556	7327621.434	4596185.528	2433827.145	1072396.12	385731.2377	121636.7176	38356.99478	12095.51752
1	Existing	336	Cool Roof - DX	8	Other Healthcare	3	Cooling		7386855.991	6312988.002	4651275.231	2928209.558	1557676.497	690211.0407	249982.678	79619.24734	25358.65524	8076.707796
1	Existing	326	DX Tune Up/ Advanced Diagnostics	3	Retail	3	Cooling		30268352.98	25813705.44	18966693.96	11899075.02	6302670.786	2778112.376	999750.9277	315463.7315	99542.15907	31409.76424
1	Existing	351	Cool Roof - DX	8	Other Healthcare	3	Cooling		276856.1705	236627.8845	174362.5146	109786.5243	58412.83181	25889.22744	9379.528566	2988.6563	952.2937554	303.4351579
1	Existing	313	Ceiling Insulation	10	Hotel/Motel	3	Cooling		14903469.14	14044124.47	12646324.1	10905678.91	9026182.459	7185327.993	5513005.128	4145210.275	3116769.86	2343488.923
1	Existing	211	Outdoor Lighting Controls (Photocell/Timeclock)	6	College	2	Outdoor Lighting		6388102.092	6307366.26	6216250.446	6116292.075	6008898.376	5895347.937	5776794.739	5654273.94	5528708.834	5400918.513
1	Existing	402	Variable Speed Drive Control	1	Office	4	Ventilation		123484266.5	119384637.1	113330280.7	105780998.8	97206679.53	88050990.48	78705827.73	69496411.38	60675635.39	52425610.57
1	Existing	305	Chiller Tune Up/Diagnostics	1	Office	3	Cooling		43698819.97	37275098.71	27394283.18	17190657.57	9108029.403	4015849.483	1445610.467	456400.0836	144092.0919	45491.95256

FL com existing_RIM annual eligible stock

Segment		Measure		Bldg	Applicable	End Use	End	Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Number	Segment	Number	Measure	Typ	Building	Number	Use	Yr Index	1	2	3	4	5	6	7	8	9	10
1	Existing	307	EMS Optimization	5	School	3	Cooling		32236895.78	31572127.55	30674958.2	29586632.84	28347494.58	26995636.58	25565964.77	24089620.48	22593701.82	21101220.28
1	Existing	326	DX Tune Up/ Advanced Diagnostics	1	Office	3	Cooling		44156853.99	37673567.51	27695260.83	17386396.67	9216484.275	4066360.957	1465037.504	463071.8958	146368.663	46264.49088
1	Existing	403	Air Handler Optimization	3	Retail	4	Ventilation		122912178.1	104242046	76092880.07	47381304.21	24885831.08	10867198.8	3871028.807	1200703.255	372430.2705	115519.2225
1	Existing	603	Heat Pump Water Heater (air source)	11	Other	6	Water Heating		9191589.532	9099673.636	9008676.9	8918590.131	8829404.23	8741110.188	8653699.086	8567162.095	8481490.474	8396675.569
1	Existing	732	Copier Power Management Enabling	3	Retail	7	Office Equipment		108162716.8	106796745.1	105243292.8	103529442.5	101680117.4	99718076.41	97663957.21	95536354.56	93351923.5	91125498.55
1	Existing	506	Compressor VSD retrofit	4	FoodStore	5	Refrigerati on		17733498.55	17530766.89	17312142.71	17079926.03	16836203.24	16582659.04	16321589.45	16053915.28	15781195.63	15504641.23
1	Existing	732	Copier Power Management Enabling	2	Restaurant/ Services	7	Office Equipment		55921968.33	55215736.42	54412572.99	53526480.33	52570344.33	51555931.84	50493912.97	49393901.63	48264508.83	47113404.36
1	Existing	732	Copier Power Management Enabling	6	College	7	Office Equipment		35474566.03	35026561.85	34517068.3	33954967.86	33348434.8	32704933.54	32031232.74	31333431.09	30616991.05	29886778.02
1	Existing	362	Occupancy Sensor (hotels)	3	Retail	3	Cooling		18427165.59	18210811.58	17973417.2	17717968.89	17447191.51	17163558.63	16869305.23	16566442.03	16256770.76	15941899.73
1	Existing	501	High-efficiency fan motors	4	FoodStore	5	Refrigerati on		42117059.05	41643955.47	41136991.53	40600991.67	40040335.54	39458984.26	38860508.13	38248114.95	37624678.15	36992764.22
1	Existing	732	Copier Power Management Enabling	9	Warehouse	7	Office Equipment		152008845.1	150089141.2	147905953.6	145497344.1	142898339.5	140140925.1	137254105	134264012.1	131194053.2	128065076.8
1	Existing	732	Copier Power Management Enabling	1	Office	7	Office Equipment		220173296.1	217392747	214230559.5	210741863.4	206977392.9	202983476.7	198802124.9	194471189.6	190024574.1	185492475.8
1	Existing	732	Copier Power Management Enabling	4	FoodStore	7	Office Equipment		21945204.45	21668060.38	21352877.46	21005150.63	20629936.69	20231853.33	19815087.81	19383412.92	18940207.91	18488482.62
1	Existing	732	Copier Power Management Enabling	10	Hotel/Motel	7	Office Equipment		100976783.7	99701556.5	98251300.5	96651299.6	94924821.81	93093114.51	91175444.69	89189172.17	87149845.85	85071315.03
1	Existing	334	Ceiling Insulation	11	Other	3	Cooling		11981679.53	11296260.15	10178971.53	8785707.609	7279344.626	5801940.74	4457821.036	3357310.523	2528485.073	1904273.292
1	Existing	732	Copier Power Management Enabling	7	Hospital	7	Office Equipment		23306292.84	23011958.61	22677225.6	22307929.65	21909441.29	21486664.7	21044046.94	20585594.87	20114897.39	19635151.08
1	Existing	732	Copier Power Management Enabling	11	Other	7	Office Equipment		135245168.7	133537161.4	131594721.2	129451713.1	127139302.5	124685947.9	122117455.7	119457077.5	116725639.6	113941691.7
1	Existing	403	Air Handler Optimization	10	Hotel/Motel	4	Ventilation		114746345.1	97385513.8	71143629.14	44336921.4	23307382.5	10186956.55	3631793.926	1128390.319	350588.3696	108927.0289
1	Existing	322	Hybrid Dessicant-DX System (Trane CDQ)	1	Office	3	Cooling		5947051.042	5887580.532	5828704.726	5770417.679	5712713.502	5655586.367	5599030.503	5543040.198	5487609.796	5432733.698
1	Existing	349	Ceiling Insulation	11	Other	3	Cooling		318050.0461	299881.3243	270254.7777	233301.7128	193339.7959	154136.4165	118460.0414	89243.44095	67232.72809	50650.66607
1	Existing	732	Copier Power Management Enabling	5	School	7	Office Equipment		82326233.61	81286533.49	80104126.73	78799628.18	77392009.07	75898593.14	74335089.49	72715652.19	71052958.84	69358301.25
1	Existing	307	EMS Optimization	1	Office	3	Cooling		43698819.97	42908738.37	41874245.58	40635687.37	39232062.13	37700064.77	36073433.81	34382557.2	32654289.59	30911935.03
1	Existing	402	Variable Speed Drive Control	5	School	4	Ventilation		55579439.24	53921711.57	51493737.66	48463640.38	45002872.05	41274552.36	37425117.01	33579208.44	29837403.45	26276194.88
1	Existing	307	EMS Optimization	3	Retail	3	Cooling		11696589.11	11487264.47	11213914.79	10887051.52	10516824.89	10112781.9	9683701.493	9237495.317	8781162.1	8320783.942
1	Existing	401	High Efficiency Fan Motor, 15hp, 1800rpm, 92.4%	1	Office	4	Ventilation		29652969.17	29356439.48	29062875.09	28772246.34	28484523.87	28199678.64	27917681.85	27638505.03	27362119.98	27088498.78
1	Existing	321	DX Packaged System, EER=10.9, 10 tons	10	Hotel/Motel	3	Cooling		2541494.281	2516079.338	2490918.545	2466009.359	2441349.266	2416935.773	2392766.415	2368838.751	2345150.364	2321698.86
1	Existing	322	Hybrid Dessicant-DX System (Trane CDQ)	8	Other Healthcare	3	Cooling		766682.5456	759015.7201	751425.5629	743911.3073	736472.1942	729107.4723	721816.3976	714598.2336	707452.2513	700377.7287

Segment		Measure		Bldg	Applicable	End Use	End	Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Number	Segment	Number	Measure	Typ	Building	Number	Use	Yr Index	1	2	3	4	5	6	7	8	9	10
1	Existing	322	Hybrid Dessicant-DX System (Trane CDQ)	11	Other	3	Cooling		1331297.725	1317984.748	1304804.901	1291756.852	1278839.283	1266050.89	1253390.381	1240856.478	1228447.913	1216163.434
1	Existing	322	Hybrid Dessicant-DX System (Trane CDQ)	5	School	3	Cooling		1311696.853	1298579.884	1285594.085	1272738.145	1260010.763	1247410.656	1234936.549	1222587.184	1210361.312	1198257.699
1	Existing	313	Ceiling Insulation	3	Retail	3	Cooling		9357271.288	8831538.711	7971548.689	6896209.366	5730186.331	4582789.382	3534970.211	2674205.348	2023036.636	1530427.434
1	Existing	401	High Efficiency Fan Motor, 15hp, 1800rpm, 92.4%	3	Retail	4	Ventilation		14567369.26	14421695.57	14277478.61	14134703.83	13993356.79	13853423.22	13714888.99	13577740.1	13441962.7	13307543.07
1	Existing	314	Roof Insulation	10	Hotel/Motel	3	Cooling		14903469.14	13768741.6	11915390.33	9677200.905	7390247.187	5317323.793	3611794.749	2376378.105	1563536.493	1028727.861
1	Existing	328	Optimize Controls	11	Other	3	Cooling		9884885.611	9769096.662	9642551.108	9506794.496	9363233.635	9213142.751	9057670.795	8897849.445	8734601.473	8568749.188
1	Existing	313	Ceiling Insulation	5	School	3	Cooling		25789516.63	24332956.86	21952303.82	18977695.47	15754941.21	12586795.55	9696914.122	7325503.626	5534028.939	4180664.957
1	Existing	601	High Efficiency Water Heater (electric)	3	Retail	6	Water Heating		8119171.148	8037979.437	7957599.642	7878023.646	7799243.41	7721250.975	7644038.466	7567598.081	7491922.1	7417002.879
1	Existing	321	DX Packaged System, EER=10.9, 10 tons	7	Hospital	3	Cooling		76469.79195	75705.09403	74948.04309	74198.56266	73456.57703	72722.01126	71994.79115	71274.84323	70562.0948	69856.47385
1	Existing	322	Hybrid Dessicant-DX System (Trane CDQ)	6	College	3	Cooling		592722.2993	586795.0763	580927.1255	575117.8543	569366.6757	563673.009	558036.2789	552455.9161	546931.3569	541462.0434
1	Existing	601	High Efficiency Water Heater (electric)	10	Hotel/Motel	6	Water Heating		4790324.932	4742421.682	4694997.466	4648047.491	4601567.016	4555551.346	4509995.832	4464895.874	4420246.915	4376044.446
1	Existing	402	Variable Speed Drive Control	6	College	4	Ventilation		31559399.65	30716997.32	29497722.56	27977901.85	26235032.69	24343227.31	22369908.45	20373712.02	18403447.44	16497911.58
1	Existing	401	High Efficiency Fan Motor, 15hp, 1800rpm, 92.4%	5	School	4	Ventilation		11087708.23	10976831.15	10867062.84	10758392.21	10650808.29	10544300.2	10438857.2	10334468.63	10231123.94	10128812.7
1	Existing	335	Roof Insulation	11	Other	3	Cooling		11981679.53	11075621.13	9592935.653	7799879.561	5965084.56	4299258.911	2926092.665	1929701.737	1272601.117	839255.9183
1	Existing	601	High Efficiency Water Heater (electric)	8	Other Healthcare	6	Water Heating		858884.5489	850295.7034	841792.7464	833374.8189	825041.0707	816790.66	808622.7534	800536.5259	792531.1606	784605.849
1	Existing	350	Roof Insulation	11	Other	3	Cooling		318050.0461	294011.3513	254668.909	207086.0514	158390.1831	114173.1721	77719.03139	51263.6195	33813.57998	22303.50104
1	Existing	313	Ceiling Insulation	1	Office	3	Cooling		34959055.97	33000038.4	29794318.53	25784448.73	21434607.3	17152103.62	13238957.94	10022524.27	7587530.164	5744123.182
1	Existing	402	Variable Speed Drive Control	3	Retail	4	Ventilation		30479183.29	29701880.31	28583485.13	27191037.71	25592441.46	23852721.58	22031301.65	20180254.39	18343405.04	16556126.37
1	Existing	351	Cool Roof - DX	10	Hotel/Motel	3	Cooling		251127.8427	215071.8751	158939.9298	100470.2262	53732.25711	23973.61412	8760.107297	2823.864247	910.2867137	293.4354589
1	Existing	601	High Efficiency Water Heater (electric)	2	Restaurant/ Services	6	Water Heating		2975098.98	2945347.99	2915894.51	2886735.565	2857868.21	2829289.527	2800996.632	2772986.666	2745256.799	2717804.231
1	Existing	305	Chiller Tune Up/Diagnostics	6	College	3	Cooling		11217294.91	9596322.587	7080463.453	4465977.375	2381539.193	1058575.236	384928.1986	123273.9143	39478.68197	12643.11545
1	Existing	326	DX Tune Up/ Advanced Diagnostics	6	College	3	Cooling		4400963.072	3765402.206	2778778.639	1753241.129	935350.2808	416010.64	151400.5317	48537.21592	15560.45612	4988.497796
1	Existing	336	Cool Roof - DX	10	Hotel/Motel	3	Cooling		42358238.02	36284747.47	26823811.09	16964066.2	9078261.566	4053804.209	1482899.632	478710.0637	154537.3133	49887.77763
1	Existing	401	High Efficiency Fan Motor, 15hp, 1800rpm, 92.4%	10	Hotel/Motel	4	Ventilation		13599566.83	13463571.16	13328935.45	13195646.1	13063689.63	12933052.74	12803722.21	12675684.99	12548928.14	12423438.86
1	Existing	401	High Efficiency Fan Motor, 15hp, 1800rpm, 92.4%	8	Other Healthcare	4	Ventilation		2692664.4	2665737.756	2639080.378	2612689.574	2586562.679	2560697.052	2535090.081	2509739.181	2484641.789	2459795.371
1	Existing	603	Heat Pump Water Heater (air source)	1	Office	6	Water Heating		17334927.32	17161578.05	16989962.27	16820062.65	16651862.02	16485343.4	16320489.97	16157285.07	15995712.22	15835755.09
1	Existing	402	Variable Speed Drive Control	9	Warehouse	4	Ventilation		197299560.3	192598012.7	185901211.1	177584522.2	168026528	157590205.2	146609174	135378737.6	124151102	113134002.5
1	Existing	307	EMS Optimization	6	College	3	Cooling		11217294.91	11055719.25	10858901.2	10632034.91	10380018.14	10107403.14	9818367.777	9516702.826	9205811.996	8888721.517
1	Existing	321	DX Packaged System, EER=10.9, 10 tons	3	Retail	3	Cooling		3668891.27	3632202.358	3595880.334	3559921.531	3524322.315	3489079.092	3454188.301	3419646.418	3385449.954	3351595.455
1	Existing	321	DX Packaged System, EER=10.9, 10 tons	2	Restaurant/ Services	3	Cooling		1775068.99	1757318.3	1739745.117	1722347.665	1705124.189	1688072.947	1671192.217	1654480.295	1637935.492	1621556.137
1	Existing	513	High R-Value Glass Doors	4	FoodStore	5	Refrigeration		42117059.05	41675701.39	41223333.49	40761774.45	40292658.04	39817448.96	39337458.18	38853857.04	38367690.5	37879889.14
1	Existing	402	Variable Speed Drive Control	10	Hotel/Motel	4	Ventilation		9996816.415	9766703.578	9440816.007	9036781.024	8572333.046	8064479.876	7528892.894	6979507.304	6428305.368	5885248.942

Segment		Measure		Bldg	Applicable	End Use	End	Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Number	Segment	Number	Measure	Typ	Building	Number	Use	Yr Index	1	2	3	4	5	6	7	8	9	10
1	Existing	401	High Efficiency Fan Motor, 15hp, 1800rpm, 92.4%	6	College	4	Ventilation		4777719.33	4729942.137	4682642.716	4635816.289	4589458.126	4543563.545	4498127.909	4453146.63	4408615.164	4364529.012
1	Existing	603	Heat Pump Water Heater (air source)	4	FoodStore	6	Water Heating		1593119.876	1577188.677	1561416.79	1545802.622	1530344.596	1515041.15	1499890.739	1484891.831	1470042.913	1455342.484
1	Existing	403	Air Handler Optimization	11	Other	4	Ventilation		153687691.7	131071896.2	96307978.48	60422391.86	32005631.31	14108214.97	5077367.877	1602259.671	505623.4089	159559.0504
1	Existing	314	Roof Insulation	3	Retail	3	Cooling		9357271.288	8662819.739	7521899.555	6137317.298	4714713.264	3416769.666	2340613.599	1555076.406	1033174.648	686429.1992
1	Existing	402	Variable Speed Drive Control	8	Other Healthcare	4	Ventilation		25949915.28	25433043.2	24722003.08	23849501.21	22848036.69	21748730.59	20580470.92	19369344.85	18138317.56	16907112.51
1	Existing	351	Cool Roof - DX	3	Retail	3	Cooling		1090092.152	936408.034	695367.4473	442642.2948	239012.4329	108021.1517	40152.67615	13232.51737	4360.842982	1437.137846
1	Existing	336	Cool Roof - DX	1	Office	3	Cooling		43255340.52	37149471.28	27577276.46	17545503.24	9467149.163	4274448.06	1586758.609	522048.718	171755.7179	56508.18712
1	Existing	351	Cool Roof - DX	1	Office	3	Cooling		9408071.198	8080650.41	5999297.602	3817659.447	2060468.132	930643.9265	345640.9294	113786.9419	37459.30253	12331.8135
1	Existing	314	Roof Insulation	5	School	3	Cooling		25789516.63	23866827.4	20710564.08	16883313.35	12954877.79	9375096.514	6411417.828	4251511.771	2819244.171	1869485.05
1	Existing	211	Outdoor Lighting Controls (Photocell/Timeclock)	9	Warehouse	2	Outdoor Lighting		28393455.89	28093082.24	27783475.81	27466105.62	27142291.76	26813218.14	26479944.51	26143417.79	25804482.5	25463890.55
1	Existing	336	Cool Roof - DX	3	Retail	3	Cooling		38349024.86	32956346.89	24490687.18	15606585.73	8439848.325	3822277.242	1424752.913	471189.6929	155830.337	51535.70696
1	Existing	314	Roof Insulation	1	Office	3	Cooling		34959055.97	32366249.48	28106047.02	22935423.31	17622051.31	12773417.62	8752431.908	5816640.594	3865589.376	2568971.038
1	Existing	336	Cool Roof - DX	5	School	3	Cooling		15687612.35	13474680.94	10004594.28	6367021.474	3436854.802	1552584.425	576765.8934	189931.4585	62545.236	20596.41187
1	Existing	351	Cool Roof - DX	5	School	3	Cooling		3819749.203	3281174.586	2436497.456	1550906.855	837388.3438	378424.5378	140648.9941	46345.06155	15271.09912	5031.959407
1	Existing	321	DX Packaged System, EER=10.9, 10 tons	4	FoodStore	3	Cooling		1081681.502	1070864.687	1060156.04	1049554.48	1039058.935	1028668.346	1018381.662	1008197.846	998115.8671	988134.7084
1	Existing	401	High Efficiency Fan Motor, 15hp, 1800rpm, 92.4%	9	Warehouse	4	Ventilation		20472571.73	20267846.01	20065167.55	19864515.88	19665870.72	19469212.01	19274519.89	19081774.69	18890956.95	18702047.38
1	Existing	601	High Efficiency Water Heater (electric)	11	Other	6	Water Heating		9191589.532	9099673.636	9008676.9	8918590.131	8829404.23	8741110.188	8653699.086	8567162.095	8481490.474	8396675.569
1	Existing	401	High Efficiency Fan Motor, 15hp, 1800rpm, 92.4%	2	Restaurant/ Services	4	Ventilation		7531578.226	7456262.444	7381699.819	7307882.821	7234803.993	7162455.953	7090831.394	7019923.08	6949723.849	6880226.61
1	Existing	362	Occupancy Sensor (hotels)	5	School	3	Cooling		16938134.49	16760913.37	16579312.16	16394047.31	16205762.94	16015037.2	15822388.17	15628279.33	15433124.66	15237293.36
1	Existing	362	Occupancy Sensor (hotels)	1	Office	3	Cooling		26658349.63	26379810.92	26094660.15	25803989.39	25508780.29	25209913.76	24908179.02	24604282.05	24298853.33	23992455.06
1	Existing	313	Ceiling Insulation	6	College	3	Cooling		8973835.928	8479498.954	7669198.184	6853529.963	5548774.28	4457457.491	3456237.896	2629819.297	2001005.064	1522546.158
1	Existing	362	Occupancy Sensor (hotels)	6	College	3	Cooling		6531748.672	6463580.264	6393849.399	6322816.405	6250715.242	6177755.825	6104126.193	6029994.526	5955511.008	5880809.54
1	Existing	362	Occupancy Sensor (hotels)	8	Other Healthcare	3	Cooling		6781980.586	6711336.052	6639169.066	6565737.397	6491272.624	6415982.47	6340052.958	6263650.429	6186923.393	6110004.233
1	Existing	305	Chiller Tune Up/Diagnostics	11	Other	3	Cooling		14379275.15	12340997.98	9150631.826	5812067.415	3128668.966	1408096.586	520478.3491	170307.6542	55727.00021	18234.63876
1	Existing	326	DX Tune Up/ Advanced Diagnostics	11	Other	3	Cooling		9884885.611	8485074.272	6293604.026	3999542.55	2154670.876	970815.2668	359398.5076	117821.4166	38625.33072	12662.52109
1	Existing	211	Outdoor Lighting Controls (Photocell/Timeclock)	7	Hospital	2	Outdoor Lighting		4405036.741	4359348.293	4312862.927	4265726.568	4218069.971	4170010.113	4121651.489	4073087.295	4024400.528	3975664.979
1	Existing	307	EMS Optimization	11	Other	3	Cooling		14379275.15	14209827.09	14021947.18	13818166.43	13600809.78	13372000.92	13133669.85	12887562.36	12635250.77	12378145.35
1	Existing	402	Variable Speed Drive Control	2	Restaurant/ Services	4	Ventilation		107.3249897	105.4880659	103.0616742	100.1368158	96.80243992	93.14321891	89.23795296	85.1585247	80.96931616	76.72699953
1	Existing	321	DX Packaged System, EER=10.9, 10 tons	9	Warehouse	3	Cooling		1360497.908	1346892.929	1333424	1320089.76	1306888.862	1293819.973	1280881.774	1268072.956	1255392.226	1242838.304
1	Existing	342	Geothermal Heat Pump, EER=13, 10 tons	7	Hospital	3	Cooling		3648.489338	3612.004444	3575.8844	3540.125556	3504.7243	3469.677057	3434.980287	3400.630484	3366.624179	3332.957937
1	Existing	314	Roof Insulation	6	College	3	Cooling		8973835.928	8321191.017	7246109.106	5937073.897	4586074.479	3346394.275	2311302.316	1549794.137	1039181.179	696800.6253
1	Existing	601	High Efficiency Water Heater (electric)	1	Office	6	Water Heating		17334927.32	17161578.05	16989962.27	16820062.65	16651862.02	16485343.4	16320489.97	16157285.07	15995712.22	15835755.09
1	Existing	211	Outdoor Lighting Controls (Photocell/Timeclock)	8	Other Healthcare	2	Outdoor Lighting		3956963.022	3916471.984	3875661.628	3834613.335	3793399.807	3752085.907	3710729.417	3669381.738	3628088.517	3586890.228
1	Existing	321	DX Packaged System, EER=10.9, 10 tons	11	Other	3	Cooling		1198167.953	1186186.273	1174324.411	1162581.167	1150955.355	1139445.801	1128051.343	1116770.83	1105603.122	1094547.09

Segment		Measure		Bldg	Applicable	End Use	End	Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Number	Segment	Number	Measure	Typ	Building	Number	Use	Yr Index	1	2	3	4	5	6	7	8	9	10
1	Existing	342	Geothermal Heat Pump, EER=13, 10 tons	10	Hotel/Motel	3	Cooling		9944.66257	9845.215944	9746.763784	9649.296147	9552.803185	9457.275153	9362.702402	9269.075378	9176.384624	9084.620778
1	Existing	601	High Efficiency Water Heater (electric)	4	FoodStore	6	Water Heating		1593119.876	1577188.677	1561416.79	1545802.622	1530344.596	1515041.15	1499890.739	1484891.831	1470042.913	1455342.484
1	Existing	313	Ceiling Insulation	11	Other	3	Cooling		11503420.12	10887259.53	9876226.626	8605380.331	7217137.197	5838014.518	4563910.112	3504002.347	2690244.143	2065470.52
1	Existing	351	Cool Roof - DX	6	College	3	Cooling		511946.1587	441622.2003	330457.163	212845.3431	116882.4121	54067.47732	20742.29322	7108.328171	2436.004971	834.8123602
1	Existing	336	Cool Roof - DX	6	College	3	Cooling		8368293.474	7220476.325	5405391.203	3484074.568	1915245.41	887238.5626	341051.1879	117159.2304	40246.99447	13825.80406
1	Existing	321	DX Packaged System, EER=10.9, 10 tons	6	College	3	Cooling		533450.0694	528115.5687	522834.413	517606.0688	512430.0082	507305.7081	502232.651	497210.3245	492238.2212	487315.839
1	Existing	342	Geothermal Heat Pump, EER=13, 10 tons	2	Restaurant/ Services	3	Cooling		80862.45827	80053.83369	79253.29535	78460.7624	77676.15478	76899.39323	76130.3993	75369.0953	74615.40435	73869.25031
1	Existing	321	DX Packaged System, EER=10.9, 10 tons	1	Office	3	Cooling		5352345.938	5298822.478	5245834.254	5193375.911	5141442.152	5090027.73	5039127.453	4988736.179	4938848.817	4889460.329
1	Existing	342	Geothermal Heat Pump, EER=13, 10 tons	3	Retail	3	Cooling		68831.56828	68143.2526	67461.82008	66787.20188	66119.32986	65458.13656	64803.55519	64155.51964	63513.96444	62878.8248
1	Existing	211	Outdoor Lighting Controls (Photocell/Timeclock)	3	Retail	2	Outdoor Lighting		18640040.68	18451266.9	18262459.26	18073821.59	17885535.09	17697760.55	17510640.42	17324300.66	17138852.36	16954393.3
1	Existing	321	DX Packaged System, EER=10.9, 10 tons	8	Other Healthcare	3	Cooling		690014.291	683114.1481	676283.0066	669520.1766	662824.9748	656196.7251	649634.7578	643138.4102	636707.0261	630339.9559
1	Existing	514	Multiplex Compressor System	4	FoodStore	5	Refrigerati on		22166873.19	21943932.53	21722162.06	21501660.3	21282513.61	21064797.42	20848577.33	20633910.17	20420844.82	20209423.13
1	Existing	321	DX Packaged System, EER=10.9, 10 tons	5	School	3	Cooling		1180527.168	1168721.896	1157034.677	1145464.33	1134009.687	1122669.59	1111442.894	1100328.465	1089325.181	1078431.929
1	Existing	504	Evaporator fan controller for MT walk-ins	4	FoodStore	5	Refrigerati on		35466997.1	35109335.24	34752800.74	34397639.62	34044069.27	33692281.37	33342444.5	32994706.5	32649196.56	32306027.17
1	Existing	342	Geothermal Heat Pump, EER=13, 10 tons	4	FoodStore	3	Cooling		25826.43492	25568.17057	25312.48887	25059.36398	24808.77034	24560.68264	24315.07581	24071.92505	23831.2058	23592.89374
1	Existing	314	Roof Insulation	11	Other	3	Cooling		11503420.12	10688172.86	9342663.021	7698096.161	5991153.079	4412978.617	3082724.465	2093199.888	1421303.078	965078.6101
1	Existing	211	Outdoor Lighting Controls (Photocell/Timeclock)	1	Office	2	Outdoor Lighting		39501348.99	39103496.82	38707270.47	38312899.35	37920585.68	37530507.25	37142819.83	36757659.51	36375144.65	35995377.75
1	Existing	603	Heat Pump Water Heater (air source)	9	Warehouse	6	Water Heating		9719399.009	9622205.019	9525982.969	9430723.139	9336415.908	9243051.749	9150621.231	9059115.019	8968523.869	8878838.63
1	Existing	351	Cool Roof - DX	11	Other	3	Cooling		489713.3178	423926.1195	319424.0661	208031.6579	116101.3346	54931.33187	21732.65486	7730.11172	2749.531872	977.9839916
1	Existing	336	Cool Roof - DX	11	Other	3	Cooling		18448631.3	15974599.58	12043324.02	7850426.979	4386975.018	2079389.348	824712.8742	294214.413	104960.3123	37444.34899
1	Existing	517	LED Display Lighting	4	FoodStore	5	Refrigerati on		42117059.05	41694357.05	41274589.79	40857861.39	40444261.41	40033866.33	39626740.88	39222939.33	38822506.53	38425478.93
1	Existing	211	Outdoor Lighting Controls (Photocell/Timeclock)	4	FoodStore	2	Outdoor Lighting		3957544.966	3917730.823	3878115.744	3838718.453	3799555.386	3760640.922	3721987.598	3683606.295	3645506.405	3607695.993
1	Existing	211	Outdoor Lighting Controls (Photocell/Timeclock)	5	School	2	Outdoor Lighting		16011859.53	15850688.05	15690252.81	15530637.71	15371916.53	15214154.03	15057406.76	14901724.02	14747148.52	14593717.08
1	Existing	342	Geothermal Heat Pump, EER=13, 10 tons	9	Warehouse	3	Cooling		27082.43219	26811.60787	26543.49179	26278.05687	26015.2763	25755.12354	25497.5723	25242.59658	24990.17061	24740.26891
1	Existing	342	Geothermal Heat Pump, EER=13, 10 tons	1	Office	3	Cooling		768332.0879	760648.767	753042.2794	745511.8566	738056.738	730676.1706	723369.4089	716135.7148	708974.3577	701884.6141
1	Existing	342	Geothermal Heat Pump, EER=13, 10 tons	8	Other Healthcare	3	Cooling		17068.54872	16897.86324	16728.8846	16561.59576	16395.9798	16232.02	16069.6998	15909.0028	15749.91278	15592.41365
1	Existing	342	Geothermal Heat Pump, EER=13, 10 tons	11	Other	3	Cooling		20991.30304	20781.39001	20573.57611	20367.84035	20164.16195	19962.52033	19762.89512	19565.26617	19369.61351	19175.91738
1	Existing	342	Geothermal Heat Pump, EER=13, 10 tons	5	School	3	Cooling		189713.3624	187816.2288	185938.0665	184078.6859	182237.899	180415.52	178611.3648	176825.2512	175056.9987	173306.4287
1	Existing	342	Geothermal Heat Pump, EER=13, 10 tons	6	College	3	Cooling		21538.97825	21323.58847	21110.35259	20899.24906	20690.25657	20483.354	20278.52046	20075.73526	19874.97791	19676.22813
1	Existing	601	High Efficiency Water Heater (electric)	9	Warehouse	6	Water Heating		9719399.009	9622205.019	9525982.969	9430723.139	9336415.908	9243051.749	9150621.231	9059115.019	8968523.869	8878838.63
1	Existing	349	Ceiling Insulation	9	Warehouse	3	Cooling		410339.8816	391747.4431	361432.7313	322897.1108	279862.6057	235758.9832	193375.3397	156419.7605	126526.6889	102346.4233
1	Existing	211	Outdoor Lighting Controls (Photocell/Timeclock)	11	Other	2	Outdoor Lighting		26358855.06	26094811.27	25833015	25573483.9	25316231.38	25061267.09	24808597.29	24558225.22	24310151.44	24064374.14
1	Existing	350	Roof Insulation	9	Warehouse	3	Cooling		410339.8816	384706.1642	342328.9985	289739.8098	233745.8677	180122.8895	132859.7916	95760.98755	69021.3843	49748.35381
1	Existing	334	Ceiling Insulation	9	Warehouse	3	Cooling		13604979.08	13035879.45	12113382.21	10936657.36	9611206.083	8235543.822	6891927.551	5697119.962	4709448.208	3893002.53
1	Existing	335	Roof Insulation	9	Warehouse	3	Cooling		13604979.08	12802382.43	11476710.6	9822173.716	8042394.614	6313425.22	4761539.424	3516257.659	2596653.482	1917552.683

Segment		Measure		Bldg	Applicable	End Use	End	Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Number	Segment	Number	Measure	Typ	Building	Number	Use	Yr Index	1	2	3	4	5	6	7	8	9	10
1	Existing	328	Optimize Controls	9	Warehouse	3	Cooling		11224107.74	11111729.26	11000354.56	10889985.78	10780623.82	10672268.46	10564918.49	10458571.83	10353225.59	10248876.21
1	Existing	305	Chiller Tune Up/Diagnostics	9	Warehouse	3	Cooling		681511.676	597643.9748	462737.0299	314977.4482	187522.9231	97047.7478	43332.95531	17776.18852	7292.206956	2991.433301
1	Existing	307	EMS Optimization	9	Warehouse	3	Cooling		681511.676	674674.624	667886.6745	661149.2943	654463.7399	647831.0783	641252.2069	634727.8709	628258.6789	621845.1178
1	Existing	211	Outdoor Lighting Controls (Photocell/Timeclock)	2	Restaurant/ Services	2	Outdoor Lighting		9512333.73	9417160.875	9322896.182	9229534.974	9137072.179	9045502.375	8954819.837	8865018.574	8776092.364	8688034.788
1	Existing	403	Air Handler Optimization	9	Warehouse	4	Ventilation		172737324	151095345.8	116367320.1	78531809.21	46174785.52	23490600.34	10252063.88	4094907.132	1635598.901	653295.3445
1	Existing	211	Outdoor Lighting Controls (Photocell/Timeclock)	10	Hotel/Motel	2	Outdoor Lighting		19738385.15	19540923.51	19345367.83	19151705.98	18959925.26	18770012.46	18581953.96	18395735.73	18211343.47	18028762.57
1	Existing	313	Ceiling Insulation	9	Warehouse	3	Cooling		545209.3408	528702.2029	502936.7893	469965.0449	431944.4625	390954.6671	348861.8343	309031.2864	273748.3055	242493.6828
1	Existing	326	DX Tune Up/ Advanced Diagnostics	9	Warehouse	3	Cooling		11224107.74	9995513.856	7997386.164	5739352.815	3687406.964	2116227.611	1082105.405	518782.2654	248714.2543	119238.4251
1	Existing	314	Roof Insulation	9	Warehouse	3	Cooling		545209.3408	519518.8941	477482.0776	424136.6651	364835.9209	304477.0347	246983.9844	197405.4164	157779.0501	126107.1205
1	Existing	351	Cool Roof - DX	9	Warehouse	3	Cooling		439283.8891	394379.4562	320959.2595	236646.3379	157968.2857	95393.30188	52064.90212	26875.96037	13873.40063	7161.464829
1	Existing	336	Cool Roof - DX	9	Warehouse	3	Cooling		14564628.95	13197894.06	10951901.18	8325967.01	5801287.213	3706341.225	2172131.295	1214564.612	679133.531	379742.9535

Penetration Model Output Filename: O_Saece_FPL_RIM-H.xls																			
Annual adoptions as share of eligible market																			
Input File: P_Saece_FPL_RIM-H.xls								Units	%	%	%	%	%	%	%	%	%	%
Segment		Measure		Bldg	Applicable	End Use	End	Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Number	Segment	Number	Measure	Typ	Building	Number	Use	Yr Index	1	2	3	4	5	6	7	8	9	10
1	Existing	603	Heat Pump Water Heater (air source)	7	Hospital	6	Water Heating		14.6%	22.2%	29.0%	35.0%	40.3%	45.0%	49.1%	49.9%	49.9%	49.9%
1	Existing	601	High Efficiency Water Heater (electric)	7	Hospital	6	Water Heating		19.3%	30.3%	40.0%	48.7%	56.4%	63.3%	69.4%	69.8%	69.8%	69.8%
1	Existing	403	Air Handler Optimization	7	Hospital	4	Ventilation		19.5%	30.4%	40.1%	48.8%	56.4%	63.2%	69.3%	69.8%	69.8%	69.8%
1	Existing	334	Ceiling Insulation	7	Hospital	3	Cooling		5.9%	10.1%	13.8%	17.1%	20.1%	22.9%	24.8%	24.8%	24.8%	24.8%
1	Existing	349	Ceiling Insulation	7	Hospital	3	Cooling		5.9%	10.1%	13.8%	17.1%	20.1%	22.9%	24.8%	24.8%	24.8%	24.8%
1	Existing	328	Optimize Controls	7	Hospital	3	Cooling		10.0%	15.2%	19.7%	23.7%	27.2%	30.4%	33.1%	35.5%	37.6%	39.4%
1	*Existing*	*335*	*Roof Insulation*	7	*Hospital*	3	*Cooling*		*8.2%*	*14.0%*	*19.2%*	*23.9%*	*28.2%*	*32.0%*	*34.7%*	*34.7%*	*34.7%*	*34.7%*
1	Existing	350	Roof Insulation	7	Hospital	3	Cooling		8.1%	13.9%	19.2%	23.9%	28.2%	32.0%	34.7%	34.7%	34.7%	34.7%
1	Existing	334	Ceiling Insulation	2	Restaurant/ Services	3	Cooling		5.7%	9.8%	13.6%	17.0%	20.1%	22.9%	24.8%	24.8%	24.8%	24.8%
1	Existing	349	Ceiling Insulation	2	Restaurant/ Services	3	Cooling		5.6%	9.8%	13.6%	17.0%	20.1%	22.9%	24.8%	24.8%	24.8%	24.8%
1	Existing	305	Chiller Tune Up/Diagnostics	7	Hospital	3	Cooling		17.0%	28.5%	38.8%	48.1%	56.4%	63.9%	69.6%	69.6%	69.6%	69.6%
1	*Existing*	*301*	*Centrifugal Chiller, 0.51 kW/ton, 500 tons*	*10*	*Hotel/Motel*	3	*Cooling*		21.4%	22.7%	23.8%	24.9%	25.8%	26.7%	27.5%	28.2%	28.9%	29.5%
1	Existing	307	EMS Optimization	7	Hospital	3	Cooling		11.1%	17.5%	23.1%	28.2%	32.7%	36.7%	40.2%	43.4%	46.2%	48.6%
1	Existing	404	Electronically Commutated Motors (ECM) on an Air Handler Unit	7	Hospital	4	Ventilation		10.6%	17.3%	23.3%	28.7%	33.5%	37.8%	41.7%	45.1%	48.2%	51.0%
1	Existing	328	Optimize Controls	2	Restaurant/ Services	3	Cooling		6.9%	10.6%	13.8%	16.7%	19.3%	21.5%	23.5%	25.3%	26.9%	28.2%
1	Existing	301	Centrifugal Chiller, 0.51 kW/ton, 500 tons	7	Hospital	3	Cooling		20.8%	22.0%	23.0%	24.0%	24.8%	25.6%	26.4%	27.0%	27.6%	28.2%
1	Existing	335	Roof Insulation	2	Restaurant/ Services	3	Cooling		7.8%	13.6%	19.0%	23.8%	28.1%	32.1%	34.6%	34.6%	34.6%	34.6%
1	Existing	350	Roof Insulation	2	Restaurant/ Services	3	Cooling		7.8%	13.6%	19.0%	23.8%	28.1%	32.1%	34.6%	34.6%	34.6%	34.6%
1	Existing	334	Ceiling Insulation	4	FoodStore	3	Cooling		5.5%	9.7%	13.5%	17.0%	20.1%	22.9%	24.7%	24.7%	24.7%	24.7%
1	Existing	349	Ceiling Insulation	4	FoodStore	3	Cooling		5.5%	9.7%	13.5%	17.0%	20.1%	22.9%	24.7%	24.7%	24.7%	24.7%
1	Existing	326	DX Tune Up/ Advanced Diagnostics	7	Hospital	3	Cooling		16.4%	28.0%	38.5%	47.9%	56.4%	64.0%	69.5%	69.5%	69.5%	69.5%
1	Existing	301	Centrifugal Chiller, 0.51 kW/ton, 500 tons	2	Restaurant/ Services	3	Cooling		18.8%	19.6%	20.3%	21.0%	21.6%	22.2%	22.8%	23.3%	23.8%	24.2%
1	Existing	301	Centrifugal Chiller, 0.51 kW/ton, 500 tons	3	Retail	3	Cooling		18.0%	18.7%	19.3%	19.9%	20.5%	21.0%	21.5%	21.9%	22.4%	22.8%
1	Existing	305	Chiller Tune Up/Diagnostics	2	Restaurant/ Services	3	Cooling		16.2%	27.8%	38.3%	47.8%	56.4%	64.1%	69.4%	69.4%	69.4%	69.4%
1	Existing	161	LED Exit Sign	6	College	1	Indoor		3.5%	5.5%	7.3%	8.9%	10.3%	11.5%	12.7%	13.7%	14.6%	15.4%
1	Existing	328	Optimize Controls	4	FoodStore	3	Cooling		5.2%	8.1%	10.7%	12.9%	14.9%	16.7%	18.3%	19.7%	20.9%	22.0%
1	Existing	335	Roof Insulation	4	FoodStore	3	Cooling		7.6%	13.5%	18.8%	23.7%	28.1%	32.1%	34.6%	34.6%	34.6%	34.6%

FPL com existing_RIM annual penetration rates

Docket Nos. 080407-EG, 080408-EG, 080409-EG, 080410-EG, 080411-EG, 080412-EG, 080413-EG
Table of weighted-average measure penetration rate calculations
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Segment		Measure		Bldg	Applicable	End Use	End	Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Number	Segment	Number	Measure	Typ	Building	Number	Use	Yr Index	1	2	3	4	5	6	7	8	9	10
1	Existing	161	LED Exit Sign	3	Retail	1	Indoor		3.0%	4.8%	6.4%	7.8%	9.0%	10.2%	11.2%	12.1%	12.9%	13.6%
1	Existing	307	EMS Optimization	2	Restaurant/ Services	3	Cooling		8.4%	13.4%	18.0%	22.0%	25.6%	28.9%	31.7%	34.3%	36.6%	38.6%
1	Existing	350	Roof Insulation	4	FoodStore	3	Cooling		7.5%	13.5%	18.8%	23.7%	28.1%	32.1%	34.5%	34.5%	34.5%	34.5%
1	Existing	301	Centrifugal Chiller, 0.51 kW/ton, 500 tons	4	FoodStore	3	Cooling		17.4%	18.0%	18.6%	19.1%	19.6%	20.0%	20.5%	20.9%	21.3%	21.7%
1	Existing	334	Ceiling Insulation	8	Other Healthcare	3	Cooling		5.2%	9.5%	13.3%	16.8%	20.0%	22.9%	24.6%	24.6%	24.6%	24.6%
1	Existing	349	Ceiling Insulation	8	Other Healthcare	3	Cooling		5.2%	9.5%	13.3%	16.8%	20.0%	22.9%	24.6%	24.6%	24.6%	24.6%
1	Existing	603	Heat Pump Water Heater (air source)	6	College	6	Water Heating		11.3%	19.7%	27.3%	34.1%	40.2%	45.8%	49.5%	49.5%	49.5%	49.5%
1	Existing	361	HE PTAC, EER=9.6, 1 ton	7	Hospital	3	Cooling		5.9%	9.6%	12.9%	15.9%	18.6%	21.0%	23.2%	25.1%	26.8%	28.4%
1	Existing	361	HE PTAC, EER=9.6, 1 ton	10	Hotel/Motel	3	Cooling		5.9%	9.6%	12.9%	15.9%	18.6%	21.0%	23.2%	25.1%	26.8%	28.4%
1	Existing	161	LED Exit Sign	11	Other	1	Indoor		2.7%	4.2%	5.6%	6.9%	8.0%	9.0%	10.0%	10.8%	11.5%	12.1%
1	Existing	326	DX Tune Up/ Advanced Diagnostics	2	Restaurant/ Services	3	Cooling		15.6%	27.4%	38.0%	47.6%	56.3%	64.2%	69.3%	69.3%	69.3%	69.3%
1	Existing	161	LED Exit Sign	2	Restaurant/ Services	1	Indoor Lighting		2.4%	3.9%	5.2%	6.4%	7.4%	8.4%	9.2%	10.0%	10.7%	11.3%
1	Existing	402	Variable Speed Drive Control	7	Hospital	4	Ventilation		7.3%	12.0%	16.3%	20.1%	23.5%	26.6%	29.3%	31.8%	34.0%	36.0%
1	Existing	313	Ceiling Insulation	7	Hospital	3	Cooling		5.2%	9.5%	13.4%	16.8%	20.0%	22.9%	24.6%	24.6%	24.6%	24.6%
1	Existing	403	Air Handler Optimization	4	FoodStore	4	Ventilation		16.5%	28.1%	38.5%	47.9%	56.4%	64.0%	69.5%	69.5%	69.5%	69.5%
1	Existing	305	Chiller Tune Up/Diagnostics	4	FoodStore	3	Cooling		15.6%	27.3%	38.0%	47.6%	56.3%	64.2%	69.3%	69.3%	69.3%	69.3%
1	Existing	161	LED Exit Sign	1	Office	1	Indoor		2.2%	3.6%	4.8%	5.9%	6.9%	7.8%	8.6%	9.3%	9.9%	10.5%
1	Existing	307	EMS Optimization	4	FoodStore	3	Cooling		6.7%	10.9%	14.7%	18.1%	21.1%	23.8%	26.2%	28.4%	30.3%	32.1%
1	Existing	161	LED Exit Sign	8	Other Healthcare	1	Indoor Lighting		2.0%	3.2%	4.3%	5.3%	6.2%	7.0%	7.7%	8.4%	9.0%	9.5%
1	Existing	161	LED Exit Sign	10	Hotel/Motel	1	Indoor		2.2%	3.6%	4.8%	5.9%	6.9%	7.7%	8.5%	9.2%	9.8%	10.4%
1	Existing	335	Roof Insulation	8	Other Healthcare	3	Cooling		7.2%	13.2%	18.6%	23.5%	28.0%	32.0%	34.4%	34.4%	34.4%	34.4%
1	Existing	350	Roof Insulation	8	Other Healthcare	3	Cooling		7.2%	13.2%	18.6%	23.5%	28.0%	32.0%	34.4%	34.4%	34.4%	34.4%
1	Existing	361	HE PTAC, EER=9.6, 1 ton	2	Restaurant/ Services	3	Cooling		4.9%	8.0%	10.9%	13.4%	15.8%	17.8%	19.7%	21.4%	22.9%	24.3%
1	Existing	328	Optimize Controls	8	Other Healthcare	3	Cooling		2.6%	4.1%	5.4%	6.6%	7.7%	8.7%	9.5%	10.3%	11.0%	11.6%
1	Existing	401	High Efficiency Fan Motor, 15hp, 1800rpm, 92.4%	7	Hospital	4	Ventilation		31.5%	35.7%	39.5%	43.0%	46.2%	49.1%	51.8%	54.3%	54.5%	54.5%
1	Existing	334	Ceiling Insulation	10	Hotel/Motel	3	Cooling		5.2%	9.4%	13.3%	16.8%	20.0%	22.9%	24.6%	24.6%	24.6%	24.6%
1	Existing	336	Cool Roof - DX	7	Hospital	3	Cooling		14.9%	26.8%	37.6%	47.3%	56.2%	64.2%	69.0%	69.0%	69.0%	69.0%
1	Existing	326	DX Tune Up/ Advanced Diagnostics	4	FoodStore	3	Cooling		15.2%	27.0%	37.7%	47.4%	56.2%	64.2%	69.2%	69.2%	69.2%	69.2%
1	Existing	349	Ceiling Insulation	10	Hotel/Motel	3	Cooling		5.2%	9.4%	13.3%	16.8%	20.0%	22.9%	24.6%	24.6%	24.6%	24.6%
1	Existing	351	Cool Roof - DX	7	Hospital	3	Cooling		14.9%	26.8%	37.5%	47.3%	56.1%	64.2%	69.0%	69.0%	69.0%	69.0%
1	Existing	361	HE PTAC, EER=9.6, 1 ton	3	Retail	3	Cooling		4.2%	7.1%	9.6%	11.9%	14.0%	15.8%	17.5%	19.0%	20.4%	21.6%

FPL com existing_RIM annual penetration rates

Segment		Measure		Bldg	Applicable	End Use	End	Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Number	Segment	Number	Measure	Typ	Building	Number	Use	Yr Index	1	2	3	4	5	6	7	8	9	10
1	Existing	314	Roof Insulation	7	Hospital	3	Cooling		7.3%	13.2%	18.6%	23.5%	28.0%	32.0%	34.4%	34.4%	34.4%	34.4%
1	Existing	161	LED Exit Sign	5	School	1	Indoor		1.8%	2.9%	3.9%	4.8%	5.6%	6.3%	6.9%	7.5%	8.1%	8.5%
1	Existing	313	Ceiling Insulation	2	Restaurant/ Services	3	Cooling		5.1%	9.3%	13.2%	16.7%	19.9%	22.8%	24.5%	24.5%	24.5%	24.5%
1	Existing	161	LED Exit Sign	7	Hospital	1	Indoor		1.6%	2.6%	3.5%	4.3%	5.0%	5.7%	6.2%	6.8%	7.3%	7.7%
1	Existing	161	LED Exit Sign	9	Warehouse	1	Indoor		1.5%	2.5%	3.4%	4.1%	4.8%	5.5%	6.0%	6.6%	7.0%	7.4%
1	Existing	301	Centrifugal Chiller, 0.51 kW/ton, 500 tons	11	Other	3	Cooling		13.6%	13.7%	13.9%	14.1%	14.3%	14.5%	14.7%	14.9%	15.1%	15.4%
1	Existing	301	Centrifugal Chiller, 0.51 kW/ton, 500 tons	1	Office	3	Cooling		12.9%	13.0%	13.1%	13.3%	13.5%	13.6%	13.8%	14.0%	14.2%	14.4%
1	Existing	301	Centrifugal Chiller, 0.51 kW/ton, 500 tons	9	Warehouse	3	Cooling		13.1%	13.2%	13.4%	13.6%	13.7%	13.9%	14.1%	14.3%	14.5%	14.7%
1	Existing	328	Optimize Controls	10	Hotel/Motel	3	Cooling		2.1%	3.4%	4.5%	5.6%	6.5%	7.3%	8.0%	8.7%	9.2%	9.8%
1	Existing	301	Centrifugal Chiller, 0.51 kW/ton, 500 tons	5	School	3	Cooling		13.0%	13.1%	13.3%	13.4%	13.6%	13.8%	14.0%	14.2%	14.4%	14.6%
1	Existing	404	Electronically Commutated Motors (ECM) on an Air Handler Unit	6	College	4	Ventilation		4.8%	8.3%	11.4%	14.2%	16.8%	19.1%	21.2%	23.0%	24.7%	26.3%
1	Existing	305	Chiller Tune Up/Diagnostics	8	Other Healthcare	3	Cooling		14.8%	26.7%	37.5%	47.3%	56.1%	64.2%	69.0%	69.0%	69.0%	69.0%
1	Existing	404	Electronically Commutated Motors (ECM) on an Air Handler Unit	3	Retail	4	Ventilation		4.5%	7.8%	10.7%	13.4%	15.8%	18.0%	20.0%	21.7%	23.4%	24.8%
1	Existing	301	Centrifugal Chiller, 0.51 kW/ton, 500 tons	6	College	3	Cooling		12.8%	12.9%	13.0%	13.2%	13.3%	13.5%	13.7%	13.9%	14.1%	14.2%
1	Existing	301	Centrifugal Chiller, 0.51 kW/ton, 500 tons	8	Other Healthcare	3	Cooling		12.1%	12.1%	12.2%	12.3%	12.4%	12.6%	12.7%	12.9%	13.1%	13.2%
1	Existing	161	LED Exit Sign	4	FoodStore	1	Indoor		1.4%	2.2%	3.0%	3.7%	4.3%	4.9%	5.4%	5.9%	6.3%	6.7%
1	Existing	603	Heat Pump Water Heater (air source)	5	School	6	Water Heating		10.8%	19.3%	26.9%	33.9%	40.1%	45.8%	49.4%	49.4%	49.4%	49.4%
1	Existing	335	Roof Insulation	10	Hotel/Motel	3	Cooling		7.2%	13.1%	18.5%	23.5%	27.9%	32.0%	34.3%	34.3%	34.3%	34.3%
1	Existing	403	Air Handler Optimization	8	Other Healthcare	4	Ventilation		15.4%	27.2%	37.8%	47.5%	56.3%	64.2%	69.2%	69.2%	69.2%	69.2%
1	Existing	401	High Efficiency Fan Motor, 15hp, 1800rpm, 92.4%	4	FoodStore	4	Ventilation		29.9%	33.6%	36.9%	40.0%	42.9%	45.5%	48.0%	50.2%	52.3%	52.4%
1	Existing	322	Hybrid Dessicant-DX System (Trane CDQ)	7	Hospital	3	Cooling		1.0%	1.7%	2.3%	2.9%	3.4%	3.9%	4.3%	4.7%	5.0%	5.4%
1	Existing	350	Roof Insulation	10	Hotel/Motel	3	Cooling		7.1%	13.1%	18.5%	23.4%	27.9%	32.0%	34.3%	34.3%	34.3%	34.3%
1	Existing	403	Air Handler Optimization	2	Restaurant/ Services	4	Ventilation		15.5%	27.3%	38.0%	47.6%	56.3%	64.2%	69.3%	69.3%	69.3%	69.3%
1	Existing	334	Ceiling Insulation	3	Retail	3	Cooling		5.0%	9.2%	13.1%	16.6%	19.8%	22.8%	24.4%	24.4%	24.4%	24.4%
1	Existing	349	Ceiling Insulation	3	Retail	3	Cooling		5.0%	9.2%	13.1%	16.6%	19.8%	22.8%	24.4%	24.4%	24.4%	24.4%
1	Existing	334	Ceiling Insulation	5	School	3	Cooling		5.0%	9.3%	13.2%	16.7%	19.9%	22.8%	24.4%	24.4%	24.4%	24.4%
1	Existing	349	Ceiling Insulation	5	School	3	Cooling		5.0%	9.3%	13.1%	16.7%	19.9%	22.8%	24.4%	24.4%	24.4%	24.4%

Segment Number	Segment	Measure Number	Measure	Bldg Typ	Applicable Building	End Use Number	End Use	Year Yr Index	2010 1	2011 2	2012 3	2013 4	2014 5	2015 6	2016 7	2017 8	2018 9	2019 10
1	Existing	307	EMS Optimization	8	Other Healthcare	3	Cooling		3.6%	6.1%	8.3%	10.2%	12.0%	13.6%	15.1%	16.4%	17.5%	18.6%
1	Existing	336	Cool Roof - DX	2	Restaurant/ Services	3	Cooling		14.4%	26.3%	37.2%	47.0%	55.9%	64.1%	68.7%	68.7%	68.7%	68.7%
1	Existing	322	Hybrid Dessicant-DX System (Trane CDQ)	10	Hotel/Motel	3	Cooling		0.9%	1.5%	2.0%	2.5%	3.0%	3.4%	3.8%	4.1%	4.4%	4.7%
1	Existing	351	Cool Roof - DX	2	Restaurant/ Services	3	Cooling		14.4%	26.3%	37.2%	47.0%	55.9%	64.1%	68.7%	68.7%	68.7%	68.7%
1	Existing	404	Electronically Commutated Motors (ECM) on an Air Handler Unit	4	FoodStore	4	Ventilation		3.8%	6.6%	9.1%	11.3%	13.4%	15.3%	16.9%	18.5%	19.9%	21.1%
1	Existing	601	High Efficiency Water Heater (electric)	6	College	6	Water Heating		14.8%	26.7%	37.5%	47.3%	56.1%	64.2%	69.0%	69.0%	69.0%	69.0%
1	Existing	402	Variable Speed Drive Control	4	FoodStore	4	Ventilation		4.8%	8.0%	11.0%	13.7%	16.1%	18.3%	20.3%	22.1%	23.7%	25.1%
1	Existing	404	Electronically Commutated Motors (ECM) on an Air Handler Unit	11	Other	4	Ventilation		3.7%	6.3%	8.8%	11.0%	12.9%	14.7%	16.4%	17.8%	19.2%	20.4%
1	Existing	334	Ceiling Insulation	1	Office	3	Cooling		5.0%	9.2%	13.1%	16.6%	19.8%	22.7%	24.4%	24.4%	24.4%	24.4%
1	Existing	314	Roof Insulation	2	Restaurant/ Services	3	Cooling		7.0%	13.0%	18.4%	23.3%	27.8%	31.9%	34.2%	34.2%	34.2%	34.2%
1	Existing	349	Ceiling Insulation	1	Office	3	Cooling		5.0%	9.2%	13.1%	16.6%	19.8%	22.7%	24.3%	24.3%	24.3%	24.3%
1	Existing	404	Electronically Commutated Motors (ECM) on an Air Handler Unit	10	Hotel/Motel	4	Ventilation		3.6%	6.3%	8.7%	10.9%	12.9%	14.7%	16.3%	17.8%	19.1%	20.4%
1	Existing	313	Ceiling Insulation	4	FoodStore	3	Cooling		5.0%	9.3%	13.1%	16.7%	19.9%	22.8%	24.4%	24.4%	24.4%	24.4%
1	Existing	326	DX Tune Up/ Advanced Diagnostics	8	Other Healthcare	3	Cooling		14.5%	26.4%	37.2%	47.0%	56.0%	64.1%	68.8%	68.8%	68.8%	68.8%
1	Existing	322	Hybrid Dessicant-DX System (Trane CDQ)	2	Restaurant/ Services	3	Cooling		0.6%	1.0%	1.4%	1.8%	2.1%	2.4%	2.7%	2.9%	3.1%	3.3%
1	Existing	515	Oversized Air Cooled Condenser	4	FoodStore	5	Refrigeration		0.6%	1.0%	1.4%	1.7%	2.0%	2.3%	2.6%	2.8%	3.0%	3.2%
1	Existing	350	Roof Insulation	3	Retail	3	Cooling		6.9%	12.9%	18.3%	23.2%	27.7%	31.8%	34.0%	34.0%	34.0%	34.0%
1	Existing	335	Roof Insulation	3	Retail	3	Cooling		6.9%	12.9%	18.3%	23.2%	27.7%	31.8%	34.0%	34.0%	34.0%	34.0%
1	Existing	328	Optimize Controls	5	School	3	Cooling		1.0%	1.6%	2.1%	2.6%	3.1%	3.5%	3.9%	4.2%	4.5%	4.7%
1	Existing	335	Roof Insulation	5	School	3	Cooling		6.9%	12.9%	18.3%	23.3%	27.8%	31.8%	34.1%	34.1%	34.1%	34.1%
1	Existing	350	Roof Insulation	5	School	3	Cooling		6.9%	12.9%	18.3%	23.3%	27.8%	31.8%	34.1%	34.1%	34.1%	34.1%
1	Existing	404	Electronically Commutated Motors (ECM) on an Air Handler Unit	8	Other Healthcare	4	Ventilation		1.3%	2.2%	3.1%	3.9%	4.7%	5.4%	6.0%	6.5%	7.1%	7.5%
1	Existing	335	Roof Insulation	1	Office	3	Cooling		6.9%	12.8%	18.3%	23.2%	27.7%	31.8%	34.0%	34.0%	34.0%	34.0%
1	Existing	328	Optimize Controls	3	Retail	3	Cooling		0.8%	1.3%	1.8%	2.2%	2.6%	2.9%	3.2%	3.5%	3.7%	3.9%
1	Existing	336	Cool Roof - DX	4	FoodStore	3	Cooling		14.2%	26.1%	37.0%	46.8%	55.8%	63.9%	68.5%	68.5%	68.5%	68.5%
1	Existing	322	Hybrid Dessicant-DX System (Trane CDQ)	3	Retail	3	Cooling		0.4%	0.7%	1.0%	1.3%	1.5%	1.7%	1.9%	2.1%	2.2%	2.4%
1	Existing	351	Cool Roof - DX	4	FoodStore	3	Cooling		14.2%	26.1%	37.0%	46.8%	55.8%	63.9%	68.5%	68.5%	68.5%	68.5%

Segment		Measure		Bldg	Applicable	End Use	End	Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Number	Segment	Number	Measure	Typ	Building	Number	Use	Yr Index	1	2	3	4	5	6	7	8	9	10
1	Existing	350	Roof Insulation	1	Office	3	Cooling		6.9%	12.8%	18.3%	23.2%	27.7%	31.8%	34.0%	34.0%	34.0%	34.0%
1	Existing	322	Hybrid Dessicant-DX System (Trane CDQ)	4	FoodStore	3	Cooling		0.5%	0.8%	1.1%	1.4%	1.6%	1.8%	2.0%	2.2%	2.4%	2.6%
1	Existing	328	Optimize Controls	1	Office	3	Cooling		0.7%	1.2%	1.6%	2.0%	2.4%	2.7%	3.0%	3.2%	3.4%	3.7%
1	Existing	404	Electronically Commutated Motors (ECM) on an Air Handler Unit	1	Office	4	Ventilation		2.3%	4.1%	5.7%	7.1%	8.4%	9.6%	10.7%	11.7%	12.6%	13.4%
1	Existing	404	Electronically Commutated Motors (ECM) on an Air Handler Unit	9	Warehouse	4	Ventilation		2.5%	4.3%	6.0%	7.5%	8.9%	10.2%	11.3%	12.4%	13.3%	14.2%
1	Existing	305	Chiller Tune Up/Diagnostics	10	Hotel/Motel	3	Cooling		14.4%	26.3%	37.1%	47.0%	55.9%	64.0%	68.7%	68.7%	68.7%	68.7%
1	Existing	326	DX Tune Up/ Advanced Diagnostics	10	Hotel/Motel	3	Cooling		14.4%	26.3%	37.1%	47.0%	55.9%	64.0%	68.7%	68.7%	68.7%	68.7%
1	Existing	314	Roof Insulation	4	FoodStore	3	Cooling		6.9%	12.9%	18.3%	23.2%	27.7%	31.8%	34.1%	34.1%	34.1%	34.1%
1	Existing	403	Air Handler Optimization	1	Office	4	Ventilation		14.9%	26.7%	37.5%	47.3%	56.1%	64.2%	69.0%	69.0%	69.0%	69.0%
1	Existing	361	HE PTAC, EER=9.6, 1 ton	1	Office	3	Cooling		2.4%	4.1%	5.7%	7.1%	8.4%	9.6%	10.6%	11.6%	12.5%	13.3%
1	Existing	361	HE PTAC, EER=9.6, 1 ton	5	School	3	Cooling		2.4%	4.2%	5.8%	7.2%	8.5%	9.7%	10.8%	11.7%	12.6%	13.5%
1	Existing	403	Air Handler Optimization	5	School	4	Ventilation		14.8%	26.7%	37.5%	47.3%	56.1%	64.2%	69.0%	69.0%	69.0%	69.0%
1	Existing	361	HE PTAC, EER=9.6, 1 ton	8	Other Healthcare	3	Cooling		2.3%	4.0%	5.5%	6.9%	8.1%	9.3%	10.3%	11.3%	12.1%	12.9%
1	Existing	603	Heat Pump Water Heater (air source)	3	Retail	6	Water Heating		10.2%	18.7%	26.5%	33.5%	39.9%	45.7%	49.0%	49.0%	49.0%	49.0%
1	Existing	307	EMS Optimization	10	Hotel/Motel	3	Cooling		2.1%	3.6%	5.0%	6.2%	7.3%	8.3%	9.2%	10.0%	10.7%	11.4%
1	Existing	603	Heat Pump Water Heater (air source)	10	Hotel/Motel	6	Water Heating		10.2%	18.7%	26.5%	33.5%	39.9%	45.7%	49.0%	49.0%	49.0%	49.0%
1	Existing	313	Ceiling Insulation	8	Other Healthcare	3	Cooling		4.8%	9.1%	12.9%	16.4%	19.6%	22.5%	24.1%	24.1%	24.1%	24.1%
1	Existing	361	HE PTAC, EER=9.6, 1 ton	6	College	3	Cooling		2.4%	4.1%	5.6%	7.0%	8.3%	9.5%	10.5%	11.5%	12.4%	13.1%
1	Existing	334	Ceiling Insulation	6	College	3	Cooling		4.9%	9.1%	13.0%	16.5%	19.7%	22.6%	24.2%	24.2%	24.2%	24.2%
1	Existing	732	Copier Power Management Enabling	8	Other Healthcare	7	Office Equipment		0.3%	0.5%	0.6%	0.8%	0.9%	1.1%	1.2%	1.3%	1.4%	1.5%
1	Existing	403	Air Handler Optimization	6	College	4	Ventilation		14.8%	26.7%	37.5%	47.2%	56.1%	64.2%	69.0%	69.0%	69.0%	69.0%
1	Existing	603	Heat Pump Water Heater (air source)	8	Other Healthcare	6	Water Heating		10.4%	18.9%	26.6%	33.6%	40.0%	45.8%	49.1%	49.1%	49.1%	49.1%
1	Existing	362	Occupancy Sensor (hotels)	7	Hospital	3	Cooling		0.4%	0.7%	1.0%	1.2%	1.4%	1.6%	1.8%	2.0%	2.1%	2.3%
1	Existing	362	Occupancy Sensor (hotels)	10	Hotel/Motel	3	Cooling		0.4%	0.7%	1.0%	1.2%	1.4%	1.6%	1.8%	2.0%	2.1%	2.3%
1	Existing	349	Ceiling Insulation	6	College	3	Cooling		4.9%	9.1%	13.0%	16.5%	19.7%	22.6%	24.2%	24.2%	24.2%	24.2%
1	Existing	601	High Efficiency Water Heater (electric)	5	School	6	Water Heating		14.3%	26.2%	37.1%	46.9%	55.9%	64.0%	68.6%	68.6%	68.6%	68.6%
1	Existing	404	Electronically Commutated Motors (ECM) on an Air Handler Unit	5	School	4	Ventilation		1.9%	3.3%	4.6%	5.8%	6.9%	7.8%	8.7%	9.5%	10.3%	10.9%
1	Existing	603	Heat Pump Water Heater (air source)	2	Restaurant/ Services	6	Water Heating		10.1%	18.7%	26.4%	33.4%	39.8%	45.7%	48.9%	48.9%	48.9%	48.9%

Segment		Measure		Bldg	Applicable	End Use	End	Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Number	Segment	Number	Measure	Typ	Building	Number	Use	Yr Index	1	2	3	4	5	6	7	8	9	10
1	Existing	404	Electronically Commutated Motors (ECM) on an Air Handler Unit	2	Restaurant/ Services	4	Ventilation		1.7%	3.1%	4.3%	5.4%	6.4%	7.3%	8.1%	8.8%	9.5%	10.2%
1	Existing	401	High Efficiency Fan Motor, 15hp, 1800rpm, 92.4%	11	Other	4	Ventilation		24.5%	26.6%	28.6%	30.4%	32.2%	33.8%	35.3%	36.8%	38.1%	39.4%
1	Existing	402	Variable Speed Drive Control	11	Other	4	Ventilation		2.8%	4.9%	6.7%	8.4%	10.0%	11.4%	12.7%	13.8%	14.9%	15.8%
1	Existing	305	Chiller Tune Up/Diagnostics	5	School	3	Cooling		14.0%	25.9%	36.8%	46.7%	55.6%	63.8%	68.3%	68.3%	68.3%	68.3%
1	Existing	328	Optimize Controls	6	College	3	Cooling		0.4%	0.7%	0.9%	1.1%	1.3%	1.5%	1.7%	1.8%	1.9%	2.1%
1	Existing	322	Hybrid Dessicant-DX System (Trane CDQ)	9	Warehouse	3	Cooling		0.2%	0.4%	0.5%	0.6%	0.7%	0.8%	0.9%	1.0%	1.1%	1.2%
1	Existing	335	Roof Insulation	6	College	3	Cooling		6.8%	12.7%	18.1%	23.0%	27.5%	31.6%	33.8%	33.8%	33.8%	33.8%
1	Existing	350	Roof Insulation	6	College	3	Cooling		6.8%	12.7%	18.1%	23.0%	27.5%	31.6%	33.8%	33.8%	33.8%	33.8%
1	Existing	362	Occupancy Sensor (hotels)	2	Restaurant/ Services	3	Cooling		0.3%	0.4%	0.6%	0.7%	0.9%	1.0%	1.1%	1.2%	1.3%	1.4%
1	Existing	314	Roof Insulation	8	Other Healthcare	3	Cooling		6.7%	12.6%	18.0%	22.9%	27.4%	31.5%	33.6%	33.6%	33.6%	33.6%
1	Existing	326	DX Tune Up/ Advanced Diagnostics	5	School	3	Cooling		13.9%	25.9%	36.7%	46.6%	55.6%	63.7%	68.3%	68.3%	68.3%	68.3%
1	Existing	305	Chiller Tune Up/Diagnostics	3	Retail	3	Cooling		13.9%	25.8%	36.6%	46.5%	55.5%	63.7%	68.1%	68.1%	68.1%	68.1%
1	Existing	336	Cool Roof - DX	8	Other Healthcare	3	Cooling		13.7%	25.6%	36.4%	46.3%	55.2%	63.4%	67.8%	67.8%	67.8%	67.8%
1	Existing	326	DX Tune Up/ Advanced Diagnostics	3	Retail	3	Cooling		13.9%	25.8%	36.6%	46.5%	55.5%	63.6%	68.1%	68.1%	68.1%	68.1%
1	Existing	351	Cool Roof - DX	8	Other Healthcare	3	Cooling		13.7%	25.6%	36.4%	46.3%	55.2%	63.4%	67.8%	67.8%	67.8%	67.8%
1	Existing	313	Ceiling Insulation	10	Hotel/Motel	3	Cooling		4.8%	9.0%	12.9%	16.4%	19.6%	22.5%	24.1%	24.1%	24.1%	24.1%
1	Existing	211	Outdoor Lighting Controls (Photocell/Timeclock)	6	College	2	Outdoor Lighting		0.3%	0.4%	0.6%	0.8%	0.9%	1.0%	1.1%	1.2%	1.3%	1.4%
1	Existing	402	Variable Speed Drive Control	1	Office	4	Ventilation		2.3%	4.1%	5.7%	7.2%	8.5%	9.7%	10.8%	11.8%	12.7%	13.6%
1	Existing	305	Chiller Tune Up/Diagnostics	1	Office	3	Cooling		13.8%	25.8%	36.6%	46.5%	55.5%	63.6%	68.1%	68.1%	68.1%	68.1%
1	Existing	307	EMS Optimization	5	School	3	Cooling		1.1%	1.9%	2.6%	3.2%	3.8%	4.3%	4.8%	5.3%	5.7%	6.0%
1	Existing	326	DX Tune Up/ Advanced Diagnostics	1	Office	3	Cooling		13.8%	25.7%	36.6%	46.5%	55.4%	63.6%	68.1%	68.1%	68.1%	68.1%
1	Existing	403	Air Handler Optimization	3	Retail	4	Ventilation		14.3%	26.3%	37.1%	46.9%	55.9%	64.0%	68.7%	68.7%	68.7%	68.7%
1	Existing	603	Heat Pump Water Heater (air source)	11	Other	6	Water Heating		9.9%	18.5%	26.2%	33.2%	39.7%	45.5%	48.7%	48.7%	48.7%	48.7%
1	Existing	732	Copier Power Management Enabling	3	Retail	7	Office Equipment		0.3%	0.5%	0.6%	0.8%	0.9%	1.1%	1.2%	1.3%	1.4%	1.5%
1	Existing	506	Compressor VSD retrofit	4	FoodStore	5	Refrigerati		0.1%	0.2%	0.3%	0.4%	0.5%	0.6%	0.6%	0.7%	0.8%	0.8%
1	Existing	732	Copier Power Management Enabling	2	Restaurant/ Services	7	Office Equipment		0.3%	0.5%	0.6%	0.8%	0.9%	1.1%	1.2%	1.3%	1.4%	1.5%
1	Existing	732	Copier Power Management Enabling	6	College	7	Office Equipment		0.3%	0.5%	0.6%	0.8%	0.9%	1.1%	1.2%	1.3%	1.4%	1.5%
1	Existing	362	Occupancy Sensor (hotels)	3	Retail	3	Cooling		0.2%	0.3%	0.4%	0.5%	0.6%	0.7%	0.8%	0.9%	0.9%	1.0%
1	Existing	501	High-efficiency fan motors	4	FoodStore	5	Refrigerati		0.1%	0.2%	0.3%	0.4%	0.5%	0.5%	0.6%	0.6%	0.7%	0.7%

FPL com existing_RIM annual penetration rates

Segment Number	Segment	Measure Number	Measure	Bldg Typ	Applicable Building	End Use Number	End Use	Year Yr Index	2010 1	2011 2	2012 3	2013 4	2014 5	2015 6	2016 7	2017 8	2018 9	2019 10
1	Existing	732	Copier Power Management Enabling	9	Warehouse	7	Office Equipment		0.3%	0.5%	0.6%	0.8%	0.9%	1.1%	1.2%	1.3%	1.4%	1.5%
1	Existing	732	Copier Power Management Enabling	1	Office	7	Office Equipment		0.3%	0.5%	0.6%	0.8%	0.9%	1.1%	1.2%	1.3%	1.4%	1.5%
1	Existing	732	Copier Power Management Enabling	4	FoodStore	7	Office Equipment		0.3%	0.5%	0.6%	0.8%	0.9%	1.1%	1.2%	1.3%	1.4%	1.5%
1	Existing	732	Copier Power Management Enabling	10	Hotel/Motel	7	Office Equipment		0.3%	0.5%	0.6%	0.8%	0.9%	1.1%	1.2%	1.3%	1.4%	1.5%
1	Existing	334	Ceiling Insulation	11	Other	3	Cooling		4.8%	9.0%	12.8%	16.3%	19.5%	22.4%	23.9%	23.9%	23.9%	23.9%
1	Existing	732	Copier Power Management Enabling	7	Hospital	7	Office Equipment		0.3%	0.5%	0.6%	0.8%	0.9%	1.1%	1.2%	1.3%	1.4%	1.5%
1	Existing	732	Copier Power Management Enabling	11	Other	7	Office Equipment		0.3%	0.5%	0.6%	0.8%	0.9%	1.1%	1.2%	1.3%	1.4%	1.5%
1	Existing	403	Air Handler Optimization	10	Hotel/Motel	4	Ventilation		14.3%	26.2%	37.1%	46.9%	55.9%	64.0%	68.6%	68.6%	68.6%	68.6%
1	Existing	322	Hybrid Dessicant-DX System (Trane CDQ)	1	Office	3	Cooling		0.1%	0.2%	0.3%	0.4%	0.4%	0.5%	0.6%	0.6%	0.7%	0.7%
1	Existing	349	Ceiling Insulation	11	Other	3	Cooling		4.8%	9.0%	12.8%	16.3%	19.5%	22.4%	23.9%	23.9%	23.9%	23.9%
1	Existing	732	Copier Power Management Enabling	5	School	7	Office Equipment		0.3%	0.5%	0.6%	0.8%	0.9%	1.1%	1.2%	1.3%	1.4%	1.5%
1	Existing	307	EMS Optimization	1	Office	3	Cooling		0.8%	1.4%	2.0%	2.5%	2.9%	3.3%	3.7%	4.1%	4.4%	4.7%
1	Existing	402	Variable Speed Drive Control	5	School	4	Ventilation		2.0%	3.5%	4.9%	6.2%	7.4%	8.4%	9.4%	10.2%	11.0%	11.8%
1	Existing	307	EMS Optimization	3	Retail	3	Cooling		0.8%	1.4%	1.9%	2.4%	2.9%	3.3%	3.6%	4.0%	4.3%	4.6%
1	Existing	401	High Efficiency Fan Motor, 15hp, 1800rpm, 92.4%	1	Office	4	Ventilation		21.5%	22.8%	24.2%	25.4%	26.6%	27.8%	28.8%	29.9%	30.9%	31.8%
1	Existing	321	DX Packaged System, EER=10.9, 10 tons	10	Hotel/Motel	3	Cooling		9.5%	9.5%	9.4%	9.5%	9.5%	9.6%	9.6%	9.7%	9.8%	10.0%
1	Existing	322	Hybrid Dessicant-DX System (Trane CDQ)	8	Other Healthcare	3	Cooling		0.1%	0.2%	0.2%	0.3%	0.4%	0.4%	0.5%	0.5%	0.6%	0.6%
1	Existing	322	Hybrid Dessicant-DX System (Trane CDQ)	11	Other	3	Cooling		0.1%	0.2%	0.3%	0.3%	0.4%	0.5%	0.5%	0.6%	0.6%	0.7%
1	Existing	322	Hybrid Dessicant-DX System (Trane CDQ)	5	School	3	Cooling		0.1%	0.2%	0.2%	0.3%	0.4%	0.4%	0.5%	0.5%	0.6%	0.6%
1	Existing	313	Ceiling Insulation	3	Retail	3	Cooling		4.7%	8.8%	12.6%	16.1%	19.2%	22.1%	23.6%	23.6%	23.6%	23.6%
1	Existing	401	High Efficiency Fan Motor, 15hp, 1800rpm, 92.4%	3	Retail	4	Ventilation		20.7%	21.9%	23.1%	24.3%	25.3%	26.4%	27.4%	28.3%	29.2%	30.1%
1	Existing	314	Roof Insulation	10	Hotel/Motel	3	Cooling		6.7%	12.6%	18.0%	22.9%	27.3%	31.4%	33.5%	33.5%	33.5%	33.5%
1	Existing	328	Optimize Controls	11	Other	3	Cooling		0.2%	0.3%	0.4%	0.5%	0.6%	0.7%	0.8%	0.8%	0.9%	1.0%
1	Existing	313	Ceiling Insulation	5	School	3	Cooling		4.7%	8.9%	12.7%	16.1%	19.3%	22.2%	23.7%	23.7%	23.7%	23.7%
1	Existing	601	High Efficiency Water Heater (electric)	3	Retail	6	Water Heating		13.7%	25.6%	36.5%	46.3%	55.3%	63.5%	67.9%	67.9%	67.9%	67.9%
1	Existing	321	DX Packaged System, EER=10.9, 10 tons	7	Hospital	3	Cooling		8.7%	8.7%	8.6%	8.6%	8.7%	8.7%	8.8%	8.9%	8.9%	9.0%
1	Existing	322	Hybrid Dessicant-DX System (Trane CDQ)	6	College	3	Cooling		0.1%	0.2%	0.2%	0.3%	0.3%	0.4%	0.4%	0.5%	0.5%	0.5%

Segment Number	Segment	Measure Number	Measure	Bldg Typ	Applicable Building	End Use Number	End Use	Year Yr Index	2010 1	2011 2	2012 3	2013 4	2014 5	2015 6	2016 7	2017 8	2018 9	2019 10
1	Existing	601	High Efficiency Water Heater (electric)	10	Hotel/Motel	6	Water Heating		13.7%	25.6%	36.5%	46.3%	55.3%	63.5%	67.9%	67.9%	67.9%	67.9%
1	Existing	402	Variable Speed Drive Control	6	College	4	Ventilation		1.7%	3.0%	4.2%	5.3%	6.3%	7.2%	8.0%	8.8%	9.4%	10.1%
1	Existing	401	High Efficiency Fan Motor, 15hp, 1800rpm, 92.4%	5	School	4	Ventilation		20.5%	21.7%	22.9%	24.0%	25.0%	26.0%	27.0%	27.9%	28.8%	29.6%
1	Existing	335	Roof Insulation	11	Other	3	Cooling		6.6%	12.5%	17.9%	22.8%	27.2%	31.3%	33.4%	33.4%	33.4%	33.4%
1	Existing	601	High Efficiency Water Heater (electric)	8	Other Healthcare	6	Water Heating		13.9%	25.8%	36.7%	46.5%	55.5%	63.7%	68.2%	68.2%	68.2%	68.2%
1	Existing	350	Roof Insulation	11	Other	3	Cooling		6.6%	12.5%	17.9%	22.7%	27.2%	31.2%	33.4%	33.4%	33.4%	33.4%
1	Existing	313	Ceiling Insulation	1	Office	3	Cooling		4.7%	8.8%	12.6%	16.0%	19.2%	22.0%	23.5%	23.5%	23.5%	23.5%
1	Existing	402	Variable Speed Drive Control	3	Retail	4	Ventilation		1.6%	2.8%	3.9%	4.9%	5.9%	6.7%	7.5%	8.2%	8.8%	9.4%
1	Existing	351	Cool Roof - DX	10	Hotel/Motel	3	Cooling		13.5%	25.4%	36.1%	46.0%	54.9%	63.1%	67.4%	67.4%	67.4%	67.4%
1	Existing	601	High Efficiency Water Heater (electric)	2	Restaurant/ Services	6	Water Heating		13.6%	25.5%	36.3%	46.2%	55.2%	63.3%	67.7%	67.7%	67.7%	67.7%
1	Existing	305	Chiller Tune Up/Diagnostics	6	College	3	Cooling		13.6%	25.5%	36.3%	46.1%	55.1%	63.3%	67.7%	67.7%	67.7%	67.7%
1	Existing	326	DX Tune Up/ Advanced Diagnostics	6	College	3	Cooling		13.6%	25.5%	36.3%	46.1%	55.1%	63.2%	67.6%	67.6%	67.6%	67.6%
1	Existing	336	Cool Roof - DX	10	Hotel/Motel	3	Cooling		13.5%	25.3%	36.1%	45.9%	54.9%	63.1%	67.4%	67.4%	67.4%	67.4%
1	Existing	401	High Efficiency Fan Motor, 15hp, 1800rpm, 92.4%	10	Hotel/Motel	4	Ventilation		19.9%	21.0%	22.0%	23.0%	24.0%	24.9%	25.8%	26.6%	27.4%	28.2%
1	Existing	401	High Efficiency Fan Motor, 15hp, 1800rpm, 92.4%	8	Other Healthcare	4	Ventilation		15.6%	16.0%	16.5%	16.9%	17.4%	17.8%	18.3%	18.7%	19.2%	19.6%
1	Existing	603	Heat Pump Water Heater (air source)	1	Office	6	Water Heating		9.7%	18.2%	25.9%	32.9%	39.3%	45.2%	48.3%	48.3%	48.3%	48.3%
1	Existing	402	Variable Speed Drive Control	9	Warehouse	4	Ventilation		1.4%	2.5%	3.5%	4.4%	5.3%	6.0%	6.7%	7.4%	8.0%	8.5%
1	Existing	307	EMS Optimization	6	College	3	Cooling		0.4%	0.8%	1.1%	1.4%	1.6%	1.9%	2.1%	2.3%	2.5%	2.6%
1	Existing	321	DX Packaged System, EER=10.9, 10 tons	3	Retail	3	Cooling		6.8%	6.7%	6.6%	6.6%	6.6%	6.6%	6.6%	6.7%	6.7%	6.8%
1	Existing	321	DX Packaged System, EER=10.9, 10 tons	2	Restaurant/ Services	3	Cooling		7.1%	7.0%	6.9%	6.9%	6.9%	6.9%	6.9%	7.0%	7.0%	7.1%
1	Existing	513	High R-Value Glass Doors	4	FoodStore	5	Refrigerati		0.0%	0.1%	0.1%	0.2%	0.2%	0.2%	0.2%	0.3%	0.3%	0.3%
1	Existing	402	Variable Speed Drive Control	10	Hotel/Motel	4	Ventilation		1.3%	2.4%	3.3%	4.2%	5.0%	5.7%	6.4%	7.0%	7.5%	8.0%
1	Existing	401	High Efficiency Fan Motor, 15hp, 1800rpm, 92.4%	6	College	4	Ventilation		18.8%	19.6%	20.5%	21.3%	22.1%	22.9%	23.7%	24.4%	25.1%	25.8%
1	Existing	603	Heat Pump Water Heater (air source)	4	FoodStore	6	Water Heating		9.7%	18.1%	25.8%	32.9%	39.3%	45.1%	48.2%	48.2%	48.2%	48.2%
1	Existing	403	Air Handler Optimization	11	Other	4	Ventilation		13.9%	25.8%	36.6%	46.5%	55.5%	63.6%	68.1%	68.1%	68.1%	68.1%
1	Existing	314	Roof Insulation	3	Retail	3	Cooling		6.5%	12.3%	17.6%	22.4%	26.8%	30.8%	32.9%	32.9%	32.9%	32.9%
1	Existing	402	Variable Speed Drive Control	8	Other Healthcare	4	Ventilation		1.0%	1.8%	2.6%	3.2%	3.8%	4.4%	4.9%	5.4%	5.8%	6.2%
1	Existing	351	Cool Roof - DX	3	Retail	3	Cooling		13.2%	25.0%	35.7%	45.5%	54.3%	62.5%	66.7%	66.7%	66.7%	66.7%
1	Existing	336	Cool Roof - DX	1	Office	3	Cooling		13.2%	25.0%	35.7%	45.5%	54.4%	62.5%	66.8%	66.8%	66.8%	66.8%
1	Existing	351	Cool Roof - DX	1	Office	3	Cooling		13.2%	25.0%	35.7%	45.5%	54.4%	62.5%	66.7%	66.7%	66.7%	66.7%
1	Existing	314	Roof Insulation	5	School	3	Cooling		6.5%	12.3%	17.7%	22.5%	26.9%	30.9%	33.0%	33.0%	33.0%	33.0%

Segment		Measure		Bldg	Applicable	End Use	End	Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Number	Segment	Number	Measure	Typ	Building	Number	Use	Yr Index	1	2	3	4	5	6	7	8	9	10
1	Existing	211	Outdoor Lighting Controls (Photocell/Timeclock)	9	Warehouse	2	Outdoor Lighting		0.1%	0.1%	0.1%	0.2%	0.2%	0.2%	0.3%	0.3%	0.3%	0.3%
1	Existing	336	Cool Roof - DX	3	Retail	3	Cooling		13.2%	24.9%	35.6%	45.4%	54.3%	62.3%	66.6%	66.6%	66.6%	66.6%
1	Existing	314	Roof Insulation	1	Office	3	Cooling		6.5%	12.3%	17.6%	22.4%	26.8%	30.8%	32.9%	32.9%	32.9%	32.9%
1	Existing	336	Cool Roof - DX	5	School	3	Cooling		13.2%	25.0%	35.7%	45.5%	54.4%	62.5%	66.7%	66.7%	66.7%	66.7%
1	Existing	351	Cool Roof - DX	5	School	3	Cooling		13.2%	25.0%	35.7%	45.5%	54.4%	62.5%	66.7%	66.7%	66.7%	66.7%
1	Existing	321	DX Packaged System, EER=10.9, 10 tons	4	FoodStore	3	Cooling		6.3%	6.2%	6.1%	6.1%	6.0%	6.0%	6.1%	6.1%	6.1%	6.2%
1	Existing	401	High Efficiency Fan Motor, 15hp, 1800rpm, 92.4%	9	Warehouse	4	Ventilation		17.7%	18.4%	19.1%	19.8%	20.5%	21.1%	21.8%	22.4%	23.1%	23.7%
1	Existing	601	High Efficiency Water Heater (electric)	11	Other	6	Water Heating		13.4%	25.3%	36.0%	45.8%	54.8%	62.9%	67.2%	67.2%	67.2%	67.2%
1	Existing	401	High Efficiency Fan Motor, 15hp, 1800rpm, 92.4%	2	Restaurant/ Services	4	Ventilation		17.3%	17.9%	18.6%	19.2%	19.8%	20.4%	21.0%	21.6%	22.2%	22.8%
1	Existing	362	Occupancy Sensor (hotels)	5	School	3	Cooling		0.0%	0.1%	0.1%	0.1%	0.2%	0.2%	0.2%	0.3%	0.3%	0.3%
1	Existing	362	Occupancy Sensor (hotels)	1	Office	3	Cooling		0.0%	0.1%	0.1%	0.1%	0.2%	0.2%	0.2%	0.2%	0.3%	0.3%
1	Existing	313	Ceiling Insulation	6	College	3	Cooling		4.6%	8.6%	12.4%	15.8%	18.9%	21.7%	23.1%	23.1%	23.1%	23.1%
1	Existing	362	Occupancy Sensor (hotels)	6	College	3	Cooling		0.0%	0.1%	0.1%	0.1%	0.2%	0.2%	0.2%	0.2%	0.3%	0.3%
1	Existing	362	Occupancy Sensor (hotels)	8	Other Healthcare	3	Cooling		0.0%	0.1%	0.1%	0.1%	0.2%	0.2%	0.2%	0.2%	0.2%	0.3%
1	Existing	305	Chiller Tune Up/Diagnostics	11	Other	3	Cooling		13.3%	25.1%	35.8%	45.6%	54.5%	62.7%	66.9%	66.9%	66.9%	66.9%
1	Existing	326	DX Tune Up/ Advanced Diagnostics	11	Other	3	Cooling		13.3%	25.1%	35.8%	45.6%	54.5%	62.6%	66.9%	66.9%	66.9%	66.9%
1	Existing	211	Outdoor Lighting Controls (Photocell/Timeclock)	7	Hospital	2	Outdoor Lighting		0.0%	0.1%	0.1%	0.1%	0.1%	0.2%	0.2%	0.2%	0.2%	0.2%
1	Existing	307	EMS Optimization	11	Other	3	Cooling		0.2%	0.3%	0.5%	0.6%	0.7%	0.8%	0.9%	1.0%	1.0%	1.1%
1	Existing	402	Variable Speed Drive Control	2	Restaurant/ Services	4	Ventilation		0.7%	1.3%	1.9%	2.4%	2.8%	3.2%	3.6%	4.0%	4.3%	4.6%
1	Existing	321	DX Packaged System, EER=10.9, 10 tons	9	Warehouse	3	Cooling		4.3%	4.2%	4.1%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.1%
1	Existing	342	Geothermal Heat Pump, EER=13, 10 tons	7	Hospital	3	Cooling		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1	Existing	314	Roof Insulation	6	College	3	Cooling		6.3%	12.0%	17.2%	22.0%	26.3%	30.2%	32.3%	32.3%	32.3%	32.3%
1	Existing	601	High Efficiency Water Heater (electric)	1	Office	6	Water Heating		13.1%	24.8%	35.5%	45.2%	54.1%	62.2%	66.4%	66.4%	66.4%	66.4%
1	Existing	211	Outdoor Lighting Controls (Photocell/Timeclock)	8	Other Healthcare	2	Outdoor Lighting		0.0%	0.0%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
1	Existing	321	DX Packaged System, EER=10.9, 10 tons	11	Other	3	Cooling		3.8%	3.7%	3.6%	3.6%	3.6%	3.5%	3.5%	3.5%	3.6%	3.6%
1	Existing	342	Geothermal Heat Pump, EER=13, 10 tons	10	Hotel/Motel	3	Cooling		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1	Existing	601	High Efficiency Water Heater (electric)	4	FoodStore	6	Water Heating		13.1%	24.8%	35.4%	45.1%	53.9%	62.0%	66.2%	66.2%	66.2%	66.2%
1	Existing	313	Ceiling Insulation	11	Other	3	Cooling		4.4%	8.4%	12.0%	15.3%	18.3%	21.0%	22.4%	22.4%	22.4%	22.4%
1	Existing	351	Cool Roof - DX	6	College	3	Cooling		12.9%	24.4%	34.9%	44.5%	53.3%	61.2%	65.4%	65.4%	65.4%	65.4%

FPL com existing_RIM annual penetration rates

Segment		Measure		Bldg	Applicable	End Use	End	Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Number	Segment	Number	Measure	Typ	Building	Number	Use	Yr Index	1	2	3	4	5	6	7	8	9	10
1	Existing	336	Cool Roof - DX	6	College	3	Cooling		12.8%	24.4%	34.9%	44.5%	53.2%	61.2%	65.3%	65.3%	65.3%	65.3%
1	Existing	321	DX Packaged System, EER=10.9, 10 tons	6	College	3	Cooling		3.3%	3.3%	3.2%	3.2%	3.1%	3.1%	3.1%	3.1%	3.1%	3.2%
1	Existing	342	Geothermal Heat Pump, EER=13, 10 tons	2	Restaurant/ Services	3	Cooling		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1	Existing	321	DX Packaged System, EER=10.9, 10 tons	1	Office	3	Cooling		3.2%	3.1%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
1	Existing	342	Geothermal Heat Pump, EER=13, 10 tons	3	Retail	3	Cooling		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1	Existing	211	Outdoor Lighting Controls (Photocell/Timeclock)	3	Retail	2	Outdoor Lighting		0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
1	Existing	321	DX Packaged System, EER=10.9, 10 tons	8	Other Healthcare	3	Cooling		2.9%	2.8%	2.8%	2.7%	2.7%	2.7%	2.7%	2.7%	2.7%	2.7%
1	Existing	514	Multiplex Compressor System	4	FoodStore	5	Refrigerati		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1	Existing	321	DX Packaged System, EER=10.9, 10 tons	5	School	3	Cooling		2.9%	2.8%	2.8%	2.7%	2.7%	2.7%	2.7%	2.7%	2.7%	2.7%
1	Existing	504	Evaporator fan controller for MT walk-ins	4	FoodStore	5	Refrigerati on		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%
1	Existing	342	Geothermal Heat Pump, EER=13, 10 tons	4	FoodStore	3	Cooling		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1	Existing	314	Roof Insulation	11	Other	3	Cooling		6.1%	11.7%	16.8%	21.4%	25.6%	29.4%	31.4%	31.4%	31.4%	31.4%
1	Existing	211	Outdoor Lighting Controls (Photocell/Timeclock)	1	Office	2	Outdoor Lighting		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1	Existing	603	Heat Pump Water Heater (air source)	9	Warehouse	6	Water Heating		9.0%	17.1%	24.5%	31.3%	37.4%	43.0%	45.9%	45.9%	45.9%	45.9%
1	Existing	351	Cool Roof - DX	11	Other	3	Cooling		12.6%	23.9%	34.2%	43.6%	52.2%	60.0%	64.1%	64.1%	64.1%	64.1%
1	Existing	336	Cool Roof - DX	11	Other	3	Cooling		12.5%	23.8%	34.2%	43.6%	52.1%	59.9%	64.0%	64.0%	64.0%	64.0%
1	Existing	517	LED Display Lighting	4	FoodStore	5	Refrigerati		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1	Existing	211	Outdoor Lighting Controls (Photocell/Timeclock)	4	FoodStore	2	Outdoor Lighting		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1	Existing	211	Outdoor Lighting Controls (Photocell/Timeclock)	5	School	2	Outdoor Lighting		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1	Existing	342	Geothermal Heat Pump, EER=13, 10 tons	9	Warehouse	3	Cooling		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1	Existing	342	Geothermal Heat Pump, EER=13, 10 tons	1	Office	3	Cooling		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1	Existing	342	Geothermal Heat Pump, EER=13, 10 tons	8	Other Healthcare	3	Cooling		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1	Existing	342	Geothermal Heat Pump, EER=13, 10 tons	11	Other	3	Cooling		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1	Existing	342	Geothermal Heat Pump, EER=13, 10 tons	5	School	3	Cooling		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1	Existing	342	Geothermal Heat Pump, EER=13, 10 tons	6	College	3	Cooling		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

Segment Number	Segment	Measure Number	Measure	Bldg Typ	Applicable Building	End Use Number	End Use	Year Yr Index	2010 1	2011 2	2012 3	2013 4	2014 5	2015 6	2016 7	2017 8	2018 9	2019 10
1	Existing	601	High Efficiency Water Heater (electric)	9	Warehouse	6	Water Heating		12.1%	23.1%	33.1%	42.2%	50.5%	58.1%	62.0%	62.0%	62.0%	62.0%
1	Existing	349	Ceiling Insulation	9	Warehouse	3	Cooling		3.6%	6.8%	9.8%	12.5%	14.9%	17.1%	18.3%	18.3%	18.3%	18.3%
1	Existing	211	Outdoor Lighting Controls (Photocell/Timeclock)	11	Other	2	Outdoor Lighting		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1	Existing	350	Roof Insulation	9	Warehouse	3	Cooling		5.3%	10.1%	14.5%	18.5%	22.2%	25.5%	27.2%	27.2%	27.2%	27.2%
1	Existing	334	Ceiling Insulation	9	Warehouse	3	Cooling		3.2%	6.1%	8.8%	11.2%	13.4%	15.5%	16.5%	16.5%	16.5%	16.5%
1	Existing	335	Roof Insulation	9	Warehouse	3	Cooling		4.9%	9.4%	13.6%	17.3%	20.7%	23.8%	25.4%	25.4%	25.4%	25.4%
1	Existing	328	Optimize Controls	9	Warehouse	3	Cooling		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1	Existing	305	Chiller Tune Up/Diagnostics	9	Warehouse	3	Cooling		11.4%	21.8%	31.2%	39.9%	47.7%	54.9%	58.6%	58.6%	58.6%	58.6%
1	Existing	307	EMS Optimization	9	Warehouse	3	Cooling		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1	Existing	211	Outdoor Lighting Controls (Photocell/Timeclock)	2	Restaurant/ Services	2	Outdoor Lighting		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1	Existing	403	Air Handler Optimization	9	Warehouse	4	Ventilation		11.6%	22.2%	31.8%	40.6%	48.6%	55.9%	59.7%	59.7%	59.7%	59.7%
1	Existing	211	Outdoor Lighting Controls (Photocell/Timeclock)	10	Hotel/Motel	2	Outdoor Lighting		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1	Existing	313	Ceiling Insulation	9	Warehouse	3	Cooling		2.0%	3.9%	5.6%	7.2%	8.6%	9.9%	10.5%	10.5%	10.5%	10.5%
1	Existing	326	DX Tune Up/ Advanced Diagnostics	9	Warehouse	3	Cooling		10.0%	19.2%	27.5%	35.1%	42.0%	48.3%	51.6%	51.6%	51.6%	51.6%
1	Existing	314	Roof Insulation	9	Warehouse	3	Cooling		3.7%	7.2%	10.3%	13.1%	15.7%	18.1%	19.3%	19.3%	19.3%	19.3%
1	Existing	351	Cool Roof - DX	9	Warehouse	3	Cooling		9.3%	17.8%	25.5%	32.6%	39.0%	44.9%	47.9%	47.9%	47.9%	47.9%
1	Existing	336	Cool Roof - DX	9	Warehouse	3	Cooling		8.5%	16.2%	23.2%	29.6%	35.5%	40.8%	43.5%	43.5%	43.5%	43.5%

Penetration Model Output Filename: O_Saece_FPL_TRC-H.xls			Worksheet: 'New Building Stock - Measure'															
New Building Stock (with Program) - Measure Specific																		
Input File: P_Saece_FPL_TRC-H.xls								Units	Sq Ft	Sq Ft	Sq Ft	Sq Ft	Sq Ft	Sq Ft	Sq Ft	Sq Ft	Sq Ft	Sq Ft
Segment		Measure		Bldg	Applicable	End Use	End	Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Number	Segment	Number	Measure	Typ	Building	Number	Use	Yr Index	1	2	3	4	5	6	7	8	9	10
1	Existing	603	Heat Pump Water Heater (air source)	7	Hospital	6	Water Heating		30076.40578	45198.96778	58329.85045	69698.21686	79507.98852	87940.54468	95157.13968	101301.067	100916.8638	100195.6186
1	Existing	601	High Efficiency Water Heater (electric)	7	Hospital	6	Water Heating		44510.23359	69548.05831	91563.6633	110887.814	127816.6447	142615.2057	155520.6624	155857.3059	155086.5802	154319.8498
1	Existing	403	Air Handler Optimization	7	Hospital	4	Ventilation		4076501.879	5272573.123	5232131.873	4322629.01	3073735.744	1914088.226	1054976.573	518434.5572	223335.7872	87421.75979
1	Existing	334	Ceiling Insulation	7	Hospital	3	Cooling		40028.90407	64873.06425	81418.24382	89007.23111	88463.50616	81635.43437	69501.46406	52901.085	40078.89102	30019.82031
1	Existing	349	Ceiling Insulation	7	Hospital	3	Cooling		2873.149332	4670.167472	5872.00329	6428.591818	6396.949051	5908.973617	5031.733407	3831.965652	2904.382228	2175.816536
1	Existing	328	Optimize Controls	7	Hospital	3	Cooling		59963.52006	81029.26842	89203.88755	86462.23755	76326.89619	62541.50634	48159.78324	35167.59228	24524.72221	16427.90659
1	Existing	335	Roof Insulation	7	Hospital	3	Cooling		55302.51096	88404.29436	106826.1067	110220.7643	101408.8569	84949.55069	64137.47921	42718.12535	28253.23735	18408.45433
1	Existing	350	Roof Insulation	7	Hospital	3	Cooling		3971.362622	6367.210103	7708.17815	7965.034905	7337.732029	6153.564258	4647.521498	3097.69521	2049.960591	1336.004867
1	Existing	334	Ceiling Insulation	2	Restaurant/ Services	3	Cooling		827876.4678	1403705.706	1814023.586	2030554.404	2058689.824	1931334.586	1653255.389	1270146.265	969134.5896	728036.4916
1	Existing	349	Ceiling Insulation	2	Restaurant/ Services	3	Cooling		56631.31273	96335.98192	124774.9944	139929.6047	142095.1351	133482.9037	114331.5988	87905.33147	67111.27848	50427.38977
1	Existing	305	Chiller Tune Up/Diagnostics	7	Hospital	3	Cooling		1754270.279	2524131.474	2676269.255	2323554.67	1714322.636	1092471.498	605812.1034	293150.9083	115898.2275	45034.27581
1	Existing	301	Centrifugal Chiller, 0.51 kW/ton, 500 tons	10	Hotel/Motel	3	Cooling		441838.8858	462187.009	479906.5053	495279.6608	508559.1311	519971.0252	529717.6712	537980.0948	544920.2413	550682.968
1	Existing	307	EMS Optimization	7	Hospital	3	Cooling		1145535.073	1614072.625	1831436.015	1823445.462	1650958.776	1385751.73	1091529.593	813819.1404	578120.8403	393377.9802
1	Existing	404	Electronically Commutated Motors (ECM) on an Air Handler Unit	7	Hospital	4	Ventilation		136443.942	211028.9007	276293.9016	333298.1585	382984.5804	426192.2584	463667.6338	496074.486	524002.861	547977.0545
1	Existing	328	Optimize Controls	2	Restaurant/ Services	3	Cooling		933986.2159	1322791.888	1544718.388	1612667.977	1557474.304	1417425.367	1229778.611	1025444.386	826760.5746	647577.8197
1	Existing	301	Centrifugal Chiller, 0.51 kW/ton, 500 tons	7	Hospital	3	Cooling		311507.4722	324650.6523	336129.9102	346120.3248	354778.9166	362246.5001	368649.3464	374100.6765	378702.0012	382544.3245
1	Existing	335	Roof Insulation	2	Restaurant/ Services	3	Cooling		1165731.06	1940617.25	2407254.298	2538834.07	2381528.17	2028919.295	1542457.032	1039226.442	693588.2764	453759.8393
1	Existing	350	Roof Insulation	2	Restaurant/ Services	3	Cooling		80267.75769	133750.2061	166017.9766	175189.5268	164416.9394	140135.4873	106560.2809	71817.02537	47942.94093	31368.69804
1	Existing	334	Ceiling Insulation	4	FoodStore	3	Cooling		463152.7541	809119.1913	1067970.974	1217084.887	1253210.131	1191086.383	1026231.284	794416.0194	609534.8882	458927.0091
1	Existing	349	Ceiling Insulation	4	FoodStore	3	Cooling		16575.75793	29060.94812	38459.10478	43928.96857	45323.01038	43148.80256	37211.51023	28834.17301	22139.48635	16673.83989
1	Existing	326	DX Tune Up/ Advanced Diagnostics	7	Hospital	3	Cooling		82782.80871	123021.1742	131120.8786	112144.1182	79712.21273	47634.92612	23950.278	9445.868789	3457.152017	1236.290681
1	Existing	301	Centrifugal Chiller, 0.51 kW/ton, 500 tons	2	Restaurant/ Services	3	Cooling		14528.81431	14960.19379	15342.46912	15680.21049	15977.57047	16238.32207	16465.89343	16663.39927	16833.66956	16979.27543
1	Existing	301	Centrifugal Chiller, 0.51 kW/ton, 500 tons	3	Retail	3	Cooling		232200.5509	238023.3338	243228.9839	247869.4476	251992.4819	255641.9824	258858.2857	261678.4498	264136.5128	266263.7325
1	Existing	305	Chiller Tune Up/Diagnostics	2	Restaurant/ Services	3	Cooling		77103.29809	116772.6225	130003.2778	119463.0634	94305.20371	65089.95805	39611.10232	21332.48907	9842.762575	4108.62387
1	Existing	161	LED Exit Sign	6	College	1	Indoor Lighting		1566028.449	2358806.098	2930524.857	3286200.679	3447916.533	3448011.235	3323041.128	3109117.511	2838782.693	2539290.761
1	Existing	328	Optimize Controls	4	FoodStore	3	Cooling		425236.1594	618332.8713	744779.1496	807614.9513	816026.1192	782410.6653	719865.2868	640395.5436	553893.4086	467762.0865
1	Existing	347	Window Film (Standard)	7	Hospital	3	Cooling		5553.632047	8382.209143	9250.642414	8360.626206	6426.693048	4266.557564	2460.514219	1224.261645	501.6020091	201.2396897
1	Existing	335	Roof Insulation	4	FoodStore	3	Cooling		665217.9175	1135178.365	1432742.883	1534277.907	1459372.481	1258872.711	963836.6925	655135.7214	440261.1901	288917.3986
1	Existing	161	LED Exit Sign	3	Retail	1	Indoor Lighting		4757180.399	7241710.397	9088036.456	10307828.73	10957361.44	11120699.14	10894735.03	10377402.29	9659444.105	8819491.447
1	Existing	307	EMS Optimization	2	Restaurant/ Services	3	Cooling		39499.32687	58478.38343	70303.59187	75171.93463	74151.48057	68779.40164	60691.57521	51352.3328	41904.68789	33126.35663
1	Existing	350	Roof Insulation	4	FoodStore	3	Cooling		23797.23392	40772.13028	51609.9668	55412.63381	52835.15031	45676.0659	35019.1019	23840.33673	16040.52419	10532.15277
1	Existing	301	Centrifugal Chiller, 0.51 kW/ton, 500 tons	4	FoodStore	3	Cooling		21202.26404	21660.67629	22074.18628	22446.09862	22779.50477	23077.29371	23342.18259	23576.62708	23783.03151	23963.55874
1	Existing	332	Window Film (Standard)	7	Hospital	3	Cooling		94979.1223	140956.4992	146549.059	119531.9136	78911.53325	42380.66028	17935.35579	5918.341565	1896.294937	584.5532897
1	Existing	334	Ceiling Insulation	8	Other Healthcare	3	Cooling		230183.5354	432833.6284	606164.4649	728907.8512	787506.9227	779917.2847	690045.1985	547228.7763	427009.1881	323585.2673

Segment Number	Segment	Measure Number	Measure	Bldg Typ	Applicable Building	End Use Number	End Use	Year Yr Index	2010 1	2011 2	2012 3	2013 4	2014 5	2015 6	2016 7	2017 8	2018 9	2019 10
1	Existing	349	Ceiling Insulation	8	Other Healthcare	3	Cooling		8481.894851	16019.79617	22522.2132	27182.62142	29467.51407	29269.5722	25951.03209	20615.70287	16105.44368	12209.86418
1	Existing	603	Heat Pump Water Heater (air source)	6	College	6	Water Heating		75625.78996	129295.2586	179977.2605	227951.3278	273473.0403	316775.8208	358072.5564	397557.062	435405.3973	471777.052
1	Existing	361	HE PTAC, EER=9.6, 1 ton	7	Hospital	3	Cooling		2516.377865	3960.966525	5224.165943	6326.76245	7287.231949	8121.991766	8845.625446	9471.083359	10009.8617	10472.16219
1	Existing	361	HE PTAC, EER=9.6, 1 ton	10	Hotel/Motel	3	Cooling		33879.19914	53328.36897	70335.40981	85180.17734	98111.42203	109350.178	119092.7904	127513.6163	134767.4344	140991.5953
1	Existing	161	LED Exit Sign	11	Other	1	Indoor Lighting		5379031.226	8262615.879	10455377.84	11968430.05	12856760.53	13203392.9	13105291.92	12662110.83	11968110.04	11107052.37
1	Existing	326	DX Tune Up/ Advanced Diagnostics	2	Restaurant/ Services	3	Cooling		1650435.02	2591649.451	2905965.124	2629957.594	1993894.477	1281743.543	699259.1776	305088.2697	119219.588	45187.96019
1	Existing	161	LED Exit Sign	2	Restaurant/ Services	1	Indoor Lighting		2106248.547	3253939.369	4138485.799	4763951.734	5150041.737	5326590.576	5328667.128	5192640.073	4953309.494	4642042.499
1	Existing	402	Variable Speed Drive Control	7	Hospital	4	Ventilation		2484332.808	3784975.19	4421771.301	4426896.447	3959430.173	3230226.253	2433697.948	1707321.469	1121965.977	693857.6089
1	Existing	313	Ceiling Insulation	7	Hospital	3	Cooling		374419.5994	697237.5585	968264.2227	1155144.981	1238999.738	1219377.706	1074125.766	848679.6384	660581.2495	500120.1963
1	Existing	403	Air Handler Optimization	4	FoodStore	4	Ventilation		1756517.327	2696066.521	3229315.682	3355172.473	3146493.39	2716661.628	2184541.844	1648439.283	1173493.901	791243.3054
1	Existing	305	Chiller Tune Up/Diagnostics	4	FoodStore	3	Cooling		104036.5265	163990.6205	190095.165	183377.0552	153533.8648	113667.9412	75095.0022	44465.33434	23634.45996	10667.53042
1	Existing	161	LED Exit Sign	1	Office	1	Indoor Lighting		6010023.356	9334399.298	11926787	13798434.43	15001326.19	15614120.02	15729680.79	15445015.51	14853845.69	14041667.41
1	Existing	307	EMS Optimization	4	FoodStore	3	Cooling		45750.31687	69702.73264	86496.35914	96095.11662	99198.592	96974.93124	90799.77902	82042.7278	71919.95482	61413.40114
1	Existing	161	LED Exit Sign	8	Other Healthcare	1	Indoor Lighting		596642.3082	933120.779	1199276.321	1396234.484	1528689.087	1603698.102	1629621.018	1615257.051	1569200.681	1499402.006
1	Existing	161	LED Exit Sign	10	Hotel/Motel	1	Indoor Lighting		2979915.682	4630033.347	5917889.104	6849054.634	7449161.518	7756985.673	7818318.581	7681017.469	7391349.504	6991556.579
1	Existing	302	High Efficiency Chiller Motors	10	Hotel/Motel	3	Cooling		826394.0165	1360697.551	1804034.358	2150767.893	2401070.572	2559828.808	2635435.935	2638602.971	2581280.253	2475746.984
1	Existing	335	Roof Insulation	8	Other Healthcare	3	Cooling		356459.1341	643445.2298	848998.1655	947663.565	937241.8785	837780.3849	657774.8167	458683.5149	314333.0503	208069.2575
1	Existing	350	Roof Insulation	8	Other Healthcare	3	Cooling		13199.97769	23910.17038	31642.99806	35422.7038	35130.14658	31482.11507	24766.36156	17301.75257	11873.07759	7863.959349
1	Existing	361	HE PTAC, EER=9.6, 1 ton	2	Restaurant/ Services	3	Cooling		24137.70575	38557.89218	51209.24068	62292.07542	71984.63897	80445.48411	87815.60994	94220.36945	99771.17261	104567.0067
1	Existing	328	Optimize Controls	8	Other Healthcare	3	Cooling		128962.2914	197001.2769	249856.5796	287846.292	312103.1691	324285.5544	326323.9362	320218.2934	307890.0221	291084.655
1	Existing	302	High Efficiency Chiller Motors	7	Hospital	3	Cooling		527481.1906	874433.2217	1168430.884	1400179.047	1575526.025	1694897.978	1762683.147	1784624.86	1767265.702	1717469.474
1	Existing	347	Window Film (Standard)	2	Restaurant/ Services	3	Cooling		264169.5084	427190.3688	506026.3889	497508.4995	422802.0931	315739.3436	208550.3375	122005.2169	60880.90049	27318.0155
1	Existing	401	High Efficiency Fan Motor, 15hp, 1800rpm, 92.4%	7	Hospital	4	Ventilation		723609.9939	780830.2884	833085.1936	880809.6364	924400.9365	964222.0749	1000604.679	1033851.745	1064240.13	1092022.818
1	Existing	334	Ceiling Insulation	10	Hotel/Motel	3	Cooling		803990.5154	1532494.686	2172216.092	2642278.805	2885176.699	2883947.535	2568621.196	2048133.421	1604031.861	1217156.147
1	Existing	332	Window Film (Standard)	2	Restaurant/ Services	3	Cooling		5497146.46	8615982.527	9351599.364	7953955.849	5474515.654	3060516.438	1332223.628	456505.8045	150334.6323	46977.41721
1	Existing	336	Cool Roof - DX	7	Hospital	3	Cooling		100588.602	160690.732	176699.7044	152384.6086	106583.4611	60691.76576	26845.9883	9415.836675	3159.952184	997.5201115
1	Existing	326	DX Tune Up/ Advanced Diagnostics	4	FoodStore	3	Cooling		897572.5129	1459187.616	1693776.87	1595761.069	1267894.008	860181.1961	498833.3829	235815.7823	96805.77509	38334.50561
1	Existing	349	Ceiling Insulation	10	Hotel/Motel	3	Cooling		4680.656721	8962.245744	12755.38713	15576.82045	17071.18173	17118.77079	15282.73228	12209.03246	9573.76266	7267.991495
1	Existing	351	Cool Roof - DX	7	Hospital	3	Cooling		7255.425075	11601.6179	12767.81817	11020.32218	7715.11758	4397.447258	1946.784974	683.4793447	229.5465715	72.49003947
1	Existing	361	HE PTAC, EER=9.6, 1 ton	3	Retail	3	Cooling		41039.98053	66289.42785	88455.1453	107938.8896	125024.9779	139984.3235	153058.0425	164460.6758	174383.0663	182994.9303
1	Existing	314	Roof Insulation	7	Hospital	3	Cooling		576830.5939	1031641.047	1350570.594	1496215.051	1469184.135	1304640.534	1019210.266	707366.7308	483023.6612	319232.2398
1	Existing	161	LED Exit Sign	5	School	1	Indoor Lighting		2036403.774	3207861.118	4147168.655	4858394.633	5356219.21	5662419.936	5802788.912	5804626.125	5694844.383	5498648.338
1	Existing	313	Ceiling Insulation	2	Restaurant/ Services	3	Cooling		14962.67135	29674.24612	43650.30904	55072.95737	62252.25126	64164.12085	58477.12432	47484.40085	37634.48049	28678.79894
1	Existing	161	LED Exit Sign	7	Hospital	1	Indoor Lighting		548076.4084	869213.5912	1129740.534	1330851.013	1476229.292	1571235.566	1622196.385	1635827.29	1618792.943	1577395.486
1	Existing	161	LED Exit Sign	9	Warehouse	1	Indoor Lighting		3449492.284	5481583.368	7135536.542	8419091.031	9355016.772	9976211.562	10321439.57	10431864.31	10348402.33	10109840.67

Segment Number	Segment	Measure Number	Measure	Bldg Typ	Applicable Building	End Use Number	End Use	Year Yr Index	2010 1	2011 2	2012 3	2013 4	2014 5	2015 6	2016 7	2017 8	2018 9	2019 10
1	Existing	301	Centrifugal Chiller, 0.51 kW/ton, 500 tons	11	Other	3	Cooling		212826.3703	213132.7687	213657.3996	214349.7425	215166.9527	216072.8603	217037.0898	218034.2866	219043.4383	220047.2794
1	Existing	301	Centrifugal Chiller, 0.51 kW/ton, 500 tons	1	Office	3	Cooling		614168.649	613185.478	613122.2163	613796.97	615054.2098	616761.4082	618806.0773	621093.1614	623542.744	626088.0322
1	Existing	301	Centrifugal Chiller, 0.51 kW/ton, 500 tons	9	Warehouse	3	Cooling		9744.760137	9738.721379	9745.793142	9763.274103	9788.859705	9820.591229	9856.810945	9896.12266	9937.357046	9979.541182
1	Existing	328	Optimize Controls	10	Hotel/Motel	3	Cooling		391217.1727	603753.1869	772915.7915	899688.6638	987018.3838	1039140.762	1060995.394	1057754.689	1034472.474	995843.4466
1	Existing	301	Centrifugal Chiller, 0.51 kW/ton, 500 tons	5	School	3	Cooling		457287.5302	456794.8016	456949.8282	457621.8008	458699.0016	460086.3602	461703.3022	463481.8562	465364.9888	467305.1424
1	Existing	404	Electronically Commutated Motors (ECM) on an Air Handler Unit	6	College	4	Ventilation		41956.44302	68389.04107	91877.57317	112739.1064	131257.3466	147686.0957	162252.3547	175159.1086	186587.8253	196700.6983
1	Existing	305	Chiller Tune Up/Diagnostics	8	Other Healthcare	3	Cooling		113833.941	189866.8522	233915.8011	243275.8163	223306.8934	184517.1147	138610.6341	95145.77108	59818.73888	34466.16818
1	Existing	302	High Efficiency Chiller Motors	2	Restaurant/ Services	3	Cooling		17351.82728	29375.16301	39881.38965	48803.18716	56130.11172	61899.13794	66185.01171	69090.96706	70740.19248	71268.28588
1	Existing	404	Electronically Commutated Motors (ECM) on an Air Handler Unit	3	Retail	4	Ventilation		114773.7739	187735.3927	252625.0543	310309.3954	361564.094	407083.2756	447487.959	483333.6367	515117.0788	543282.4391
1	Existing	301	Centrifugal Chiller, 0.51 kW/ton, 500 tons	6	College	3	Cooling		156390.6857	156070.2335	155994.9145	156117.0578	156395.8642	156796.5315	157289.4845	157849.6975	158456.0973	159091.0393
1	Existing	301	Centrifugal Chiller, 0.51 kW/ton, 500 tons	8	Other Healthcare	3	Cooling		21134.20103	21023.93449	20957.1947	20926.24831	20924.44092	20946.06212	20986.22637	21040.76802	21106.14879	21179.37631
1	Existing	161	LED Exit Sign	4	FoodStore	1	Indoor Lighting		473286.9034	756988.517	990231.3665	1174193.793	1311844.071	1407359.616	1465626.108	1491830.51	1491148.983	1468522.331
1	Existing	302	High Efficiency Chiller Motors	3	Retail	3	Cooling		240964.0595	410994.1529	561228.2634	690963.7977	800112.992	889100.3617	958761.2197	1010245.712	1044931.342	1064345.738
1	Existing	603	Heat Pump Water Heater (air source)	5	School	6	Water Heating		48141.70603	84845.55487	120211.2741	154414.1737	187618.3783	219977.761	251636.7731	282731.172	313388.6488	343729.3584
1	Existing	347	Window Film (Standard)	4	FoodStore	3	Cooling		38932.64941	64785.94925	79178.29889	80871.65073	71961.54166	56730.95973	39892.22445	25061.18691	13881.73445	6585.175646
1	Existing	335	Roof Insulation	10	Hotel/Motel	3	Cooling		1267471.092	2310988.093	3075977.044	3462643.042	3452427.538	3109176.737	2455307.313	1721323.779	1184358.765	785344.6682
1	Existing	403	Air Handler Optimization	8	Other Healthcare	4	Ventilation		815497.5036	1351171.06	1759596.715	2024479.49	2146220.913	2139176.912	2027430.597	1840058.625	1606745.703	1354339.913
1	Existing	401	High Efficiency Fan Motor, 15hp, 1800rpm, 92.4%	4	FoodStore	4	Ventilation		624502.7401	666503.5746	705334.7329	741244.7559	774463.5892	805203.941	833662.5461	860021.3419	884448.5616	907099.7499
1	Existing	322	Hybrid Dessicant-DX System (Trane CDQ)	7	Hospital	3	Cooling		330.7770733	564.1216005	780.370422	981.2099328	1168.177533	1342.67529	1505.982376	1659.266374	1803.593573	1939.938333
1	Existing	350	Roof Insulation	10	Hotel/Motel	3	Cooling		7360.288745	13497.26816	18056.8963	20428.24842	20465.69442	18512.51908	14670.15593	10317.18691	7115.514089	4723.101342
1	Existing	403	Air Handler Optimization	2	Restaurant/ Services	4	Ventilation		2641317.469	4318161.574	5543419.479	6268126.993	6508261.207	6331118.735	5836022.112	5134150.28	4331332.01	3516065.341
1	Existing	332	Window Film (Standard)	4	FoodStore	3	Cooling		1667801.23	2682701.112	2977271.385	2590600.75	1825321.741	1044563.683	463456.9977	162319.5242	54309.60269	17105.37659
1	Existing	334	Ceiling Insulation	3	Retail	3	Cooling		754613.9468	1575312.041	2441101.736	3252305.357	3880845.88	4204895.396	3987922.576	3338917.354	2698222.235	2069626.642
1	Existing	349	Ceiling Insulation	3	Retail	3	Cooling		21389.29119	44674.24278	69264.20475	92334.94159	110245.157	119517.9344	113403.4384	94981.57532	76772.90833	58891.66143
1	Existing	334	Ceiling Insulation	5	School	3	Cooling		267774.2095	549010.3197	834874.979	1090134.822	1274526.369	1354774.154	1265014.482	1046598.424	839454.575	642298.4927
1	Existing	349	Ceiling Insulation	5	School	3	Cooling		63524.61565	130886.713	200054.743	262634.5089	308728.2171	329826.9356	309230.5938	256637.7728	206249.0838	157912.369
1	Existing	307	EMS Optimization	8	Other Healthcare	3	Cooling		29280.74346	47094.12329	61668.95256	72923.87963	80958.44184	86008.5562	88402.69075	88522.33088	86768.83549	83537.52723
1	Existing	336	Cool Roof - DX	2	Restaurant/ Services	3	Cooling		1659387.008	2758090.287	3143497.989	2818290.869	2056612.506	1225131.373	565059.7749	207582.5084	72165.14647	23200.06534
1	Existing	322	Hybrid Dessicant-DX System (Trane CDQ)	10	Hotel/Motel	3	Cooling		9346.220648	16008.46681	22190.57982	27940.00834	33300.03772	38310.17177	43006.48014	47421.91455	51586.59671	55528.08032
1	Existing	351	Cool Roof - DX	2	Restaurant/ Services	3	Cooling		114238.3601	190056.9176	216811.5252	194577.6048	142149.2077	84780.69333	39148.3364	14399.48084	5010.659586	1611.649959
1	Existing	404	Electronically Commutated Motors (ECM) on an Air Handler Unit	4	FoodStore	4	Ventilation		17399.9266	28728.31369	38825.16889	47821.64949	55835.23651	62971.14162	69323.57094	74976.85993	80006.49264	84480.0168
1	Existing	601	High Efficiency Water Heater (electric)	6	College	6	Water Heating		359207.6319	663715.111	954196.2604	1230168.167	1491289.305	1737412.949	1922265.759	1953119.43	1982080.937	2009722.538
1	Existing	302	High Efficiency Chiller Motors	4	FoodStore	3	Cooling		19717.25826	33817.03044	46368.65473	57328.88841	66695.6347	74500.97586	80804.4385	85686.72067	89244.02685	91583.08898

Segment Number	Segment	Measure Number	Measure	Bldg Typ	Applicable Building	End Use Number	End Use	Year Yr Index	2010 1	2011 2	2012 3	2013 4	2014 5	2015 6	2016 7	2017 8	2018 9	2019 10
1	Existing	402	Variable Speed Drive Control	4	FoodStore	4	Ventilation		1.832909352	2.968067166	3.694514561	3.995416252	3.923176307	3.573708993	3.057804156	2.477509729	1.911629651	1.410646128
1	Existing	404	Electronically Commutated Motors (ECM) on an Air Handler Unit	11	Other	4	Ventilation		101164.9744	167340.8143	226347.0004	278945.892	325820.4555	367582.4241	404779.6266	437902.5708	467390.3556	493635.9802
1	Existing	334	Ceiling Insulation	1	Office	3	Cooling		1055798.699	2220178.157	3467237.178	4658711.906	5607787.393	6126700.074	5850633.684	4924306.126	3992501.34	3065656.213
1	Existing	314	Roof Insulation	2	Restaurant/ Services	3	Cooling		24494.65851	46240.84178	63545.49805	73837.50999	75913.75909	70336.98436	56828.20936	40653.32191	28393.38206	18949.02492
1	Existing	349	Ceiling Insulation	1	Office	3	Cooling		223063.251	471382.5051	740072.0466	1000204.506	1211289.313	1331091.446	1277296.944	1079064.779	876908.4945	673840.9308
1	Existing	404	Electronically Commutated Motors (ECM) on an Air Handler Unit	10	Hotel/Motel	4	Ventilation		75252.29014	124492.4117	168398.8874	207538.7944	242420.159	273498.0245	301179.9025	325830.6692	347776.9625	367311.1306
1	Existing	313	Ceiling Insulation	4	FoodStore	3	Cooling		19037.16351	39418.24352	60559.35355	79939.99315	94492.12597	101474.4813	95539.04718	79545.83691	64057.39849	49077.75661
1	Existing	304	EMS - Chiller	10	Hotel/Motel	3	Cooling		108793.3841	175117.0178	225240.283	258812.0275	276884.1351	281473.006	275127.1824	260557.3837	240357.0914	216819.0937
1	Existing	326	DX Tune Up/ Advanced Diagnostics	8	Other Healthcare	3	Cooling		412146.2468	724592.9848	916401.2199	957341.1233	859900.4252	672639.2908	458795.8316	271429.4167	128002.1611	57290.64907
1	Existing	304	EMS - Chiller	7	Hospital	3	Cooling		75671.90547	122305.2911	157833.2431	181998.7402	195480.3291	199605.8753	196069.8861	186690.1569	173221.9254	157233.464
1	Existing	322	Hybrid Dessicant-DX System (Trane CDQ)	2	Restaurant/ Services	3	Cooling		4398.739348	7612.049085	10602.24817	13391.48938	16000.013	18446.32217	20747.3427	22918.56856	24974.19459	26927.23736
1	Existing	515	Oversized Air Cooled Condenser	4	FoodStore	5	Refrigerati on		46698.25788	77040.79379	103545.8131	126548.3819	146372.287	163325.9128	177699.528	189763.6875	199768.502	207943.5636
1	Existing	350	Roof Insulation	3	Retail	3	Cooling		39583.71468	77233.59097	109649.1006	131731.7347	139969.4104	133745.5683	110870.9428	81058.32734	57513.57753	38638.34635
1	Existing	335	Roof Insulation	3	Retail	3	Cooling		1378302.288	2695375.288	3835494.406	4619048.723	4919704.749	4711610.136	3913273.167	2865590.778	2035565.354	1368169.339
1	Existing	328	Optimize Controls	5	School	3	Cooling		80873.26863	129437.2112	170541.0482	204512.3564	231820.7148	253027.2002	268742.844	279595.7949	286206.4269	289169.3675
1	Existing	335	Roof Insulation	5	School	3	Cooling		473255.8779	912033.9837	1278810.134	1516695.486	1591063.118	1502156.884	1232720.78	893643.0814	630208.2039	422304.5137
1	Existing	350	Roof Insulation	5	School	3	Cooling		114564.7483	221079.2413	310400.4421	368647.2795	387248.7506	366075.7225	300734.5578	218209.0819	153983.7499	103213.0684
1	Existing	404	Electronically Commutated Motors (ECM) on an Air Handler Unit	8	Other Healthcare	4	Ventilation		3543.81151	6129.596059	8455.319747	10547.67186	12430.64221	14125.79213	15652.49837	17028.17271	18268.45961	19387.41409
1	Existing	335	Roof Insulation	1	Office	3	Cooling		1955277.944	3847026.503	5508549.46	6877366.974	7158657.653	6898344.415	5759607.145	4236039.626	3018465.639	2031428.428
1	Existing	328	Optimize Controls	3	Retail	3	Cooling		204580.8399	330134.8971	437398.0286	527292.0997	601001.9003	659875.5375	705343.7491	738856.8216	761837.1384	775645.0993
1	Existing	336	Cool Roof - DX	4	FoodStore	3	Cooling		871061.1393	1478325.165	1719928.27	1578026.239	1181532.109	723687.1189	343009.8121	129661.9098	46076.52005	14983.71668
1	Existing	322	Hybrid Dessicant-DX System (Trane CDQ)	3	Retail	3	Cooling		6240.133369	10901.82172	15250.13613	19316.33471	23129.01635	26714.3647	30096.37071	33297.03552	36336.55555	39233.49137
1	Existing	351	Cool Roof - DX	4	FoodStore	3	Cooling		31421.05328	53377.98362	62162.61438	57097.47508	42804.46058	26253.14581	12460.08362	4716.603449	1677.879618	545.9388732
1	Existing	347	Window Film (Standard)	8	Other Healthcare	3	Cooling		10856.14705	19491.26528	25995.06046	29594.15903	30044.99828	27683.10706	23314.68845	17982.64731	12687.8848	8162.506322
1	Existing	350	Roof Insulation	1	Office	3	Cooling		420133.4247	828772.9225	1189917.763	1446486.373	1555161.334	1502650.357	1257481.553	926604.1337	661165.1529	445213.3874
1	Existing	322	Hybrid Dessicant-DX System (Trane CDQ)	4	FoodStore	3	Cooling		1990.777422	3471.130185	4851.314638	6141.312712	7350.254571	8486.496768	9557.693478	10570.86145	11532.43926	12448.34133
1	Existing	328	Optimize Controls	1	Office	3	Cooling		274329.9045	444147.2247	589711.5743	712308.5672	813530.9493	895158.0331	959058.6594	1007115.718	1041169.617	1062977.851
1	Existing	404	Electronically Commutated Motors (ECM) on an Air Handler Unit	1	Office	4	Ventilation		85010.39053	143593.395	196056.7994	243040.2711	285117.7855	322804.3018	356561.7659	386804.5078	413904.0947	438193.6934
1	Existing	304	EMS - Chiller	2	Restaurant/ Services	3	Cooling		3090.264299	5103.618823	6697.252858	7859.498719	8608.755366	8985.190114	9042.532022	8840.830162	8440.65057	7898.859485
1	Existing	404	Electronically Commutated Motors (ECM) on an Air Handler Unit	9	Warehouse	4	Ventilation		63904.00358	107654.8039	146814.8858	181865.1257	213236.9291	241317.2652	266453.1931	288955.9315	309104.5165	327149.0901
1	Existing	305	Chiller Tune Up/Diagnostics	10	Hotel/Motel	3	Cooling		974287.0341	1698351.917	2200290.208	2437096.485	2416383.294	2188530.895	1829150.15	1418289.114	1022906.029	686855.518
1	Existing	326	DX Tune Up/ Advanced Diagnostics	10	Hotel/Motel	3	Cooling		1417904.418	2526045.014	3244358.248	3454255.716	3174147.605	2549809.23	1792834.587	1097571.707	542772.1032	248951.9664
1	Existing	304	EMS - Chiller	3	Retail	3	Cooling		46913.17998	78105.20119	103110.0926	121753.4365	134274.4975	141215.8789	143314.6622	141405.7512	136343.3329	128942.4356
1	Existing	314	Roof Insulation	4	FoodStore	3	Cooling		33972.59627	66112.37652	93611.64988	112154.7123	118841.1906	113263.4045	93686.97189	68370.16113	48447.32359	32529.78705
1	Existing	332	Window Film (Standard)	8	Other Healthcare	3	Cooling		605695.6214	1042249.775	1233743.424	1150243.937	871721.3189	537299.7704	254826.8969	95538.48915	33578.56482	10837.28767
1	Existing	403	Air Handler Optimization	1	Office	4	Ventilation		5458709.067	9379330.732	12682718.23	15264409.17	17075676.32	18120407.71	18447898.54	18142875.33	17314138.66	16083108.25
1	Existing	361	HE PTAC, EER=9.6, 1 ton	1	Office	3	Cooling		31070.54834	52427.29308	71366.75243	88151.08449	103014.4611	116166.0235	127792.5292	138060.7202	147119.4441	155101.5515

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Table of weighted-average measure penetration rate calculations
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Segment		Measure		Bldg	Applicable	End Use	End	Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Number	Segment	Number	Measure	Typ	Building	Number	Use	Yr Index	1	2	3	4	5	6	7	8	9	10
1	Existing	361	HE PTAC, EER=9.6, 1 ton	5	School	3	Cooling		20061.97196	33816.70079	46012.33851	56818.10871	66385.1585	74848.46864	82328.56362	88933.04243	94757.94859	99688.99636
1	Existing	403	Air Handler Optimization	5	School	4	Ventilation		2021019.326	3474692.297	4701323.643	5662383.404	6339673.262	6734219.756	6863686.113	6758774.915	6459118.658	6009119.878
1	Existing	361	HE PTAC, EER=9.6, 1 ton	8	Other Healthcare	3	Cooling		7610.174418	12872.35091	17540.92315	21680.14573	25347.4239	28594.0361	31465.78097	34003.55655	36243.87878	38219.34589
1	Existing	603	Heat Pump Water Heater (air source)	3	Retail	6	Water Heating		23400.28554	42742.38826	61728.56254	80457.77643	99027.06516	117532.225	136068.4998	154731.2655	173616.7157	192822.5522
1	Existing	307	EMS Optimization	10	Hotel/Motel	3	Cooling		174981.4574	290204.4884	389720.2032	473459.5913	541822.3663	595568.9988	635721.2103	663474.159	680121.8649	686996.1555
1	Existing	603	Heat Pump Water Heater (air source)	10	Hotel/Motel	6	Water Heating		14687.39366	26789.38618	38661.44321	50365.24028	61961.14282	73508.63115	85066.71904	96694.36853	108450.9029	120396.4198
1	Existing	313	Ceiling Insulation	8	Other Healthcare	3	Cooling		14734.54911	33428.22156	56931.75828	84620.1572	113883.3064	139405.3849	147315.3525	134234.5831	114330.5255	89124.99131
1	Existing	361	HE PTAC, EER=9.6, 1 ton	6	College	3	Cooling		7507.755093	12679.61921	17266.82483	21332.7346	24933.95059	28121.02811	30939.11462	33428.52188	35625.23794	37561.38553
1	Existing	334	Ceiling Insulation	6	College	3	Cooling		74361.64641	164730.2405	272710.1649	391631.7377	506548.2152	594448.0423	604026.2496	533421.3373	445572.883	345334.7766
1	Existing	732	Copier Power Management Enabling	8	Other Healthcare	7	Office Equipment		23359.64498	39580.05293	53927.93118	66574.09473	77678.56501	87390.2158	95846.72948	103174.7864	109490.4246	114899.5184
1	Existing	403	Air Handler Optimization	6	College	4	Ventilation		799041.2048	1380849.1	1877842.84	2275333.303	2585685.816	2748024.555	2827453.964	2813934.827	2720962.392	2564187.328
1	Existing	603	Heat Pump Water Heater (air source)	8	Other Healthcare	6	Water Heating		3901.281214	7048.074859	10121.60053	13137.48235	16110.82572	19056.31362	21988.29808	24920.88726	27868.02815	30843.58501
1	Existing	362	Occupancy Sensor (hotels)	7	Hospital	3	Cooling		7369.261939	12874.16253	17817.95567	22146.71021	25828.01789	28849.1573	31214.85974	32944.8439	34071.25947	34636.1521
1	Existing	362	Occupancy Sensor (hotels)	10	Hotel/Motel	3	Cooling		99216.53667	173332.043	239893.0016	298173.2985	347736.5993	388411.6296	420262.0949	443553.4874	458718.6675	466323.7317
1	Existing	349	Ceiling Insulation	6	College	3	Cooling		4391.363837	9772.238497	16264.11241	23505.04682	30621.20105	36204.53794	37039.00072	32885.54383	27561.16575	21382.32129
1	Existing	601	High Efficiency Water Heater (electric)	5	School	6	Water Heating		412866.8683	794922.9171	1175587.695	1551780.202	1920303.856	2278104.569	2565753.274	2639313.984	2707405.217	2771315.524
1	Existing	404	Electronically Commutated Motors (ECM) on an Air Handler Unit	5	School	4	Ventilation		23888.75327	40710.08197	55799.62705	69337.15273	81484.06769	92385.28171	102170.876	110957.6058	118850.2515	125942.8347
1	Existing	302	High Efficiency Chiller Motors	11	Other	3	Cooling		94757.16555	167881.0921	235104.7606	296579.2805	352493.0092	403061.7562	448520.4284	489116.0073	525101.7368	556732.3928
1	Existing	603	Heat Pump Water Heater (air source)	2	Restaurant/ Services	6	Water Heating		6924.401761	12708.581	18397.47464	24021.07552	29608.95765	35190.49879	40795.10428	46452.43399	52192.63412	58046.57562
1	Existing	347	Window Film (Standard)	10	Hotel/Motel	3	Cooling		10663.279	19444.12304	26413.3858	30773.61274	32138.6219	30624.45775	26818.39562	21626.07866	16040.65213	10908.73203
1	Existing	404	Electronically Commutated Motors (ECM) on an Air Handler Unit	2	Restaurant/ Services	4	Ventilation		14659.67431	25060.15516	34395.22626	42775.21385	50299.20137	57056.16484	63125.99443	68580.41353	73483.80557	77893.95781
1	Existing	302	High Efficiency Chiller Motors	9	Warehouse	3	Cooling		3979.120882	7074.023677	9926.014857	12542.70801	14932.8847	17106.14401	19072.60725	20842.67267	22426.81509	23835.4249
1	Existing	304	EMS - Chiller	4	FoodStore	3	Cooling		4117.662802	6897.322842	9145.952798	10848.69096	12024.26029	12716.22215	12984.3724	12897.07518	12524.9762	11936.24996
1	Existing	302	High Efficiency Chiller Motors	1	Office	3	Cooling		226770.9304	404464.3029	568558.5844	719552.2822	857991.3408	984452.1667	1099527.496	1203814.806	1297906.968	1382384.865
1	Existing	401	High Efficiency Fan Motor, 15hp, 1800rpm, 92.4%	11	Other	4	Ventilation		2789147.564	2882639.999	2975451.226	3067255.954	3157795.319	3246867.936	3334322.016	3420048.422	3503974.572	3586059.09
1	Existing	332	Window Film (Standard)	10	Hotel/Motel	3	Cooling		4076244.91	7126502.02	8576370.496	8142985.32	6292822.211	3957310.509	1912510.904	730080.0867	259947.5457	84435.46485
1	Existing	402	Variable Speed Drive Control	11	Other	4	Ventilation		2369478.006	4048341.008	5322649.733	6149041.387	6536016.81	6533174.717	6216895.34	5675624.471	4997161.128	4259342.085
1	Existing	302	High Efficiency Chiller Motors	6	College	3	Cooling		56633.90083	101086.5785	142156.4127	179971.4652	214670.6229	246399.5201	275307.1546	301543.1204	325255.3848	346588.5374
1	Existing	302	High Efficiency Chiller Motors	8	Other Healthcare	3	Cooling		7045.419342	12623.60932	17789.07343	22559.91376	26954.97772	30993.44769	34694.50593	38077.06538	41159.5578	43959.77106
1	Existing	302	High Efficiency Chiller Motors	5	School	3	Cooling		156934.4808	280389.9801	394519.4902	499690.6709	596297.5578	684749.8416	765464.0049	838856.1064	905336.0106	965302.87
1	Existing	305	Chiller Tune Up/Diagnostics	5	School	3	Cooling		1139702.312	2073242.936	2823436.843	3329338.601	3563058	3532638.637	3278234.423	2862608.776	2358343.417	1834829.014
1	Existing	328	Optimize Controls	6	College	3	Cooling		14465.74021	23980.56411	32291.22533	39482.63846	45643.12101	50861.5817	55225.38362	58818.77716	61721.80356	64009.57946
1	Existing	322	Hybrid Dessicant-DX System (Trane CDQ)	9	Warehouse	3	Cooling		1077.781028	1918.158592	2705.230185	3444.360248	4140.469263	4798.074586	5421.327737	6014.048464	6579.755887	7121.696985
1	Existing	335	Roof Insulation	6	College	3	Cooling		153410.7652	316411.6932	476536.5491	609937.1791	691362.9096	702871.9771	614738.0835	469689.1633	343808.5418	233915.076
1	Existing	350	Roof Insulation	6	College	3	Cooling		9304.63289	19220.65988	28997.4121	37185.59935	42233.97824	43020.95782	37691.50147	28838.6885	21130.43557	14382.00148

Segment Number	Segment	Measure Number	Measure	Bldg Typ	Applicable Building	End Use Number	End Use	Year Yr Index	2010 1	2011 2	2012 3	2013 4	2014 5	2015 6	2016 7	2017 8	2018 9	2019 10
1	Existing	362	Occupancy Sensor (hotels)	2	Restaurant/ Services	3	Cooling		54196.2536	96351.03608	135162.0253	170411.8459	201957.3362	229722.0691	253688.7187	273891.5395	290409.1552	303357.7923
1	Existing	314	Roof Insulation	8	Other Healthcare	3	Cooling		32698.53694	68906.05994	106322.9255	139830.534	163122.0818	170619.1269	153057.8275	119389.3756	88658.61682	60662.3822
1	Existing	326	DX Tune Up/ Advanced Diagnostics	5	School	3	Cooling		432694.7462	823475.5872	1145567.344	1347856.618	1398106.551	1295215.284	1072812.317	790170.7049	510017.3357	270371.2643
1	Existing	305	Chiller Tune Up/Diagnostics	3	Retail	3	Cooling		341978.9548	632466.7314	878231.2093	1061073.992	1169644.323	1200905.632	1160313.954	1060637.697	919634.8418	757057.6187
1	Existing	336	Cool Roof - DX	8	Other Healthcare	3	Cooling		621354.7874	1125967.574	1406967.833	1401917.938	1151800.423	780573.4403	410146.2496	171858.4992	66158.18654	22445.40759
1	Existing	326	DX Tune Up/ Advanced Diagnostics	3	Retail	3	Cooling		1191104.469	2301360.318	3262468.845	3931772.965	4200383.329	4030264.75	3476955.075	2682194.387	1831574.798	1036965.262
1	Existing	351	Cool Roof - DX	8	Other Healthcare	3	Cooling		23188.46927	42068.43976	52636.72581	52529.04725	43232.7903	29354.68127	15454.58725	6488.198324	2501.437014	849.3418368
1	Existing	313	Ceiling Insulation	10	Hotel/Motel	3	Cooling		156050.4852	357402.2415	615774.8315	928580.4203	1271447.339	1586255.88	1707277.592	1579190.876	1357713.712	1061289.428
1	Existing	211	Outdoor Lighting Controls (Photocell/Timeclock)	6	College	2	Outdoor Lighting		25859.52276	43987.48985	60198.83267	74555.51779	87138.48942	98042.25753	107370.3153	115231.3372	121736.0901	126994.9802
1	Existing	402	Variable Speed Drive Control	1	Office	4	Ventilation		3470869.412	6014185.542	8018272.436	9417973.579	10209896.1	10441964.44	10198792.83	9585831.83	8714709.189	7691383.606
1	Existing	305	Chiller Tune Up/Diagnostics	1	Office	3	Cooling		1230131.484	2281967.132	3180022.441	3859234.302	4277207.065	4419703.094	4301968.447	3965481.721	3470640.042	2886781.593
1	Existing	307	EMS Optimization	5	School	3	Cooling		138437.7463	236385.4799	323777.044	400924.9383	468259.1816	526294.8869	575604.6416	616795.4775	650490.0729	677311.7591
1	Existing	326	DX Tune Up/ Advanced Diagnostics	1	Office	3	Cooling		1650336.241	3207800.803	4581782.283	5575042.712	6026950.618	5865406.018	5144377.296	4043862.863	2820249.04	1646896.865
1	Existing	403	Air Handler Optimization	3	Retail	4	Ventilation		1267331.942	2260623.171	3166465.595	3969853.088	4659582.226	5228275.78	5672281.239	5991463.426	6188910.536	6270572.44
1	Existing	603	Heat Pump Water Heater (air source)	11	Other	6	Water Heating		11560.4013	21488.02887	31297.39362	41041.70094	50774.11716	60548.22293	70418.48515	80440.75355	90672.78803	101174.8241
1	Existing	732	Copier Power Management Enabling	3	Retail	7	Office Equipment		126428.5177	214214.6934	291866.2267	360307.5724	420404.7865	472963.6046	518729.201	558387.2109	592565.6742	621837.6256
1	Existing	506	Compressor VSD retrofit	4	FoodStore	5	Refrigeration		16278.84605	27629.57433	37649.54553	46466.893	54200.11661	60958.24691	66841.1563	71939.97298	76337.56257	80109.04978
1	Existing	732	Copier Power Management Enabling	2	Restaurant/ Services	7	Office Equipment		65366.28797	110753.6135	150901.1086	186286.7361	217358.2656	244532.2796	268194.0496	288698.0638	306369.0326	321503.2277
1	Existing	732	Copier Power Management Enabling	6	College	7	Office Equipment		41465.68855	70257.54161	95725.46145	118172.648	137883.1479	155121.224	170131.2766	183138.1786	194347.9129	203948.4221
1	Existing	362	Occupancy Sensor (hotels)	3	Retail	3	Cooling		76476.83923	137419.2959	194215.913	246706.1768	294787.7114	338408.7376	377561.0271	412273.4501	442606.1741	468645.537
1	Existing	501	High-efficiency fan motors	4	FoodStore	5	Refrigeration		21061.34443	36443.31966	50090.12536	62174.58825	72854.27949	82272.48545	90559.19963	97832.11114	104197.5715	109751.5265
1	Existing	732	Copier Power Management Enabling	9	Warehouse	7	Office Equipment		177681.6917	301055.5802	410186.317	506373.1222	590833.1432	664698.7544	729017.2182	784752.1215	832786.1075	873924.5157
1	Existing	732	Copier Power Management Enabling	1	Office	7	Office Equipment		257360.0646	436058.8141	594127.309	733447.3813	855781.9874	962771.2955	1055932.195	1136660.379	1206234.295	1265820.426
1	Existing	732	Copier Power Management Enabling	4	FoodStore	7	Office Equipment		25651.71197	43463.05609	59218.13188	73104.50616	85297.89714	95961.78443	105247.3602	113293.7364	120228.3393	126167.435
1	Existing	732	Copier Power Management Enabling	10	Hotel/Motel	7	Office Equipment		118031.6822	199987.3341	272481.4416	336377.0592	392482.7223	441550.6525	484276.5328	521300.462	553208.7688	580536.4302
1	Existing	334	Ceiling Insulation	11	Other	3	Cooling		98862.67651	231558.3038	410297.6026	641467.6779	918446.7619	1206159.16	1367107.471	1321102.885	1167813.541	920120.0574
1	Existing	732	Copier Power Management Enabling	7	Hospital	7	Office Equipment		27243.18081	46159.53855	62892.05392	77639.93031	90589.78749	101915.2475	111776.8827	120322.4359	127687.2391	133994.7719

Docket Nos. 080407-EG, 080408-EG, 080409-EG, 080410-EG, 080411-EG, 080412-EG, 080413-EG
Table of weighted-average measure penetration rate calculations
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Segment		Measure		Bldg	Applicable	End Use	End	Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Number	Segment	Number	Measure	Typ	Building	Number	Use	Yr Index	1	2	3	4	5	6	7	8	9	10
1	Existing	732	Copier Power Management Enabling	11	Other	7	Office Equipment		158091.4258	267862.4879	364960.7727	450542.2515	525689.8734	591411.1622	648637.9148	698227.4785	740965.1821	777567.5736
1	Existing	403	Air Handler Optimization	10	Hotel/Motel	4	Ventilation		1063192.816	1904505.451	2677386.165	3370398.963	3974739.775	4484253.277	4895377.646	5207028.267	5420430.948	5538914.47
1	Existing	322	Hybrid Dessicant-DX System (Trane CDQ)	1	Office	3	Cooling		2449.089393	4413.95781	6258.660618	7995.360085	9635.229937	11188.54642	12664.77154	14072.62925	15420.17515	16714.86035
1	Existing	349	Ceiling Insulation	11	Other	3	Cooling		2512.357737	5906.017856	10513.66914	16538.58711	23866.16256	31636.28166	36210.45024	35292.0829	31369.37573	24754.26295
1	Existing	732	Copier Power Management Enabling	5	School	7	Office Equipment		96235.25592	163056.2604	222162.9434	274258.9795	320003.5932	360010.0958	394845.7017	425032.3057	451047.9627	473328.8587
1	Existing	307	EMS Optimization	1	Office	3	Cooling		139030.4164	239753.9821	330314.3365	411132.031	482693.7803	545530.2382	600197.5827	647262.5473	687290.5057	720836.2121
1	Existing	402	Variable Speed Drive Control	5	School	4	Ventilation		1341295.954	2351064.177	3169837.978	3772710.324	4154394.357	4326490.511	4313478.522	4148182.477	3867353.916	3507846.627
1	Existing	347	Window Film (Standard)	5	School	3	Cooling		133054.9288	257063.0748	374239.1139	475967.428	553810.1451	600683.4978	612154.3114	587592.7474	530832.1403	449991.4305
1	Existing	307	EMS Optimization	3	Retail	3	Cooling		36295.38027	62640.26605	86340.12268	107506.8316	126268.6061	142764.377	157139.1518	169540.2507	180114.3182	189005.007
1	Existing	401	High Efficiency Fan Motor, 15hp, 1800rpm, 92.4%	1	Office	4	Ventilation		3665618.674	3735953.667	3812706.426	3894752.681	3981121.97	4070979.867	4163612.141	4258410.648	4354860.778	4452530.287
1	Existing	321	DX Packaged System, EER=10.9, 10 tons	10	Hotel/Motel	3	Cooling		427491.5812	454990.5936	482129.7568	508914.1266	535354.9433	561468.9006	587277.5203	612806.6235	638085.8892	663148.4943
1	Existing	347	Window Film (Standard)	3	Retail	3	Cooling		31771.07457	61941.50845	91159.75988	117550.2468	139140.8509	154083.542	160934.9814	158959.1144	148384.6891	130528.9458
1	Existing	322	Hybrid Dessicant-DX System (Trane CDQ)	8	Other Healthcare	3	Cooling		267.2761318	483.4847871	686.6063685	877.9676544	1058.788026	1230.189554	1393.20594	1548.790811	1697.825298	1841.124978
1	Existing	347	Window Film (Standard)	1	Office	3	Cooling		78548.57993	152901.5851	224608.4588	288947.9334	341014.7539	376292.705	391365.3303	384659.2287	357044.9545	312075.066
1	Existing	322	Hybrid Dessicant-DX System (Trane CDQ)	11	Other	3	Cooling		516.4827161	932.0854983	1322.365958	1689.888536	2037.009623	2365.896735	2678.546033	2976.798364	3262.353937	3536.785775
1	Existing	332	Window Film (Standard)	5	School	3	Cooling		1850329.38	3472423.017	4521137.486	4692959.625	3995248.122	2777560.638	1477922.126	616467.2528	233832.2391	78342.02946
1	Existing	322	Hybrid Dessicant-DX System (Trane CDQ)	5	School	3	Cooling		454.8584083	822.9040891	1168.679239	1494.441678	1802.266692	2094.063852	2371.592402	2636.475338	2890.212303	3134.1914
1	Existing	304	EMS - Chiller	11	Other	3	Cooling		31891.37317	55441.56965	75422.63301	91774.36732	104583.1396	114047.4015	120445.0322	124104.2256	125378.8514	124628.6028
1	Existing	313	Ceiling Insulation	3	Retail	3	Cooling		43702.72613	106405.3258	198329.9123	332320.3321	522094.7549	771202.0892	998479.2971	1093067.267	1051148.247	847697.7963
1	Existing	401	High Efficiency Fan Motor, 15hp, 1800rpm, 92.4%	3	Retail	4	Ventilation		1700632.066	1728246.519	1759541.181	1793932.617	1830914.299	1870047.895	1910955.506	1953312.728	1996842.475	2041309.469
1	Existing	304	EMS - Chiller	9	Warehouse	3	Cooling		1416.438385	2472.273028	3372.103908	4113.656174	4700.688043	5141.578607	5447.998387	5633.726778	5713.650358	5702.952798
1	Existing	332	Window Film (Standard)	3	Retail	3	Cooling		4022624.536	7697782.399	10255218.48	10932953.17	9586104.92	6873542.846	3769234.862	1615363.844	624607.7804	211220.654
1	Existing	332	Window Film (Standard)	1	Office	3	Cooling		1286491.046	2453094.62	3254288.251	3452228.266	3010377.091	2146128.488	1170253.928	499002.8771	192258.1008	64902.64535
1	Existing	314	Roof Insulation	10	Hotel/Motel	3	Cooling		340321.1943	729241.8764	1147235.025	1542675.807	1843506.56	1975649.905	1811894.683	1439125.863	1082137.779	744009.7404
1	Existing	328	Optimize Controls	11	Other	3	Cooling		14304.08679	24386.2673	33314.74989	41188.35541	48101.16642	54141.9047	59393.56959	63933.28033	67832.27507	71156.0272
1	Existing	313	Ceiling Insulation	5	School	3	Cooling		142092.1533	342707.3544	630787.5644	1038359.789	1591489.467	2274704.081	2831013.317	2980238.33	2788470.182	2231949.123
1	Existing	601	High Efficiency Water Heater (electric)	3	Retail	6	Water Heating		481699.0496	994677.2472	1559128.004	2171445.21	2823853.733	3504394.707	4156199.552	4417098.196	4655133.751	4871365.961
1	Existing	321	DX Packaged System, EER=10.9, 10 tons	7	Hospital	3	Cooling		12158.50204	12881.57855	13602.75408	14321.53551	15037.66633	15751.10169	16461.98687	17170.63888	17877.53097	18583.27978
1	Existing	322	Hybrid Dessicant-DX System (Trane CDQ)	6	College	3	Cooling		181.9692225	330.0798911	469.2936246	600.5134413	724.569624	842.2264258	954.1882032	1061.105032	1163.577649	1262.16317
1	Existing	601	High Efficiency Water Heater (electric)	10	Hotel/Motel	6	Water Heating		291340.8004	599543.6569	936843.5768	1300822.965	1686728.568	2087533.829	2467735.558	2617287.74	2753742.021	2877882.242
1	Existing	402	Variable Speed Drive Control	6	College	4	Ventilation		643992.5624	1141888.016	1556616.343	1876675.678	2098087.647	2223561.919	2261205.302	2222996.041	2123222.428	1977043.773
1	Existing	401	High Efficiency Fan Motor, 15hp, 1800rpm, 92.4%	5	School	4	Ventilation		1274734.757	1294496.433	1317148.488	1342242.288	1369387.834	1398247.165	1428528.458	1459980.763	1492389.312	1525571.325
1	Existing	335	Roof Insulation	11	Other	3	Cooling		233488.62	511798.7643	827238.3772	1148401.294	1421926.11	1580836.363	1500228.159	1225693.567	939738.0785	650883.4615
1	Existing	601	High Efficiency Water Heater (electric)	8	Other Healthcare	6	Water Heating		60481.64792	121813.4611	186766.0524	254682.6033	324637.4878	395496.0362	458911.4058	481094.4252	501380.2436	520018.0084
1	Existing	350	Roof Insulation	11	Other	3	Cooling		6121.208283	13439.87741	21767.38312	30291.65189	37609.76961	41934.1025	39904.96287	32676.88133	25092.62181	17389.91565
1	Existing	304	EMS - Chiller	1	Office	3	Cooling		80833.91528	142053.2256	194613.1489	238425.7099	273702.5427	300885.0931	320579.6516	333499.8404	340417.8861	342125.0189
1	Existing	313	Ceiling Insulation	1	Office	3	Cooling		150448.4648	367853.2449	689542.4051	1164794.983	1851162.494	2777963.355	3667985.998	4097477.439	3998163.632	3237183.316
1	Existing	304	EMS - Chiller	6	College	3	Cooling		21542.04318	37775.85883	51681.61242	63232.24453	72484.22519	79558.07613	84620.1741	87866.61547	89509.54422	89766.05561
1	Existing	402	Variable Speed Drive Control	3	Retail	4	Ventilation		578551.4367	1030616.351	1411088.782	1709879.244	1923014.593	2052025.213	2102975.724	2085298.738	2010577.965	1891400.066

Segment Number	Segment	Measure Number	Measure	Bldg Typ	Applicable Building	End Use Number	End Use	Year Yr Index	2010 1	2011 2	2012 3	2013 4	2014 5	2015 6	2016 7	2017 8	2018 9	2019 10
1	Existing	304	EMS - Chiller	8	Other Healthcare	3	Cooling		2858.193082	5034.436245	6907.397849	8474.498149	9743.232731	10728.82634	11452.05794	11937.33909	12211.08631	12300.39664
1	Existing	304	EMS - Chiller	5	School	3	Cooling		60684.87036	106538.3462	145864.2928	178591.9009	204880.09	225063.97	239604.9224	249046.3742	253976.3249	254996.9109
1	Existing	351	Cool Roof - DX	10	Hotel/Motel	3	Cooling		18692.24833	34946.6946	45297.64156	47122.57989	40648.70635	29050.36936	16127.80657	7127.96499	2861.182236	992.7301901
1	Existing	601	High Efficiency Water Heater (electric)	2	Restaurant/ Services	6	Water Heating		161394.7415	337248.23	534475.2133	752494.8293	988962.2096	1239569.353	1487956.54	1593370.681	1689601.731	1776588.577
1	Existing	305	Chiller Tune Up/Diagnostics	6	College	3	Cooling		202003.1617	386331.6031	557857.9962	707607.9392	827481.893	911045.2065	954260.5419	956051.8365	918586.6615	847184.507
1	Existing	326	DX Tune Up/ Advanced Diagnostics	6	College	3	Cooling		107662.105	218015.738	328036.1161	426895.7183	501890.2102	540625.749	534423.1275	482177.2577	392945.1376	285077.8434
1	Existing	336	Cool Roof - DX	10	Hotel/Motel	3	Cooling		3105927.149	5827909.932	7586956.827	7933239.614	6883265.237	4950551.934	2766543.476	1230496.179	496393.0159	172693.675
1	Existing	401	High Efficiency Fan Motor, 15hp, 1800rpm, 92.4%	10	Hotel/Motel	4	Ventilation		1486463.754	1506127.865	1529640.103	1556437.285	1586028.062	1617984.957	1651937.233	1687564.527	1724591.163	1762781.073
1	Existing	401	High Efficiency Fan Motor, 15hp, 1800rpm, 92.4%	8	Other Healthcare	4	Ventilation		196865.5918	197168.7728	198324.5744	200235.0249	202813.4144	205983.1431	209676.6828	213834.6455	218404.9435	223342.0373
1	Existing	603	Heat Pump Water Heater (air source)	1	Office	6	Water Heating		9145.408943	17268.42855	25332.52573	33382.68426	41464.44451	49624.34117	57910.3723	66372.50769	75063.24562	84038.22858
1	Existing	402	Variable Speed Drive Control	9	Warehouse	4	Ventilation		3348471.833	6005644.456	8275233.334	10101365.42	11458386.2	12348295.78	12796538	12846796.31	12555408.96	11985922.4
1	Existing	307	EMS Optimization	6	College	3	Cooling		18700.88549	32884.8287	45784.50167	57479.20777	68047.96514	77568.36243	86115.68428	93762.26446	100577.0287	106625.1936
1	Existing	321	DX Packaged System, EER=10.9, 10 tons	3	Retail	3	Cooling		491612.4705	514830.7425	538823.652	563514.0973	588839.8276	614752.1511	641214.8145	668203.0409	695702.7189	723709.7321
1	Existing	321	DX Packaged System, EER=10.9, 10 tons	2	Restaurant/ Services	3	Cooling		244506.9387	256477.852	268773.6209	281359.5227	294207.8926	307297.4943	320612.9736	334144.3899	347886.8189	361840.0246
1	Existing	513	High R-Value Glass Doors	4	FoodStore	5	Refrigeration		12011.96401	21127.55795	29242.56623	36458.19778	42866.09072	48549.09574	53582.01986	58032.3269	61960.79266	65422.11435
1	Existing	402	Variable Speed Drive Control	10	Hotel/Motel	4	Ventilation		159888.5941	287756.6053	397767.4401	487323.3752	555151.1181	601199.3054	626466.6203	632786.4047	622592.2543	598685.6896
1	Existing	401	High Efficiency Fan Motor, 15hp, 1800rpm, 92.4%	6	College	4	Ventilation		474558.1283	479069.995	485063.3137	492338.3178	500719.8245	510054.5722	520208.8355	531066.2894	542526.0978	554501.2039
1	Existing	603	Heat Pump Water Heater (air source)	4	FoodStore	6	Water Heating		727.2242426	1376.45623	2021.387983	2665.629656	3312.842229	3966.773222	4631.295086	5310.446958	6008.480547	6729.91105
1	Existing	403	Air Handler Optimization	11	Other	4	Ventilation		591063.2043	1088966.405	1564932.696	2016925.3	2443132.976	2841943.947	3211922.382	3551788.077	3860399.878	4136743.317
1	Existing	314	Roof Insulation	3	Retail	3	Cooling		112175.0745	259682.2902	449633.3468	680217.8369	932760.396	1160945.254	1232623.976	1108976.635	909006.265	645089.9247
1	Existing	402	Variable Speed Drive Control	8	Other Healthcare	4	Ventilation		317526.0943	579652.8667	811694.9989	1009192.932	1169443.519	1291413.423	1375578.399	1423709.583	1438627.385	1423941.687
1	Existing	351	Cool Roof - DX	3	Retail	3	Cooling		63991.25934	126166.2121	174507.1298	196166.8538	184838.6907	145482.718	89308.882	43454.41549	18818.11713	6802.323466
1	Existing	336	Cool Roof - DX	1	Office	3	Cooling		2586753.633	5080540.399	6993595.295	7816375.733	7316370.154	5716856.904	3482900.297	1682437.494	724423.6022	261051.8244
1	Existing	351	Cool Roof - DX	1	Office	3	Cooling		558808.353	1099085.218	1515606.478	1697511.363	1592793.677	1247901.201	762386.2716	369254.8365	159328.4323	57480.665
1	Existing	314	Roof Insulation	5	School	3	Cooling		349211.6567	798916.337	1362233.231	2020369.379	2703527.649	3271504.551	3373844.737	2958411.567	2381762.795	1679455.259
1	Existing	211	Outdoor Lighting Controls (Photocell/Timeclock)	9	Warehouse	2	Outdoor Lighting		25623.6995	45588.71474	63902.47614	80688.07551	96062.239	110135.0552	123009.8577	134783.2313	145545.1125	155378.9644
1	Existing	336	Cool Roof - DX	3	Retail	3	Cooling		2164619.482	4301877.766	6009738.177	6837561.345	6532608.144	5220580.646	3256283.694	1608594.904	705034.1236	256518.3038
1	Existing	314	Roof Insulation	1	Office	3	Cooling		411814.6297	954874.4044	1656830.318	2513412.273	3458452.567	4321872.495	4608165.906	4161619.851	3420284.535	2429544.114
1	Existing	347	Window Film (Standard)	6	College	3	Cooling		7563.144229	15236.39455	23305.97276	31564.31445	39724.07864	47410.40374	54162.83486	59454.06418	62733.72927	63504.05727
1	Existing	336	Cool Roof - DX	5	School	3	Cooling		928708.3033	1827872.68	2522741.591	2828441.606	2657102.302	2084458.135	1275198.347	618429.6549	267117.3897	96420.94694
1	Existing	351	Cool Roof - DX	5	School	3	Cooling		224579.743	442642.8452	611997.0208	687624.6949	647555.9262	509366.9529	312490.5643	151954.0896	65772.69425	23769.14716
1	Existing	321	DX Packaged System, EER=10.9, 10 tons	4	FoodStore	3	Cooling		137250.4	143298.8489	149626.1003	156207.1507	163021.4556	170052.5591	177287.7735	184717.9046	192337.0216	200142.2683
1	Existing	401	High Efficiency Fan Motor, 15hp, 1800rpm, 92.4%	9	Warehouse	4	Ventilation		1850056.206	1862049.049	1880638.162	1904985.831	1934354.711	1968097.171	2005645.733	2046504.501	2090241.468	2136481.637
1	Existing	601	High Efficiency Water Heater (electric)	11	Other	6	Water Heating		372128.416	804449.0702	1317905.354	1919831.142	2611594.695	3385289.453	4221580.029	4662937.914	5053922.77	5403497.092
1	Existing	332	Window Film (Standard)	6	College	3	Cooling		641066.9217	1307514.57	1883976.447	2206398.487	2151764.896	1728452.636	1060886.921	502720.5652	208709.9707	73016.34441
1	Existing	401	High Efficiency Fan Motor, 15hp, 1800rpm, 92.4%	2	Restaurant/ Services	4	Ventilation		652669.024	656141.4376	662054.632	670105.5683	680027.1566	691584.4711	704571.35	718807.3458	734134.9882	750417.3318
1	Existing	362	Occupancy Sensor (hotels)	5	School	3	Cooling		18823.75519	34937.28494	50332.94576	65052.89603	79138.17061	92628.33168	105561.1792	117972.5106	129895.9217	141362.6395
1	Existing	362	Occupancy Sensor (hotels)	1	Office	3	Cooling		28695.92525	53295.16159	76806.6199	99296.31191	120828.349	141464.445	161263.506	180281.291	198570.1318	216178.699
1	Existing	313	Ceiling Insulation	6	College	3	Cooling		23300.53104	58154.75311	112106.2875	197317.0546	333268.2731	546347.9703	812871.3265	1039852.646	1128468.252	940903.2948

FPL com existing_TRC max annual sign ups

Segment		Measure		Bldg	Applicable	End Use	End	Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Number	Segment	Number	Measure	Typ	Building	Number	Use	Yr Index	1	2	3	4	5	6	7	8	9	10
1	Existing	362	Occupancy Sensor (hotels)	6	College	3	Cooling		6841.054247	12712.56454	18326.06924	23697.65392	28842.9143	33776.84484	38513.74708	43067.1543	47449.76946	51673.41344
1	Existing	362	Occupancy Sensor (hotels)	8	Other Healthcare	3	Cooling		6774.660726	12601.23771	18174.5122	23510.9928	28626.64344	33536.78471	38256.01352	42798.13763	47176.12216	51402.04525
1	Existing	305	Chiller Tune Up/Diagnostics	11	Other	3	Cooling		138159.3912	272411.3422	407204.9136	538966.3425	663618.14	776681.1815	873451.9832	949268.6157	999870.6562	1021843.671
1	Existing	326	DX Tune Up/ Advanced Diagnostics	11	Other	3	Cooling		128127.7843	270332.5058	428808.8171	598177.1561	768598.7753	924679.497	1045361.426	1106096.851	1084730.826	971323.3918
1	Existing	211	Outdoor Lighting Controls (Photocell/Timeclock)	7	Hospital	2	Outdoor Lighting		2550.090201	4588.176793	6464.608958	8192.479654	9784.004457	11250.54598	12602.64477	13850.05475	15001.78175	16066.12384
1	Existing	307	EMS Optimization	11	Other	3	Cooling		9469.121495	17061.84329	24032.40285	30430.28331	36301.81754	41690.23132	46635.72113	51175.55774	55344.2083	59173.47096
1	Existing	402	Variable Speed Drive Control	2	Restaurant/ Services	4	Ventilation		0.945762142	1.752414643	2.486351508	3.137028936	3.696955588	4.16160983	4.529268167	4.80076424	4.979196969	5.069604952
1	Existing	321	DX Packaged System, EER=10.9, 10 tons	9	Warehouse	3	Cooling		133161.026	137569.0825	142472.4239	147838.6011	153640.2667	159854.8317	166464.1738	173454.398	180815.6457	188541.9551
1	Existing	347	Window Film (Standard)	11	Other	3	Cooling		3162.213351	6520.609328	10238.6167	14331.13376	18797.50725	23611.6988	28708.69781	33966.76331	39186.08226	44066.68473
1	Existing	314	Roof Insulation	6	College	3	Cooling		62730.85371	151235.2274	276568.0513	450525.5119	680614.9824	954813.6937	1159068.33	1183814.633	1064078.765	779694.4976
1	Existing	601	High Efficiency Water Heater (electric)	1	Office	6	Water Heating		423392.2025	956657.9721	1642618.165	2520750.787	3629733.312	4995490.868	6612510.868	7888832.396	8949111.947	9898682.972
1	Existing	211	Outdoor Lighting Controls (Photocell/Timeclock)	8	Other Healthcare	2	Outdoor Lighting		1430.464199	2601.851703	3683.542228	4683.226444	5608.01218	6464.457649	7258.60478	7996.012192	8681.787389	9320.61792
1	Existing	332	Window Film (Standard)	11	Other	3	Cooling		862236.3248	1883804.306	2971311.011	3903223.409	4366653.743	4090714.248	2943920.782	1610762.234	740884.1693	271870.1857
1	Existing	321	DX Packaged System, EER=10.9, 10 tons	11	Other	3	Cooling		108435.9178	111785.6516	115580.8383	119794.6858	124404.6331	129392.0828	134742.1782	140443.6224	146488.5401	152872.3822
1	Existing	601	High Efficiency Water Heater (electric)	4	FoodStore	6	Water Heating		35394.16947	80504.78687	139256.1804	215556.3276	313503.9612	436309.1837	584390.0251	708496.0877	811651.5647	904361.7125
1	Existing	313	Ceiling Insulation	11	Other	3	Cooling		15089.36442	38310.65836	75612.78163	137951.2827	246584.3188	442747.1117	760041.3536	1187072.136	1563559.424	1380660.991
1	Existing	351	Cool Roof - DX	6	College	3	Cooling		19171.55532	40916.48416	62678.38898	79940.48933	87350.30762	81115.89478	59322.43981	34110.49539	16877.88425	6557.835382
1	Existing	336	Cool Roof - DX	6	College	3	Cooling		304632.0432	652885.9588	1005732.126	1291876.742	1423797.355	1335230.387	986893.929	573282.3129	286000.3866	111619.4543
1	Existing	321	DX Packaged System, EER=10.9, 10 tons	6	College	3	Cooling		44425.26099	45712.87388	47199.30358	48873.67447	50726.86548	52751.40722	54941.39731	57292.43359	59801.56565	62467.26489
1	Existing	321	DX Packaged System, EER=10.9, 10 tons	1	Office	3	Cooling		430734.3683	442930.9515	457115.3213	473183.1011	491046.9889	510635.7879	531893.6136	554779.2785	579265.8547	605340.4234
1	Existing	211	Outdoor Lighting Controls (Photocell/Timeclock)	3	Retail	2	Outdoor Lighting		3667.214386	6753.624995	9611.822095	12262.25506	14723.70639	17013.41488	19147.19209	21139.53207	23003.71433	24751.90017
1	Existing	321	DX Packaged System, EER=10.9, 10 tons	8	Other Healthcare	3	Cooling		52064.92735	53482.39407	55152.96942	57064.39383	59206.48392	61571.02183	64151.6662	66943.885	69944.91069	73153.71895
1	Existing	321	DX Packaged System, EER=10.9, 10 tons	5	School	3	Cooling		88890.77708	91307.98795	94158.01391	97419.94783	101076.4279	105113.4492	109520.2117	114289.0064	119415.1391	124896.8947
1	Existing	504	Evaporator fan controller for MT walk-ins	4	FoodStore	5	Refrigerati on		2474.771894	4499.100914	6311.070068	7932.319649	9382.324565	10678.60446	11836.91459	12871.41909	13794.8479	14618.63897
1	Existing	314	Roof Insulation	11	Other	3	Cooling		43257.21118	107395.3891	204692.4085	353999.6844	582669.6606	920913.102	1304250.117	1578531.79	1628660.854	1250916.935
1	Existing	211	Outdoor Lighting Controls (Photocell/Timeclock)	1	Office	2	Outdoor Lighting		4364.837298	8119.521135	11603.42609	14841.38748	17856.15308	20668.553	23297.65744	25760.92274	28074.32639	30252.49172
1	Existing	603	Heat Pump Water Heater (air source)	9	Warehouse	6	Water Heating		460.9267016	898.9789448	1336.993364	1777.491195	2223.070144	2676.433019	3140.419362	3618.04076	4112.520675	4627.339772
1	Existing	351	Cool Roof - DX	11	Other	3	Cooling		11848.00284	26741.40843	44207.59983	62279.97467	76984.0196	82629.54709	70898.31601	47666.38223	26791.76878	11151.08355
1	Existing	336	Cool Roof - DX	11	Other	3	Cooling		431210.7549	976860.1359	1623254.948	2302790.165	2871926.326	3116065.363	2706772.575	1842407.271	1046201.486	437843.5181
1	Existing	211	Outdoor Lighting Controls (Photocell/Timeclock)	4	FoodStore	2	Outdoor Lighting		366.4808005	683.6019686	977.9985182	1251.764733	1506.817882	1744.91289	1967.655905	2176.516824	2372.84084	2557.859088
1	Existing	211	Outdoor Lighting Controls (Photocell/Timeclock)	5	School	2	Outdoor Lighting		1617.741139	3013.580667	4309.087161	5513.4864	6635.226365	7682.041172	8661.010279	9578.613232	10440.78022	11252.93868
1	Existing	601	High Efficiency Water Heater (electric)	9	Warehouse	6	Water Heating		34558.97985	84081.77333	157622.9351	270281.0413	448631.8523	740269.2731	1229153.001	2048425.875	3304121.357	4656917.429
1	Existing	349	Ceiling Insulation	9	Warehouse	3	Cooling		74.82603994	193.526918	391.6135334	742.8576256	1417.109858	2858.311069	6133.60675	15015.06265	43679.16181	55894.29562
1	Existing	211	Outdoor Lighting Controls (Photocell/Timeclock)	11	Other	2	Outdoor Lighting		692.5295831	1311.666147	1887.863129	2425.145154	2927.191352	3397.365735	3838.744987	4254.143863	4646.138413	5017.087202
1	Existing	350	Roof Insulation	9	Warehouse	3	Cooling		245.0293044	630.0374223	1263.261078	2361.596135	4396.860518	8490.218886	16712.65132	33862.14357	66281.51277	66162.24013
1	Existing	334	Ceiling Insulation	9	Warehouse	3	Cooling		1528.395528	3959.31629	8028.171901	15276.5047	29297.59177	59688.49696	130896.3172	339544.2739	1188636.076	1762298.417
1	Existing	335	Roof Insulation	9	Warehouse	3	Cooling		4991.294218	12877.91376	25947.42175	48881.39905	92186.08599	182186.9156	375514.0539	841012.2784	2018097.013	2259318.332
1	Existing	328	Optimize Controls	9	Warehouse	3	Cooling		116.368391	218.5694445	310.9408379	394.4511609	469.9739595	538.2970166	600.1307339	656.1157014	706.8295308	752.7930249

FPL com existing_TRC max annual sign ups

Segment Number	Segment	Measure Number	Measure	Bldg Typ	Applicable Building	End Use Number	End Use	Year Yr Index	2010 1	2011 2	2012 3	2013 4	2014 5	2015 6	2016 7	2017 8	2018 9	2019 10
1	Existing	305	Chiller Tune Up/Diagnostics	9	Warehouse	3	Cooling		136.2973032	286.6405112	456.3498021	650.0412829	873.5300936	1134.215744	1441.611409	1808.078839	2249.860013	2788.541294
1	Existing	307	EMS Optimization	9	Warehouse	3	Cooling		8.290970396	15.80461259	22.78250722	29.27476753	35.3271314	40.9813519	46.27555362	51.24455745	55.92017673	60.33148733
1	Existing	211	Outdoor Lighting Controls (Photocell/Timeclock)	2	Restaurant/ Services	2	Outdoor Lighting		74.87545051	143.071222	206.6166992	265.9498086	321.4697181	373.5421844	422.5016061	468.6540094	512.2795895	553.6350282
1	Existing	403	Air Handler Optimization	9	Warehouse	4	Ventilation		4760.936051	9385.101724	13985.04495	18585.1876	23210.32588	27885.86197	32638.05381	37494.28752	42483.3774	47635.89957
1	Existing	211	Outdoor Lighting Controls (Photocell/Timeclock)	10	Hotel/Motel	2	Outdoor Lighting		117.5090643	224.8573163	324.9050811	418.3390671	505.7870287	587.8230268	664.9722254	737.7152672	806.4922643	871.7064388
1	Existing	347	Window Film (Standard)	9	Warehouse	3	Cooling		14.43286858	31.07762047	50.73600069	74.2930718	102.9424572	138.3206655	182.7122368	239.3704762	313.0321288	410.7676014
1	Existing	313	Ceiling Insulation	9	Warehouse	3	Cooling		17.44023203	45.28143412	92.06768962	175.92269	339.763011	701.4131663	1583.508876	4460.866283	22037.89467	49353.30624
1	Existing	326	DX Tune Up/ Advanced Diagnostics	9	Warehouse	3	Cooling		900.6900138	2046.864331	3546.445224	5553.940456	8309.518069	12199.50203	17870.61091	26457.59116	40066.23006	62876.66869
1	Existing	314	Roof Insulation	9	Warehouse	3	Cooling		59.47511929	154.158111	312.6181439	594.8953994	1141.082084	2326.363658	5115.308087	13439.52	50774.70675	81937.05407
1	Existing	332	Window Film (Standard)	9	Warehouse	3	Cooling		5177.565476	13362.38794	26924.14057	50702.60926	95522.109	188360.9729	386478.0955	858049.8755	2006406.611	1817525.782
1	Existing	351	Cool Roof - DX	9	Warehouse	3	Cooling		395.251649	1015.732898	2033.052054	3789.641076	7023.94787	13472.45429	26276.5517	52904.07841	105507.8743	92419.8733
1	Existing	336	Cool Roof - DX	9	Warehouse	3	Cooling		7840.096608	20221.87726	40699.03068	76528.22835	143910.9078	283205.1377	580457.4298	1298173.507	3229632.359	3362933.837

Penetration Model Output Filename: O_Saece_FPL_TRC-H.xls Worksheet: 'Bld Stock Available - Measure'

Building Stock Available (with Program) - Measure Specific

Input File: P_Saece_FPL_TRC-H.xls

Segment Number	Segment	Measure Number	Measure	Bldg Typ	Applicable Building	End Use Number	End Use	Year Yr Index	Units	Sq Ft 2010 1	Sq Ft 2011 2	Sq Ft 2012 3	Sq Ft 2013 4	Sq Ft 2014 5	Sq Ft 2015 6	Sq Ft 2016 7	Sq Ft 2017 8	Sq Ft 2018 9	Sq Ft 2019 10
1	Existing	603	Heat Pump Water Heater (air source)	7	Hospital	6	Water Heating			242879.8214	240451.0232	238046.513	235666.0478	233309.3873	230976.2935	228666.5305	226379.8652	224116.0666	221874.9059
1	Existing	601	High Efficiency Water Heater (electric)	7	Hospital	6	Water Heating			242879.8214	240451.0232	238046.513	235666.0478	233309.3873	230976.2935	228666.5305	226379.8652	224116.0666	221874.9059
1	Existing	403	Air Handler Optimization	7	Hospital	4	Ventilation			26484423.68	22183842.58	18742156.76	11394924.64	7001572.674	3888558.561	1954725.632	890751.5685	368593.8412	143805.4734
1	Existing	334	Ceiling Insulation	7	Hospital	3	Cooling			764697.9195	717422.3252	646023.7684	558959.4693	465252.7158	373021.3176	288472.0244	216780.8547	162240.972	120940.4602
1	Existing	349	Ceiling Insulation	7	Hospital	3	Cooling			55280.14148	51882.92222	46740.6272	40459.93768	33691.0324	27021.14251	20901.04721	15710.62066	11759.86846	8766.93137
1	Existing	328	Optimize Controls	7	Hospital	3	Cooling			630875.7836	565203.1409	479332.1337	386226.9637	296767.0789	218235.7809	154137.3318	104917.7731	69052.67897	44082.67719
1	Existing	335	Roof Insulation	7	Hospital	3	Cooling			764697.9195	702301.4544	607758.1884	495922.7609	381844.9767	277631.7586	190755.3858	125351.7275	81807.26616	53018.48852
1	Existing	350	Roof Insulation	7	Hospital	3	Cooling			55280.14148	50795.69107	43984.19615	35913.25782	27668.74069	20127.69858	13834.39297	9095.002761	5937.334476	3848.500147
1	Existing	334	Ceiling Insulation	2	Restaurant/ Services	3	Cooling			17750689.9	16753585.29	15196380.79	13248533.63	11105799.44	8956638.517	6955050.892	5248777.547	3938844.97	2940013.276
1	Existing	349	Ceiling Insulation	2	Restaurant/ Services	3	Cooling			1225188.762	1156871.875	1049930.534	915903.9839	768214.6354	619858.3053	481511.8476	363508.2483	272846.8876	203678.2531
1	Existing	305	Chiller Tune Up/Diagnostics	7	Hospital	3	Cooling			13526240.15	11654250.17	9038817.511	6298922.773	3935614.422	2199078.868	1095541.297	484831.9018	189764.1836	73127.29648
1	Existing	301	Centrifugal Chiller, 0.51 kW/ton, 500 tons	10	Hotel/Motel	3	Cooling			2111324.795	2090211.547	2069309.432	2048616.338	2028130.174	2007848.873	1987770.384	1967892.68	1948213.753	1928731.616
1	Existing	307	EMS Optimization	7	Hospital	3	Cooling			13526240.15	12256898.03	10536397.15	8617911.521	6726521.398	5024806.996	3602664.713	2486023.769	1655482.582	1066588.125
1	Existing	404	Electronically Commutated Motors (ECM) on an Air Handler Unit	7	Hospital	4	Ventilation			3138894.658	3107505.711	3076430.654	3045666.348	3015209.684	2985057.587	2955207.012	2925654.941	2896398.392	2867434.408
1	Existing	328	Optimize Controls	2	Restaurant/ Services	3	Cooling			14644319.16	13573229.62	12127933.35	10477382.82	8776067.69	7146407.453	5671692.265	4397494.517	3338329.63	2486453.365
1	Existing	301	Centrifugal Chiller, 0.51 kW/ton, 500 tons	7	Hospital	3	Cooling			1532973.884	1517644.145	1502467.703	1487443.026	1472568.596	1457842.91	1443264.481	1428831.836	1414543.518	1400398.083
1	Existing	335	Roof Insulation	2	Restaurant/ Services	3	Cooling			17750689.9	16419109.25	14333707.08	11807188.25	9175670.64	6726201.045	4650308.933	3076773.382	2017171.47	1310347.362
1	Existing	350	Roof Insulation	2	Restaurant/ Services	3	Cooling			1225188.762	1133471.794	989724.372	815469.3314	633877.0066	464765.4665	321383.6794	212675.1645	139449.5577	90591.55063
1	Existing	334	Ceiling Insulation	4	FoodStore	3	Cooling			10816815.02	10250125.64	9346596.388	8195839.16	6908966.73	5599199.033	4364031.544	3304422.257	2484906.176	1856617.575
1	Existing	349	Ceiling Insulation	4	FoodStore	3	Cooling			391309.62	370986.5235	338506.3196	297046.7427	250586.5964	203210.9501	158461.5261	120037.5157	90291.30928	67470.3047
1	Existing	326	DX Tune Up/ Advanced Diagnostics	7	Hospital	3	Cooling			630875.7836	542612.0451	415394.9622	281431.3427	167594.3523	87003.31822	38974.70817	14874.18587	5374.033914	1897.713077
1	Existing	301	Centrifugal Chiller, 0.51 kW/ton, 500 tons	2	Restaurant/ Services	3	Cooling			79411.52755	78617.41227	77831.23815	77052.92577	76282.39651	75519.57254	74764.37682	74016.73305	73276.56572	72543.80006
1	Existing	301	Centrifugal Chiller, 0.51 kW/ton, 500 tons	3	Retail	3	Cooling			1325613.432	1312357.298	1299233.725	1286241.388	1273378.974	1260645.184	1248038.732	1235558.345	1223202.762	1210970.734
1	Existing	305	Chiller Tune Up/Diagnostics	2	Restaurant/ Services	3	Cooling			700689.9489	617350.7843	495572.3803	361913.4114	240025.8446	144263.4345	78381.74164	38382.93293	16879.93942	6966.805075
1	Existing	161	LED Exit Sign	6	College	1	Indoor Lighting			45754457.49	43746544.75	40973861.27	37662903.05	34032935.34	30279168.62	26562845.81	23007406.64	19699306.24	16691918.31
1	Existing	328	Optimize Controls	4	FoodStore	3	Cooling			8923872.392	8413649.87	7717363.829	6902858.832	6034291.442	5166082.67	4339835.285	3583770.298	2913941.007	2336447.122
1	Existing	347	Window Film (Standard)	7	Hospital	3	Cooling			48084.87826	42105.93375	33386.48736	23894.4865	15378.52169	8862.310358	4549.795266	2068.388237	835.6853254	330.7424831
1	Existing	335	Roof Insulation	4	FoodStore	3	Cooling			10816815.02	10050081.13	8825753.74	7319080.748	5726954.812	4224906.507	2936373.458	1952811.398	1284698.92	835993.3524
1	Existing	161	LED Exit Sign	3	Retail	1	Indoor Lighting			160173734.3	153862388.4	145154471.2	134705770.4	123153962.3	111074634.8	98954396.33	87179064.68	76033645.76	65710459.64
1	Existing	307	EMS Optimization	2	Restaurant/ Services	3	Cooling			700689.9489	654578.7159	590139.3291	514637.3799	435070.7908	357310.1171	285645.4083	222704.2948	169638.4423	126456.4169
1	Existing	350	Roof Insulation	4	FoodStore	3	Cooling			391309.62	363837.2623	319834.4807	265542.2687	208028.3386	153641.2564	106885.5386	71147.77231	46834.36122	30485.89867
1	Existing	301	Centrifugal Chiller, 0.51 kW/ton, 500 tons	4	FoodStore	3	Cooling			125320.3198	124067.1166	122826.4454	121598.181	120382.1991	119178.3772	117986.5934	116806.7274	115638.6602	114482.2736
1	Existing	332	Window Film (Standard)	7	Hospital	3	Cooling			665164.8383	564483.8588	419292.086	270015.5967	148978.8463	69366.63996	26716.11988	8692.95645	2746.868736	842.0680619
1	Existing	334	Ceiling Insulation	8	Other Healthcare	3	Cooling			6900142.91	6603259.781	6108721.891	5447531.852	4671437.761	3845091.53	3034522.503	2321032.531	1756065.717	1315765.964

FPL com existing_TRC annual eligible stock

Docket Nos. 080407-EG, 080408-EG, 080409-EG, 080410-EG, 080411-EG, 080412-EG, 080413-EG
Table of weighted-average measure penetration rate calculations
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Segment		Measure		Bldg	Applicable	End Use	End	Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Number	Segment	Number	Measure	Typ	Building	Number	Use	Yr Index	1	2	3	4	5	6	7	8	9	10
1	Existing	349	Ceiling Insulation	8	Other Healthcare	3	Cooling		258614.3746	247631.155	229295.2452	204705.3017	175747.4535	144817.14	114392.0921	87556.64942	66271.53708	49664.43246
1	Existing	603	Heat Pump Water Heater (air source)	6	College	6	Water Heating		3236869.014	3204500.323	3172455.32	3140730.767	3109323.459	3078230.225	3047447.922	3016973.443	2986803.709	2956935.672
1	Existing	361	HE PTAC, EER=9.6, 1 ton	7	Hospital	3	Cooling		57542.32007	56966.89686	56397.2279	55833.25562	55274.92306	54722.17383	54174.95209	53633.20257	53096.87055	52565.90184
1	Existing	361	HE PTAC, EER=9.6, 1 ton	10	Hotel/Motel	3	Cooling		774715.7429	766968.5855	759298.8996	751705.9106	744188.8515	736746.963	729379.4934	722085.6985	714864.8415	707716.1931
1	Existing	161	LED Exit Sign	11	Other	1	Indoor Lighting		205977806	198592787	188426869.5	176191776.7	162581113.2	148227109.1	133673479.1	119362505.3	105633390.5	92728627.65
1	Existing	326	DX Tune Up/ Advanced Diagnostics	2	Restaurant/ Services	3	Cooling		14644319.16	12863945.3	10169572.89	7190971.691	4515403.955	2496294.383	1202405.332	498114.6927	191096.1587	71157.80503
1	Existing	161	LED Exit Sign	2	Restaurant/ Services	1	Indoor Lighting		87844192.05	84880564.07	80810358.45	75905153.93	70429790.17	64626950.95	58707356.77	52844902.75	47175740.05	41800206.25
1	Existing	402	Variable Speed Drive Control	7	Hospital	4	Ventilation		30250353.69	27488360.67	23466351.63	18854134.52	14282965.69	10220300.16	6920173.172	4441610.472	2706946.113	1569130.334
1	Existing	313	Ceiling Insulation	7	Hospital	3	Cooling		10820992.12	10342106.8	9548420.544	8494354.759	7265817.679	5966549.762	4699700.335	3589318.824	2713232.794	2032125.029
1	Existing	403	Air Handler Optimization	4	FoodStore	4	Ventilation		24937732.33	22949402.86	20050802.97	16653272.42	13165118.95	9918439.3	7129759.895	4895765.87	3214853.321	2020945.826
1	Existing	305	Chiller Tune Up/Diagnostics	4	FoodStore	3	Cooling		1105767.527	991713.6909	819445.8397	623057.168	435283.3117	278931.9524	163611.3711	87631.20519	42734.21214	18908.75466
1	Existing	161	LED Exit Sign	1	Office	1	Indoor Lighting		272106708.5	263435718.3	251560305.8	237237183.6	221204361.7	204141005.2	186641618.3	169202816.2	152220222.7	135992713.2
1	Existing	307	EMS Optimization	4	FoodStore	3	Cooling		1105767.527	1049417.038	969917.1627	874586.5955	770706.5641	664792.8924	562139.7816	466626.6025	380738.036	305729.9003
1	Existing	161	LED Exit Sign	8	Other Healthcare	1	Indoor Lighting		30190608.17	29298026.2	28081256.37	26613160.25	24964756.51	23201706.74	21382028.56	19554883.46	17760230.15	16029119.17
1	Existing	161	LED Exit Sign	10	Hotel/Motel	1	Indoor Lighting		135748856.2	131441251.1	125543105.5	118428964.3	110464110.5	101984799.5	93285535.73	84612544.97	76162212.23	68083154.1
1	Existing	302	High Efficiency Chiller Motors	10	Hotel/Motel	3	Cooling		44710407.43	43445173.28	41663630.97	39461000.65	36937130.43	34190699.26	31314561.74	28392334.55	25496194.26	22685764.87
1	Existing	335	Roof Insulation	8	Other Healthcare	3	Cooling		6900142.91	6478246.938	5776453.692	4878180.971	3891212.232	2924430.65	2065783.762	1393928.856	925892.8876	605444.2389
1	Existing	350	Roof Insulation	8	Other Healthcare	3	Cooling		258614.3746	242960.2529	216859.5817	183364.4178	146462.2969	110218.8288	77949.34662	52651.1552	34995.90861	22891.60271
1	Existing	361	HE PTAC, EER=9.6, 1 ton	2	Restaurant/ Services	3	Cooling		686465.8946	679601.2356	672805.2233	666077.171	659416.3993	652822.2353	646294.013	639831.0729	633432.7621	627098.4345
1	Existing	328	Optimize Controls	8	Other Healthcare	3	Cooling		5692617.901	5508019.053	5257907.599	4957970.509	4623422.975	4268206.608	3904481.843	3542376.327	3189936.454	2853225.967
1	Existing	302	High Efficiency Chiller Motors	7	Hospital	3	Cooling		32462976.36	31616140.22	30434289.93	28975180.45	27299251.39	25466488.11	23533874.23	21553479.18	19571165.77	17625861.07
1	Existing	347	Window Film (Standard)	2	Restaurant/ Services	3	Cooling		2967839.06	2676632.856	2226948.062	1703712.457	1194141.918	763626.4264	443408.2119	232509.2957	109399.0379	48032.95608
1	Existing	401	High Efficiency Fan Motor, 15hp, 1800rpm, 92.4%	7	Hospital	4	Ventilation		3138894.658	3107505.711	3076430.654	3045666.348	3015209.684	2985057.587	2955207.012	2925654.941	2896398.392	2867434.408
1	Existing	334	Ceiling Insulation	10	Hotel/Motel	3	Cooling		25414942.81	24364842.77	22604024.61	20227490.43	17409359.51	14378940.98	11380043.51	8723308.091	6608422.923	4954347.152
1	Existing	332	Window Film (Standard)	2	Restaurant/ Services	3	Cooling		42998428.05	37126268.77	28225183.38	18684848.18	10623583.4	5097577.072	2016690.028	677621.7363	218904.7724	67884.43872
1	Existing	336	Cool Roof - DX	7	Hospital	3	Cooling		818637.1617	710868.0741	544675.5686	364296.1056	209792.3821	102176.8318	41070.21534	14081.98477	4619.486614	1444.939086
1	Existing	326	DX Tune Up/ Advanced Diagnostics	4	FoodStore	3	Cooling		8923872.392	7946036.88	6421980.772	4680921.863	3054309.185	1768551.026	899286.1314	396448.221	159026.1143	61598.13578
1	Existing	349	Ceiling Insulation	10	Hotel/Motel	3	Cooling		150676.7056	144536.0884	134218.1042	120248.0899	103624.5568	85687.84129	67883.37979	52074.64103	39466.95249	29594.25793
1	Existing	351	Cool Roof - DX	7	Hospital	3	Cooling		59179.41839	51404.75338	39405.10412	26370.9131	15197.08501	7407.147756	2979.603493	1022.490333	335.6208789	105.0135644
1	Existing	361	HE PTAC, EER=9.6, 1 ton	3	Retail	3	Cooling		1364975.229	1351325.477	1337812.222	1324434.1	1311189.759	1298077.861	1285097.082	1272246.112	1259523.65	1246928.414
1	Existing	314	Roof Insulation	7	Hospital	3	Cooling		10820992.12	10141719.91	9018978.076	7591723.407	6034553.273	4519715.447	3182924.164	2142076.759	1420362.928	927965.8742
1	Existing	161	LED Exit Sign	5	School	1	Indoor Lighting		116235271.2	113056878.7	108750527.4	103557325.2	97711941.25	91432164.82	84912047.43	78318165.94	71788404.41	65432624.43
1	Existing	313	Ceiling Insulation	2	Restaurant/ Services	3	Cooling		560551.9592	540133.3949	505354.5573	457087.2058	397994.1059	332384.4361	265538.1121	204990.3779	155930.9173	117113.4725

Segment		Measure		Bldg	Applicable	End Use	End	Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Number	Segment	Number	Measure	Typ	Building	Number	Use	Yr Index	1	2	3	4	5	6	7	8	9	10
1	Existing	161	LED Exit Sign	7	Hospital	1	Indoor Lighting		35193817.21	34299283.4	33095769.11	31646368.29	30012362.1	28250771.48	26412740.56	24542638.73	22677743.33	20848360.88
1	Existing	161	LED Exit Sign	9	Warehouse	1	Indoor Lighting		229541933	223831516.3	216166433.6	206940588.1	196536282.1	185309452.7	173579908.7	161625884.5	149682080	137940340.8
1	Existing	301	Centrifugal Chiller, 0.51 kW/ton, 500 tons	11	Other	3	Cooling		1629651.183	1613354.671	1597221.125	1581248.913	1565436.424	1549782.06	1534284.239	1518941.397	1503751.983	1488714.463
1	Existing	301	Centrifugal Chiller, 0.51 kW/ton, 500 tons	1	Office	3	Cooling		4952532.929	4903007.6	4853977.524	4805437.749	4757383.371	4709809.538	4662711.442	4616084.328	4569923.485	4524224.25
1	Existing	301	Centrifugal Chiller, 0.51 kW/ton, 500 tons	9	Warehouse	3	Cooling		77237.98994	76465.61004	75700.95394	74943.9444	74194.50496	73452.55991	72718.03431	71990.85397	71270.94543	70558.23597
1	Existing	328	Optimize Controls	10	Hotel/Motel	3	Cooling		20967327.82	20370349.54	19568930.39	18608054.45	17531282.13	16378821.11	15186283.54	13984035.27	12797017.77	11644919.85
1	Existing	301	Centrifugal Chiller, 0.51 kW/ton, 500 tons	5	School	3	Cooling		3653514.855	3616979.707	3580809.91	3545001.811	3509551.793	3474456.275	3439711.712	3405314.595	3371261.449	3337548.834
1	Existing	404	Electronically Commutated Motors (ECM) on an Air Handler Unit	6	College	4	Ventilation		4777719.33	4729942.137	4682642.716	4635816.289	4589458.126	4543563.545	4498127.909	4453146.63	4408615.164	4364529.012
1	Existing	305	Chiller Tune Up/Diagnostics	8	Other Healthcare	3	Cooling		1610306.544	1481507.877	1278724.614	1034360.725	783174.0598	554268.4947	366053.8662	225168.7997	128722.7984	68215.01891
1	Existing	302	High Efficiency Chiller Motors	2	Restaurant/ Services	3	Cooling		1681655.877	1647661.01	1602102.988	1546599.383	1482818.233	1412421.241	1337016.882	1258123.551	1177142.258	1095338.045
1	Existing	404	Electronically Commutated Motors (ECM) on an Air Handler Unit	3	Retail	4	Ventilation		14567369.26	14421695.57	14277478.61	14134703.83	13993356.79	13853423.22	13714888.99	13577740.1	13441962.7	13307543.07
1	Existing	301	Centrifugal Chiller, 0.51 kW/ton, 500 tons	6	College	3	Cooling		1271293.423	1258580.489	1245994.684	1233534.737	1221199.39	1208987.396	1196897.522	1184928.547	1173079.261	1161348.469
1	Existing	301	Centrifugal Chiller, 0.51 kW/ton, 500 tons	8	Other Healthcare	3	Cooling		182501.4083	180676.3942	178869.6303	177080.934	175310.1246	173557.0234	171821.4532	170103.2386	168402.2062	166718.1842
1	Existing	161	LED Exit Sign	4	FoodStore	1	Indoor Lighting		35486997.1	34643773.09	33547916.73	32232108.51	30747335.57	29141136.58	27456439.2	25730904.96	23996683.7	22280479.37
1	Existing	302	High Efficiency Chiller Motors	3	Retail	3	Cooling		28071813.86	27552541.31	26870131.68	26045814.38	25101302.08	24058177.2	22937386.07	21758838.6	20541106.96	19301213.86
1	Existing	603	Heat Pump Water Heater (air source)	5	School	6	Water Heating		4512475.496	4467350.741	4422677.233	4378450.461	4334665.956	4291319.297	4248406.104	4205922.043	4163862.822	4122224.194
1	Existing	347	Window Film (Standard)	4	FoodStore	3	Cooling		500538.8091	456990.0981	388282.1074	306012.7704	222889.7085	149418.8851	91761.04616	51350.13349	26026.05712	12022.87944
1	Existing	335	Roof Insulation	10	Hotel/Motel	3	Cooling		25414942.81	23905997	21379058.82	18120050.96	14510833.84	10947822.24	7760259.044	5251902.214	3495272.651	2287804.747
1	Existing	403	Air Handler Optimization	8	Other Healthcare	4	Ventilation		22719355.87	21684819.79	20130312.24	18187008.37	16000903.59	13716135.85	11461189.35	9339421.162	7424368.911	5759446.976
1	Existing	401	High Efficiency Fan Motor, 15hp, 1800rpm, 92.4%	4	FoodStore	4	Ventilation		2955583.091	2926027.26	2896766.988	2867799.318	2839121.325	2810730.112	2782622.81	2754796.582	2727248.616	2699976.13
1	Existing	322	Hybrid Dessicant-DX System (Trane CDQ)	7	Hospital	3	Cooling		84966.4355	84116.77114	83275.60343	82442.84739	81618.41892	80802.23473	79994.21238	79194.27026	78402.32756	77618.30428
1	Existing	350	Roof Insulation	10	Hotel/Motel	3	Cooling		150676.7056	141883.2527	127102.1247	107954.7761	86651.2624	65523.71231	46541.0813	31552.21611	21022.6789	13768.09317
1	Existing	403	Air Handler Optimization	2	Restaurant/ Services	4	Ventilation		63547691.28	60297310.08	55419357.02	49377178.16	42677960.66	35808002.46	29182114.88	23112631.84	17798696.75	13332691.09
1	Existing	332	Window Film (Standard)	4	FoodStore	3	Cooling		13836193.72	12046708.57	9270367.382	6230165.037	3603168.644	1760068.435	708349.7044	242443.7796	79323.01284	24763.27605
1	Existing	334	Ceiling Insulation	3	Retail	3	Cooling		36688912.7	35574955.77	33659647.29	30906360.1	27377514.19	23261701.63	18866238.17	14729532.44	11276708.94	8492701.834
1	Existing	349	Ceiling Insulation	3	Retail	3	Cooling		1042902.55	1011298.126	956957.6444	878816.5052	778616.748	661687.8751	536748.2414	419111.3549	320888.4818	241674.4177
1	Existing	334	Ceiling Insulation	5	School	3	Cooling		11805271.68	11422122.49	10764381.05	9830211.011	8652675.427	7304367.567	5890097.478	4578832.166	3496911.404	2630882.261
1	Existing	349	Ceiling Insulation	5	School	3	Cooling		2874444.886	2782811.067	2625405.111	2401096.864	2117077.732	1790266.019	1445834.693	1125238.058	859914.2825	647128.5467
1	Existing	307	EMS Optimization	8	Other Healthcare	3	Cooling		1610306.544	1565215.542	1502940.205	1426858.54	1340395.314	1246842.503	1149225.607	1050214.687	952075.433	856653.5315
1	Existing	336	Cool Roof - DX	2	Restaurant/ Services	3	Cooling		14924513.8	13132475.53	10270641.39	7055871.966	4195205.286	2117206.852	883154.7246	314914.0002	106258.1769	33752.10011
1	Existing	322	Hybrid Dessicant-DX System (Trane CDQ)	10	Hotel/Motel	3	Cooling		2823882.535	2795643.709	2767687.272	2740010.399	2712610.295	2685484.192	2658629.351	2632043.057	2605722.626	2579665.4
1	Existing	351	Cool Roof - DX	2	Restaurant/ Services	3	Cooling		1030120.333	906723.1532	709499.5733	487761.1676	290251.7272	146621.4944	61222.39302	21853.31605	7379.296854	2344.950895

FPL com existing_TRC annual eligible stock

Segment		Measure		Bldg	Applicable	End Use	End	Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Number	Segment	Number	Measure	Typ	Building	Number	Use	Yr Index	1	2	3	4	5	6	7	8	9	10
1	Existing	404	Electronically Commutated Motors (ECM) on an Air Handler Unit	4	FoodStore	4	Ventilation		2955583.091	2926027.26	2896766.988	2867799.318	2839121.325	2810730.112	2782622.81	2754796.582	2727248.616	2699976.13
1	Existing	601	High Efficiency Water Heater (electric)	6	College	6	Water Heating		3236869.014	3204500.323	3172455.32	3140730.767	3109323.459	3078230.225	3047447.922	3016973.443	2986803.709	2956935.672
1	Existing	302	High Efficiency Chiller Motors	4	FoodStore	3	Cooling		2653842.066	2607783.559	2548226.884	2476839.627	2395315.631	2305333.796	2208524.492	2106442.853	2000548.571	1892191.499
1	Existing	402	Variable Speed Drive Control	4	FoodStore	4	Ventilation		33.25030978	31.10322642	27.85380766	23.91770017	19.72306108	15.64188592	11.94749516	8.800794096	6.260051523	4.304937653
1	Existing	404	Electronically Commutated Motors (ECM) on an Air Handler Unit	11	Other	4	Ventilation		18214837.54	18032689.16	17852362.27	17673838.65	17497100.26	17322129.26	17148907.96	16977418.88	16807644.7	16639568.25
1	Existing	334	Ceiling Insulation	1	Office	3	Cooling		53523459.38	51942984.07	49225577.86	45300757.27	40235624.91	34281559.14	27873310.48	21802450.03	16709362.46	12589692.51
1	Existing	314	Roof Insulation	2	Restaurant/ Services	3	Cooling		560551.9592	530696.7276	479611.327	411905.1707	334686.9841	256185.4927	183990.0233	125890.1958	84384.50513	55431.21184
1	Existing	349	Ceiling Insulation	1	Office	3	Cooling		11641395.27	11304148.7	10724438.53	9884522.822	8795475.132	7508343.961	6115479.99	4789801.216	3673629.072	2768753.371
1	Existing	404	Electronically Commutated Motors (ECM) on an Air Handler Unit	10	Hotel/Motel	4	Ventilation		13599566.83	13463571.16	13328935.45	13195646.1	13063689.63	12933052.74	12803722.21	12675684.99	12548928.14	12423438.86
1	Existing	313	Ceiling Insulation	4	FoodStore	3	Cooling		884614.0219	856921.0898	809327.8178	741280.7796	654727.3786	554632.9001	448626.8346	349556.9096	267310.9619	201221.0278
1	Existing	304	EMS - Chiller	10	Hotel/Motel	3	Cooling		3747228.925	3602051.186	3392664.826	3135750.298	2848168.888	2545571.905	2241457.91	1946667.42	1669248.936	1414602.926
1	Existing	326	DX Tune Up/ Advanced Diagnostics	8	Other Healthcare	3	Cooling		5692617.901	5227666.938	4458043.213	3506225.573	2523395.606	1646860.229	964478.7285	500626.0679	226904.6847	97913.49844
1	Existing	304	EMS - Chiller	7	Hospital	3	Cooling		2720758.119	2618635.351	2471366.759	2290398.181	2087315.447	1872916.766	1656577.782	1445902.817	1246620.534	1062664.622
1	Existing	322	Hybrid Dessicant-DX System (Trane CDQ)	2	Restaurant/ Services	3	Cooling		1972298.877	1952575.889	1933050.13	1913719.628	1894582.432	1875636.608	1856880.242	1838311.439	1819928.325	1801729.042
1	Existing	515	Oversized Air Cooled Condenser	4	FoodStore	5	Refrigerati on		22166873.19	21898973.18	21603713.06	21285165.57	20947031.02	20592652.15	20225032.97	19846860.11	19460525.46	19068149.39
1	Existing	350	Roof Insulation	3	Retail	3	Cooling		1042902.55	993285.6467	906891.5352	789270.0102	650962.8927	505883.5474	368416.5994	254970.2	172172.7539	113512.5846
1	Existing	335	Roof Insulation	3	Retail	3	Cooling		36688912.7	34957504.31	31939507.73	27822973.19	22971885.23	17871658.67	13028448.05	9024023.136	6096848.034	4020669.854
1	Existing	328	Optimize Controls	5	School	3	Cooling		9739349.133	9561891.105	9338129.355	9075912.424	8782686.067	8465356.699	8130206.203	7782848.726	7428220.402	7070593.835
1	Existing	335	Roof Insulation	5	School	3	Cooling		11805271.68	11218695.64	10203595.04	8835537.057	7245653.154	5598044.136	4054928.38	2793985.524	1881339.018	1238619.506
1	Existing	350	Roof Insulation	5	School	3	Cooling		2874444.886	2732281.336	2486090.074	2153932.735	1767432.601	1366382.012	990303.2266	682672.9821	459819.2612	302777.1563
1	Existing	404	Electronically Commutated Motors (ECM) on an Air Handler Unit	8	Other Healthcare	4	Ventilation		2692664.4	2665737.756	2639080.378	2612689.574	2586562.679	2560697.052	2535090.081	2509739.181	2484641.789	2459795.371
1	Existing	335	Roof Insulation	1	Office	3	Cooling		53523459.38	51052499.62	46733418.39	40812620.24	33793900.73	26368890.65	19275840.77	13381071.29	9053581.344	5974764.547
1	Existing	328	Optimize Controls	3	Retail	3	Cooling		30268352.98	29763134.42	29138669.53	28414258.78	27608097.02	26737024.17	25816377.14	24859923.06	23879855.57	22886838.25
1	Existing	336	Cool Roof - DX	4	FoodStore	3	Cooling		8313785.997	7368297.609	5831072.719	4070033.005	2467086.698	1272699.043	543521.8047	198506.8727	68156.51331	21859.19333
1	Existing	322	Hybrid Dessicant-DX System (Trane CDQ)	3	Retail	3	Cooling		4076545.856	4035780.397	3995422.593	3955468.367	3915913.684	3876754.547	3837987.001	3799607.131	3761611.06	3723994.95
1	Existing	351	Cool Roof - DX	4	FoodStore	3	Cooling		300759.9218	266645.4798	211134.8212	147482.4848	89481.15962	46209.93204	19757.21837	7224.163398	2482.48435	796.5586842
1	Existing	347	Window Film (Standard)	8	Other Healthcare	3	Cooling		224953.1276	211956.0107	190540.098	162899.5872	131972.3739	100908.1018	72492.74482	48686.2758	30396.59221	17531.62034
1	Existing	350	Roof Insulation	1	Office	3	Cooling		11641395.27	11109049.23	10177473.54	8897680.222	7376681.911	5763305.371	4218048.464	2930961.242	1984313.538	1309916.901
1	Existing	322	Hybrid Dessicant-DX System (Trane CDQ)	4	FoodStore	3	Cooling		1201868.336	1189849.652	1177951.156	1166171.644	1154509.928	1142964.828	1131535.18	1120219.828	1109017.63	1097927.454
1	Existing	328	Optimize Controls	1	Office	3	Cooling		44156853.99	43443698.84	42569556.1	41560046.08	40439260.14	39229471.9	37950970.73	36621992.95	35258728.46	33875383.25
1	Existing	404	Electronically Commutated Motors (ECM) on an Air Handler Unit	1	Office	4	Ventilation		29652969.17	29356439.48	29062875.09	28772246.34	28484523.87	28199678.64	27917681.85	27638505.03	27362119.98	27088498.78
1	Existing	304	EMS - Chiller	2	Restaurant/ Services	3	Cooling		140941.4476	136472.6715	130055.3621	122124.5282	113122.3791	103468.4875	93538.46446	83650.97311	74062.04152	64965.17704

Segment		Measure		Bldg	Applicable	End Use	End	Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Number	Segment	Number	Measure	Typ	Building	Number	Use	Yr Index	1	2	3	4	5	6	7	8	9	10
1	Existing	404	Electronically Commutated Motors (ECM) on an Air Handler Unit	9	Warehouse	4	Ventilation		20472571.73	20267846.01	20065167.55	19864515.88	19665870.72	19469212.01	19274519.89	19081774.69	18890956.95	18702047.38
1	Existing	305	Chiller Tune Up/Diagnostics	10	Hotel/Motel	3	Cooling		18629336.43	17478498.9	15622345.51	13287834.75	10742230.89	8242589.116	5993517.638	4122723.814	2677390.353	1637939.481
1	Existing	326	DX Tune Up/ Advanced Diagnostics	10	Hotel/Motel	3	Cooling		20967327.82	19353929.17	18659605.31	13281094.59	9728570.487	6488878.654	3899678.729	2085775.701	978321.9539	431194.3522
1	Existing	304	EMS - Chiller	3	Retail	3	Cooling		2352729.911	2282758.564	2182606.829	2058701.769	1917578.849	1765471.308	1608012.875	1450051.23	1295559.024	1147623.535
1	Existing	314	Roof Insulation	4	FoodStore	3	Cooling		884614.0219	842135.0114	768262.4085	667904.2511	550192.0433	427037.3442	310636.2004	214779.7362	144945.4793	95533.17417
1	Existing	332	Window Film (Standard)	8	Other Healthcare	3	Cooling		6002020.309	5342361.441	4257110.549	2993133.454	1824480.622	943211.9098	401853.018	145555.8599	49517.19708	15779.24594
1	Existing	403	Air Handler Optimization	1	Office	4	Ventilation		250196927.4	242290836.2	230582390.4	215720675.4	198451703.6	179562267	159827440.7	139965746.7	120604642.7	102257599
1	Existing	361	HE PTAC, EER=9.6, 1 ton	1	Office	3	Cooling		1974692.565	1954945.639	1935396.183	1916042.221	1896881.799	1877912.981	1859133.851	1840542.513	1822137.088	1803915.717
1	Existing	361	HE PTAC, EER=9.6, 1 ton	5	School	3	Cooling		1254676.629	1242129.863	1229708.564	1217411.479	1205237.364	1193184.99	1181253.14	1169440.609	1157746.203	1146168.741
1	Existing	403	Air Handler Optimization	5	School	4	Ventilation		93552538.2	90616203.68	86270096.27	80753084.9	74339794.48	67320120.01	59980041.25	52585191.59	45368152.51	38519943.51
1	Existing	361	HE PTAC, EER=9.6, 1 ton	8	Other Healthcare	3	Cooling		502368.9323	497345.2429	492371.7905	487448.0726	482573.5919	477747.856	472970.3774	468240.6736	463558.2669	458922.6842
1	Existing	603	Heat Pump Water Heater (air source)	3	Retail	6	Water Heating		8119171.148	8037979.437	7957599.642	7878023.646	7799243.41	7721250.975	7644038.466	7567598.081	7491922.1	7417002.879
1	Existing	307	EMS Optimization	10	Hotel/Motel	3	Cooling		18629336.43	18269811.42	17799810.86	17235989.76	16594904.86	15892551.67	15144012.85	14363208.72	13562737.21	12753789.2
1	Existing	603	Heat Pump Water Heater (air source)	10	Hotel/Motel	6	Water Heating		4790324.932	4742421.682	4694997.466	4648047.491	4601567.016	4555551.346	4509995.832	4464895.874	4420246.915	4376044.446
1	Existing	313	Ceiling Insulation	8	Other Healthcare	3	Cooling		1288245.235	1260775.579	1215073.884	1146560.704	1051321.142	928063.457	780771.4914	627121.5775	487958.1245	369891.323
1	Existing	361	HE PTAC, EER=9.6, 1 ton	6	College	3	Cooling		483833.235	478994.9026	474204.9536	469462.904	464768.275	460120.5922	455519.3863	450964.1925	446454.5505	441990.005
1	Existing	334	Ceiling Insulation	6	College	3	Cooling		5334500.694	5207537.657	4992379.342	4672472.485	4238032.34	3694169.284	3068724.029	2440050.802	1887563.17	1427570.384
1	Existing	732	Copier Power Management Enabling	8	Other Healthcare	7	Office Equipment		19993033.17	19769976.79	19533092.77	19284373.19	19025621.1	18758463.11	18484362.17	18204630.28	17920440.94	17632841.01
1	Existing	403	Air Handler Optimization	6	College	4	Ventilation		40312006.85	39117835.99	37359617.02	35126956.44	32523106.91	29657846.88	26640724.1	23575137.43	20553590.58	17654301.91
1	Existing	603	Heat Pump Water Heater (air source)	8	Other Healthcare	6	Water Heating		858884.5489	850295.7034	841792.7464	833374.8189	825041.0707	816790.66	808622.7534	800536.5259	792531.1606	784605.849
1	Existing	362	Occupancy Sensor (hotels)	7	Hospital	3	Cooling		776821.3209	761757.5384	741394.5421	716340.8205	687252.1692	654809.9098	619701.145	582601.4224	544160.0127	504987.8657
1	Existing	362	Occupancy Sensor (hotels)	10	Hotel/Motel	3	Cooling		10458662.53	10255851.53	9981694.295	9644383.28	9252747.882	8815961.17	8343274.045	7843781.831	7326226.06	6798832.318
1	Existing	349	Ceiling Insulation	6	College	3	Cooling		326348.1554	318737.2236	305875.3353	286715.1106	260577.9632	227657.1945	189538.13	150974.138	116907.7082	88453.07703
1	Existing	601	High Efficiency Water Heater (electric)	5	School	6	Water Heating		4512475.496	4467350.741	4422677.233	4378450.461	4334665.956	4291319.297	4248406.104	4205922.043	4163862.822	4122224.194
1	Existing	404	Electronically Commutated Motors (ECM) on an Air Handler Unit	5	School	4	Ventilation		11087708.23	10976831.15	10867062.84	10758392.21	10650808.29	10544300.2	10438857.2	10334468.63	10231123.94	10128812.7
1	Existing	302	High Efficiency Chiller Motors	11	Other	3	Cooling		34510260.35	34071348.15	33564432.39	32996034.35	32372460.52	31699767.84	30983739.02	30229866.4	29443342.89	28629058.74
1	Existing	603	Heat Pump Water Heater (air source)	2	Restaurant/ Services	6	Water Heating		2975098.98	2945347.99	2915894.51	2886735.565	2857868.21	2829289.527	2800996.632	2772986.666	2745256.799	2717804.231
1	Existing	347	Window Film (Standard)	10	Hotel/Motel	3	Cooling		251143.4126	238075.3323	216444.8971	188131.1962	155784.0077	122408.9319	90866.6294	63407.75144	41383.85606	25069.97189
1	Existing	404	Electronically Commutated Motors (ECM) on an Air Handler Unit	2	Restaurant/ Services	4	Ventilation		7531578.226	7456262.444	7381699.819	7307882.821	7234803.993	7162455.953	7090831.394	7019923.08	6949723.849	6880226.61
1	Existing	302	High Efficiency Chiller Motors	9	Warehouse	3	Cooling		1635628.022	1615332.412	1592175.805	1566427.292	1538345.738	1508178.725	1476161.855	1442518.355	1407458.926	1371181.79
1	Existing	304	EMS - Chiller	4	FoodStore	3	Cooling		222421.4522	216120.7515	207131.1944	196005.3892	183305.1313	169568.0623	155283.3217	140875.9598	126699.0958	113032.3784

Segment		Measure		Bldg	Applicable	End Use	End	Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Number	Segment	Number	Measure	Typ	Building	Number	Use	Yr Index	1	2	3	4	5	6	7	8	9	10
1	Existing	302	High Efficiency Chiller Motors	1	Office	3	Cooling		104877167.9	103603893	102167434.4	100582887.1	98864701.45	97026643.01	95081768.94	93042419.03	90920218.18	88726088.1
1	Existing	401	High Efficiency Fan Motor, 15hp, 1800rpm, 92.4%	11	Other	4	Ventilation		18214837.54	18032689.16	17852362.27	17673838.65	17497100.26	17322129.26	17148907.96	16977418.88	16807644.7	16639568.25
1	Existing	332	Window Film (Standard)	10	Hotel/Motel	3	Cooling		42360864.23	37901773.13	30467518.39	21672236.42	13393958.59	7030125.014	3042086.359	1118279.701	384317.6177	123126.3713
1	Existing	402	Variable Speed Drive Control	11	Other	4	Ventilation		71224686.85	68166656.76	63477132.59	57572938.03	50909657.68	43929904.46	37022762.45	30497808.44	24573962.12	19381032.99
1	Existing	302	High Efficiency Chiller Motors	6	College	3	Cooling		26921507.78	26596225.15	26230187.18	25827150.46	25390707.21	24924276.22	24431097.93	23914232.87	23376562.85	22820794.39
1	Existing	302	High Efficiency Chiller Motors	8	Other Healthcare	3	Cooling		3864735.705	3819113.383	3768424.876	3713129.444	3653663.835	3590441.769	3523853.838	3454267.739	3382028.767	3307460.517
1	Existing	302	High Efficiency Chiller Motors	5	School	3	Cooling		77368549.88	76439499.24	75397518.17	74252968.69	73015745.24	71695253.21	70300398.33	68839584.98	67320721.59	65751231.72
1	Existing	305	Chiller Tune Up/Diagnostics	5	School	3	Cooling		32236895.78	30786221.54	28425848.81	25346387.85	21796878.76	18051482.55	14373655.47	10984466.84	8040639.483	5625473.105
1	Existing	328	Optimize Controls	6	College	3	Cooling		4400963.072	4342632.359	4275465.277	4200742.311	4119647.076	4033263.915	3942578.31	3848479.397	3751764.014	3653141.788
1	Existing	322	Hybrid Dessicant-DX System (Trane CDQ)	9	Warehouse	3	Cooling		1511664.342	1496547.699	1481582.222	1466766.399	1452098.735	1437577.748	1423201.971	1408969.951	1394880.251	1380931.449
1	Existing	335	Roof Insulation	6	College	3	Cooling		5334500.694	5129279.029	4764738.663	4245320.092	3599029.084	2878589.513	2153960.36	1523830.054	1043599.482	692793.0306
1	Existing	350	Roof Insulation	6	College	3	Cooling		326348.1554	313873.0873	291705.9031	260081.4061	220666.8487	176648.5417	132291.3081	93653.80852	64166.96883	42606.16793
1	Existing	362	Occupancy Sensor (hotels)	2	Restaurant/ Services	3	Cooling		9267289.577	9120962.39	8934365.24	8711211.183	8455391.344	8170899.667	7861765.822	7531996.333	7185523.745	6826163.444
1	Existing	314	Roof Insulation	8	Other Healthcare	3	Cooling		1288245.235	1242991.231	1162344.319	1045461.18	896574.3395	726117.7352	549943.6222	392916.9367	270792.2856	180312.332
1	Existing	326	DX Tune Up/ Advanced Diagnostics	5	School	3	Cooling		9739349.133	9213587.843	8306211.133	7089037.351	5683768.925	4242805.75	2918114.561	1826849.222	1026311.732	511131.4524
1	Existing	305	Chiller Tune Up/Diagnostics	3	Retail	3	Cooling		11696589.11	11241064.05	10502511.35	9528037.338	8382293.713	7140522.896	5880221.091	4672708.066	3575949.665	2629751.675
1	Existing	336	Cool Roof - DX	8	Other Healthcare	3	Cooling		7386855.991	6897846.191	5516159.831	4068100.078	2639520.319	1472842.697	685346.5642	272448.3114	99583.91415	33091.47033
1	Existing	326	DX Tune Up/ Advanced Diagnostics	3	Retail	3	Cooling		30268352.98	28786476.03	26220264.55	22728217.75	18608480.34	14264016.04	10131413.77	6587914.113	3866662.529	2014736.853
1	Existing	351	Cool Roof - DX	8	Other Healthcare	3	Cooling		276856.1705	251131.0243	206971.9586	152791.8805	99260.20493	55467.14048	25851.33462	10292.77989	3766.535752	1252.447751
1	Existing	313	Ceiling Insulation	10	Hotel/Motel	3	Cooling		14903469.14	14599944.47	14100116.81	13349498.56	12296708.96	10915009	9235465.589	7452906.117	5814978.089	4412691.733
1	Existing	211	Outdoor Lighting Controls (Photocell/Timeclock)	6	College	2	Outdoor Lighting		6388102.092	6298620.143	6192086.327	6070568.619	5936052.97	5790425.336	5635459.248	5472808.043	5304000.939	5130442.2
1	Existing	402	Variable Speed Drive Control	1	Office	4	Ventilation		123484266.5	118813263.1	111671086.8	102616286.2	92266329.53	81235869.1	70085965.61	59288301.06	49205444.54	40085827.99
1	Existing	305	Chiller Tune Up/Diagnostics	1	Office	3	Cooling		43698819.97	42044001.6	39364414.12	35822547.76	31643680.33	27092808.53	22446374.38	17962961.87	13857505.35	10282996.65
1	Existing	307	EMS Optimization	5	School	3	Cooling		32236895.78	31777473.46	31225677.1	30592881.05	29890036.55	29127559.6	28315252.06	27462250.95	26577000.91	25667245.73
1	Existing	326	DX Tune Up/ Advanced Diagnostics	1	Office	3	Cooling		44156853.99	42081452.57	38484915.25	33564101.63	27709168.33	21465395.54	15443989.62	10196616.2	6091225.808	3238267
1	Existing	403	Air Handler Optimization	3	Retail	4	Ventilation		122912178.1	120428397.7	116986096.8	112681434.9	107624466	101935234.9	95739889.57	89166932.25	82343714.13	75393255.56
1	Existing	603	Heat Pump Water Heater (air source)	11	Other	6	Water Heating		9191589.532	9099673.636	9008676.9	8918590.131	8829404.23	8741110.188	8653699.086	8567162.095	8481490.474	8396675.569
1	Existing	732	Copier Power Management Enabling	3	Retail	7	Office Equipment		108162716.8	106955925.4	105674293.6	104328603.1	102928612.5	101483125.7	100000060.4	98486517.93	96948849.41	95392720.9
1	Existing	506	Compressor VSD retrofit	4	FoodStore	5	Refrigerati on		17733498.55	17540047.51	17337293.75	17126647.76	16909379.06	16686627.16	16459412.22	16228645.35	15995138.33	15759612.76
1	Existing	732	Copier Power Management Enabling	2	Restaurant/ Services	7	Office Equipment		55921968.33	55298036.02	54635409.58	53939663.39	53215842.89	52468499.78	51701727.82	50919198.43	50124195.37	49319648.07
1	Existing	732	Copier Power Management Enabling	6	College	7	Office Equipment		35474566.03	35078769.34	34658426.68	34217074.2	33757912.54	33283829.1	32797420.8	32301016.82	31796699.66	31286328.23

Segment		Measure		Bldg	Applicable	End Use	End	Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Number	Segment	Number	Measure	Typ	Building	Number	Use	Yr Index	1	2	3	4	5	6	7	8	9	10
1	Existing	362	Occupancy Sensor (hotels)	3	Retail	3	Cooling		18427165.59	18167181.86	17849464.94	17478696.54	17059670.46	16597233.92	16096236.93	15561489.14	14997723.54	14409566.19
1	Existing	501	High-efficiency fan motors	4	FoodStore	5	Refrigeration		42117059.05	41675037.73	41222208.47	40760397.16	40291240.34	39816202.2	39336590.42	38853570.91	38368181.41	37881344
1	Existing	732	Copier Power Management Enabling	9	Warehouse	7	Office Equipment		152008845.1	150312851.8	148511678.2	146620477	144652962.8	142621508.4	140537241.5	138410142.1	136249136.1	134062186.5
1	Existing	732	Copier Power Management Enabling	1	Office	7	Office Equipment		220173296.1	217716776.7	215107910.7	212368645.6	209518846.2	206576433.6	203557525.7	200476577.5	197346518	194178880.8
1	Existing	732	Copier Power Management Enabling	4	FoodStore	7	Office Equipment		21945204.45	21700357.21	21440325.22	21167296.01	20883249.59	20589972.18	20289070.29	19981984.7	19670004.05	19354277.96
1	Existing	732	Copier Power Management Enabling	10	Hotel/Motel	7	Office Equipment		100976783.7	99850164.51	98653675.41	97397382.03	96090394.92	94740933.07	93356388.6	91943390.94	90507869.58	89055114.2
1	Existing	334	Ceiling Insulation	11	Other	3	Cooling		11981679.53	11763988.68	11417106.08	10896740.39	10152719.98	9141930.49	7856413.616	6424413.084	5052277.097	3845618.92
1	Existing	732	Copier Power Management Enabling	7	Hospital	7	Office Equipment		23306292.84	23046259.16	22770098.62	22480134.5	22178469.63	21867001.04	21547434.94	21221301.47	20889969.25	20554659.19
1	Existing	732	Copier Power Management Enabling	11	Other	7	Office Equipment		135245168.7	133736206.5	132133860.6	130451012.8	128700465.8	126893028.2	125038600.9	123146063.3	121223357.5	119277588.4
1	Existing	403	Air Handler Optimization	10	Hotel/Motel	4	Ventilation		114746345.1	112546320.8	109535397.2	105789430.9	101394841.6	96445900.84	91042031.08	85285186.9	79277377.05	73118376.64
1	Existing	322	Hybrid Dessicant-DX System (Trane CDQ)	1	Office	3	Cooling		5947051.042	5887580.532	5828704.726	5770417.679	5712713.502	5655586.367	5599030.503	5543040.198	5487609.796	5432733.698
1	Existing	349	Ceiling Insulation	11	Other	3	Cooling		316050.0461	312382.3115	303411.5307	289968.8829	270695.9928	244361.532	210597.9978	172643.6721	135978.0733	103562.6106
1	Existing	732	Copier Power Management Enabling	5	School	7	Office Equipment		82326233.61	81407698.37	80432195.69	79407932.42	78342336.71	77242109.78	76113278.69	74961248.66	73790854.19	72606408.17
1	Existing	307	EMS Optimization	1	Office	3	Cooling		43698819.97	43124191.65	42455593.29	41704026.17	40879965.2	39993298.7	39053290.78	38068562.26	37047086.72	35996198.25
1	Existing	402	Variable Speed Drive Control	5	School	4	Ventilation		55579439.24	53695761.85	50831250.7	47184798.59	42977967.38	38435337.3	33767758.32	29159737	24761438.98	20685144.21
1	Existing	347	Window Film (Standard)	5	School	3	Cooling		5964925.863	5773552.225	5461324.258	5036214.293	4514644.396	3921225.909	3287336.987	2648430.849	2040229.72	1494303.604
1	Existing	307	EMS Optimization	3	Retail	3	Cooling		11696589.11	11543690.79	11366240.02	11167100.9	10948998.13	10714502.23	10466020.47	10205792.51	9935889.732	9658217.66
1	Existing	401	High Efficiency Fan Motor, 15hp, 1800rpm, 92.4%	1	Office	4	Ventilation		29652969.17	29356439.48	29062875.09	28772246.34	28484523.87	28199678.64	27917681.85	27638505.03	27362119.98	27088498.78
1	Existing	321	DX Packaged System, EER=10.9, 10 tons	10	Hotel/Motel	3	Cooling		2541494.281	2516079.338	2490918.545	2466009.359	2441349.266	2416935.773	2392766.415	2368838.751	2345150.364	2321698.86
1	Existing	347	Window Film (Standard)	3	Retail	3	Cooling		1634193.532	1586398.233	1509212.157	1403871.873	1273458.41	1122974.384	959201.9333	790284.2624	625011.9163	471860.955
1	Existing	322	Hybrid Dessicant-DX System (Trane CDQ)	8	Other Healthcare	3	Cooling		766682.5456	759015.7201	751425.5629	743911.3073	736472.1942	729107.4723	721816.3976	714598.2336	707452.2513	700377.7287
1	Existing	347	Window Film (Standard)	1	Office	3	Cooling		3942096.577	3824912.517	3635290.823	3376575.54	3056751.331	2688579.211	2289163.641	1878820.328	1479219.488	1110952.788
1	Existing	322	Hybrid Dessicant-DX System (Trane CDQ)	11	Other	3	Cooling		1331297.725	1317984.748	1304804.901	1291756.852	1278839.283	1266050.89	1253390.381	1240856.478	1228447.913	1216163.434
1	Existing	332	Window Film (Standard)	5	School	3	Cooling		24497798.06	22420993.99	18759085.26	14095568.3	9308582.589	5260201.123	2457814.08	970093.0342	350089.5236	115094.7117
1	Existing	322	Hybrid Dessicant-DX System (Trane CDQ)	5	School	3	Cooling		1311696.853	1298579.884	1285594.085	1272738.145	1260010.763	1247410.656	1234936.549	1222587.184	1210361.312	1198257.699
1	Existing	304	EMS - Chiller	11	Other	3	Cooling		2892343.265	2831847.372	2748641.745	2646486.921	2529165.428	2400336.465	2263426.173	2121551.33	1977472.633	1833572.844
1	Existing	313	Ceiling Insulation	3	Retail	3	Cooling		9357271.288	9220432.876	9022887.275	8736311.789	8319951.543	7719878.22	6879189.369	5821902.971	4681547.348	3594095.109
1	Existing	401	High Efficiency Fan Motor, 15hp, 1800rpm, 92.4%	3	Retail	4	Ventilation		14567369.26	14421695.57	14277478.61	14134703.83	13993356.79	13853423.22	13714888.99	13577740.1	13441962.7	13307543.07
1	Existing	304	EMS - Chiller	9	Warehouse	3	Cooling		137083.8019	134310.6899	130520.0327	125876.4495	120545.1654	114686.0326	108449.0094	101971.0009	95373.90141	88763.64855
1	Existing	332	Window Film (Standard)	3	Retail	3	Cooling		57490303.24	52933001.92	44782867.32	34182372.36	23016924.99	13296511.87	6358739.337	2583609.43	938763.1296	311013.7957
1	Existing	332	Window Film (Standard)	1	Office	3	Cooling		18124515.24	16669643.95	14074383.84	10711894.63	7187069.703	4134925.685	1968909.226	790668.7443	288749.2085	95526.19662
1	Existing	314	Roof Insulation	10	Hotel/Motel	3	Cooling		14903469.14	14417516.47	13551391.85	12280115.25	10630065.05	8698692.908	6655812.573	4795478.712	3322789.321	2218245.026
1	Existing	328	Optimize Controls	11	Other	3	Cooling		9884885.611	9771875.709	9650014.547	9520532.8	9384551	9243085.335	9097053.996	8947283.822	8794517.036	8639417.914
1	Existing	313	Ceiling Insulation	5	School	3	Cooling		25789516.63	25390950.23	24797760.44	23925303.15	22658073.93	20855918.62	18395402.39	15408745.18	12304221.78	9420594.086

Segment Number	Segment	Measure Number	Measure	Bldg Typ	Applicable Building	End Use Number	End Use	Year Yr Index	2010 1	2011 2	2012 3	2013 4	2014 5	2015 6	2016 7	2017 8	2018 9	2019 10
1	Existing	601	High Efficiency Water Heater (electric)	3	Retail	6	Water Heating		8119171.148	8037979.437	7957599.642	7878023.646	7799243.41	7721250.975	7644038.466	7567598.081	7491922.1	7417002.879
1	Existing	321	DX Packaged System, EER=10.9, 10 tons	7	Hospital	3	Cooling		76469.79195	75705.09403	74948.04309	74198.56266	73456.57703	72722.01126	71994.79115	71274.84323	70562.0948	69856.47385
1	Existing	322	Hybrid Dessicant-DX System (Trane CDQ)	6	College	3	Cooling		592722.2993	586795.0763	580927.1255	575117.8543	569366.6757	563673.009	558036.2789	552455.9161	546931.3569	541462.0434
1	Existing	601	High Efficiency Water Heater (electric)	10	Hotel/Motel	6	Water Heating		4790324.932	4742421.682	4694997.466	4648047.491	4601567.016	4555551.346	4509995.832	4464895.874	4420246.915	4376044.446
1	Existing	402	Variable Speed Drive Control	6	College	4	Ventilation		31559399.65	30606253.02	29169721.35	27336973.96	25205695.3	22876531.58	20446439.96	18003382.31	15622582.41	13364366.38
1	Existing	401	High Efficiency Fan Motor, 15hp, 1800rpm, 92.4%	5	School	4	Ventilation		11087708.23	10976831.15	10867062.84	10758392.21	10650808.29	10544300.2	10438857.2	10334468.63	10231123.94	10128812.7
1	Existing	335	Roof Insulation	11	Other	3	Cooling		11981679.53	11630709	11007721.13	10078677.93	8840973.868	7344857.28	5706380.708	4164091.023	2909013.481	1949582.649
1	Existing	601	High Efficiency Water Heater (electric)	8	Other Healthcare	6	Water Heating		858884.5489	850295.7034	841792.7464	833374.8189	825041.0707	816790.66	808622.7534	800536.5259	792531.1606	784605.849
1	Existing	350	Roof Insulation	11	Other	3	Cooling		318050.0461	308809.5494	292415.9753	267942.1062	235273.9498	195687.5384	152215.9015	111187.8293	77725.83847	52106.88449
1	Existing	304	EMS - Chiller	1	Office	3	Cooling		8789871.973	8621947.677	8395095.507	8118477.535	7801251.307	7452273.276	7079874.301	6691701.703	6294619.844	5894659.939
1	Existing	313	Ceiling Insulation	1	Office	3	Cooling		34959055.97	34460521.43	33751741.51	32731577.11	31251114.31	29105932.49	26064689.45	22172736.41	17894506.38	13757379.33
1	Existing	304	EMS - Chiller	6	College	3	Cooling		2256321.48	2212431.643	2152909.226	2080215.337	1996813.262	1905085.746	1807272.394	1705425.697	1601383.491	1496755.207
1	Existing	402	Variable Speed Drive Control	3	Retail	4	Ventilation		30479183.29	29601625.54	28285299.09	26605468.21	24646633.08	22496382.3	20239913.51	17955568.41	15711566.98	13563979.12
1	Existing	304	EMS - Chiller	8	Other Healthcare	3	Cooling		323907.7936	317839.1045	309676.6216	299741.5315	288354.363	275825.019	262445.2307	248463.2411	234180.4429	219749.6631
1	Existing	304	EMS - Chiller	5	School	3	Cooling		6484344.13	6359422.667	6190355.478	5984046.273	5747399.829	5487094.541	5209410.266	4920107.29	4624350.306	4326670.242
1	Existing	351	Cool Roof - DX	10	Hotel/Motel	3	Cooling		251127.8427	230111.2384	193212.8984	146436.1042	98320.38909	57094.96592	27764.15059	11519.98059	4348.09544	1472.044072
1	Existing	601	High Efficiency Water Heater (electric)	2	Restaurant/ Services	6	Water Heating		2975098.98	2945347.99	2915894.51	2886735.565	2857868.21	2829289.527	2800996.632	2772986.666	2745256.799	2717804.231
1	Existing	305	Chiller Tune Up/Diagnostics	6	College	3	Cooling		11217294.91	10905138.83	10413619.16	9757203.548	8959099.653	8050301.582	7067863.812	6052467.237	5045451.247	4085595.939
1	Existing	326	DX Tune Up/ Advanced Diagnostics	6	College	3	Cooling		4400963.072	4250367.958	3992028.697	3627352.655	3168452.368	2639896.536	2078278.079	1528416.402	1035776.753	636403.2992
1	Existing	336	Cool Roof - DX	10	Hotel/Motel	3	Cooling		42358238.02	38859787.76	32701559.05	24863456.2	16760914.42	9778872.693	4780037.551	1993359.135	755234.3265	256252.8975
1	Existing	401	High Efficiency Fan Motor, 15hp, 1800rpm, 92.4%	10	Hotel/Motel	4	Ventilation		13599566.83	13463571.16	13328935.45	13195646.1	13063689.63	12933052.74	12803722.21	12675684.99	12548928.14	12423438.86
1	Existing	401	High Efficiency Fan Motor, 15hp, 1800rpm, 92.4%	8	Other Healthcare	4	Ventilation		2692664.4	2665737.756	2639080.378	2612689.574	2586562.679	2560697.052	2535090.081	2509739.181	2484641.789	2459795.371
1	Existing	603	Heat Pump Water Heater (air source)	1	Office	6	Water Heating		17334927.32	17161578.05	16989962.27	16820062.65	16651862.02	16485343.4	16320489.97	16157285.07	15995712.22	15835755.09
1	Existing	402	Variable Speed Drive Control	9	Warehouse	4	Ventilation		197299560.3	192011577.5	184145873.8	174111934	162370462.9	149402955.9	135684113.6	121658699.8	107723784.5	94216691.74
1	Existing	307	EMS Optimization	6	College	3	Cooling		11217294.91	11086608.08	10943186.02	10788427.51	10623638.82	10450034.94	10268741.91	10080799.97	9887167.326	9688724.394
1	Existing	321	DX Packaged System, EER=10.9, 10 tons	3	Retail	3	Cooling		3668891.27	3632202.358	3595880.334	3559921.531	3524322.315	3489079.092	3454188.301	3419646.418	3385449.954	3351595.455
1	Existing	321	DX Packaged System, EER=10.9, 10 tons	2	Restaurant/ Services	3	Cooling		1775068.99	1757318.3	1739745.117	1722347.665	1705124.189	1688072.947	1671192.217	1654480.295	1637935.492	1621556.137
1	Existing	513	High R-Value Glass Doors	4	FoodStore	5	Refrigerati on		42117059.05	41683996.62	41246240.37	40804827.82	40360685.93	39914641.64	39467431.62	39019711.1	38572061.99	38125000.18
1	Existing	402	Variable Speed Drive Control	10	Hotel/Motel	4	Ventilation		9996816.415	9738558.542	9356293.918	8868941.213	8297801.659	7665224.036	6993384.483	6303248.684	5613757.657	4941253.748
1	Existing	401	High Efficiency Fan Motor, 15hp, 1800rpm, 92.4%	6	College	4	Ventilation		4777719.33	4729942.137	4682642.716	4635816.289	4589458.126	4543563.545	4498127.909	4453146.63	4408615.164	4364529.012
1	Existing	603	Heat Pump Water Heater (air source)	4	FoodStore	6	Water Heating		1593119.876	1577188.677	1561416.79	1545802.622	1530344.596	1515041.15	1499890.739	1484891.831	1470042.913	1455342.484
1	Existing	403	Air Handler Optimization	11	Other	4	Ventilation		153687691.7	151565662.2	148971928.9	145932926.2	142476840.9	138633370.8	134433512.6	129909374.3	125094010.4	120021274.4
1	Existing	314	Roof Insulation	3	Retail	3	Cooling		9357271.288	9152645.251	8804033.332	8270855.985	7514731.767	6516151.657	5301654.339	4028340.059	2890169.79	1961351.89

Segment		Measure		Bldg	Applicable	End Use	End	Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Number	Segment	Number	Measure	Typ	Building	Number	Use	Yr Index	1	2	3	4	5	6	7	8	9	10
1	Existing	402	Variable Speed Drive Control	8	Other Healthcare	4	Ventilation		25949915.28	25376065.29	24548448.3	23499385.77	22265290.91	20884888.92	19397540.74	17841742.72	16253852.8	14667073.16
1	Existing	351	Cool Roof - DX	3	Retail	3	Cooling		1090092.152	1015839.884	880776.9349	699207.107	498009.8506	310039.4483	162911.163	72866.25817	29117.72425	10196.61105
1	Existing	336	Cool Roof - DX	1	Office	3	Cooling		43255340.52	40261901.02	34829547.01	27557592.2	19543804.3	12105159.81	6324419.873	2813104.38	1119360.217	390987.2491
1	Existing	351	Cool Roof - DX	1	Office	3	Cooling		9408071.198	8760770.216	7585068.148	6008767.053	4268143.133	2648595.962	1386687.813	618058.526	246315.6526	86117.34818
1	Existing	314	Roof Insulation	5	School	3	Cooling		25789516.63	25185901.92	24143115.73	22553073.67	20327377.25	17447611.1	14034345.49	10553895.74	7519529.335	5086388.874
1	Existing	211	Outdoor Lighting Controls (Photocell/Timeclock)	9	Warehouse	2	Outdoor Lighting		28393455.89	28084153.87	27758179.51	27417334.26	27063279.72	26697545.31	26321536.15	25936541.03	25543740.22	25144213.16
1	Existing	336	Cool Roof - DX	3	Retail	3	Cooling		38349024.86	35822561.32	31205476.72	24943781.15	17925157.61	11278623.97	5997462.894	2713767.408	1094120.779	385195.7887
1	Existing	314	Roof Insulation	1	Office	3	Cooling		34959055.97	34201768.93	32914425.58	30945019.31	28147290.97	24441950.01	19918876.74	15157603.73	10886024.04	7391082.11
1	Existing	347	Window Film (Standard)	6	College	3	Cooling		747983.4451	733016.0979	710601.9063	680422.9742	642370.0732	596619.5346	543717.0395	484658.6626	420952.5525	354636.635
1	Existing	336	Cool Roof - DX	5	School	3	Cooling		15687612.35	14811315	12655607.9	10031537.64	7131065.078	4429223.149	2321317.364	1035657.826	413055.8895	144479.1148
1	Existing	351	Cool Roof - DX	5	School	3	Cooling		3819749.203	3559217.765	3085409.171	2448678.029	1743442.8	1084928.005	569805.4419	254741.7288	101759.7628	35627.1979
1	Existing	321	DX Packaged System, EER=10.9, 10 tons	4	FoodStore	3	Cooling		1081681.502	1070864.687	1060156.04	1049554.48	1039058.935	1028668.346	1018381.662	1008197.846	998115.8671	988134.7084
1	Existing	401	High Efficiency Fan Motor, 15hp, 1800rpm, 92.4%	9	Warehouse	4	Ventilation		20472571.73	20267846.01	20065167.55	19864515.88	19665870.72	19469212.01	19274519.89	19081774.69	18890956.95	18702047.38
1	Existing	601	High Efficiency Water Heater (electric)	11	Other	6	Water Heating		9191589.532	9099673.636	9008676.9	8918590.131	8829404.23	8741110.188	8653699.086	8567162.095	8481490.474	8396675.569
1	Existing	332	Window Film (Standard)	6	College	3	Cooling		12226568.9	11469646.96	10060511.06	8094769.271	5829487.076	3640944.958	1893367.399	824155.6729	318220.7566	108415.6781
1	Existing	401	High Efficiency Fan Motor, 15hp, 1800rpm, 92.4%	2	Restaurant/ Services	4	Ventilation		7531578.226	7456262.444	7381699.819	7307882.821	7234803.993	7162455.953	7090831.394	7019923.08	6949723.849	6880226.61
1	Existing	362	Occupancy Sensor (hotels)	5	School	3	Cooling		16938134.49	16750117.63	16548028.54	16332718.64	16104989.09	15865592.41	15615234.44	15354576.52	15084237.97	14804798.63
1	Existing	362	Occupancy Sensor (hotels)	1	Office	3	Cooling		26658349.63	26363357.17	26046961.39	25710453.22	25355045.34	24981874.82	24592006.27	24186435.34	23766092.5	23331847.15
1	Existing	313	Ceiling Insulation	6	College	3	Cooling		8973835.928	8861030.043	8714846.537	8516712.847	8236201.835	7823904.226	7204780.693	6327990.273	5235256.251	4065720.12
1	Existing	362	Occupancy Sensor (hotels)	6	College	3	Cooling		6531748.672	6459658.541	6382476.517	6300508.943	6214043.177	6123348.26	6028675.701	5930260.334	5828321.248	5723062.764
1	Existing	362	Occupancy Sensor (hotels)	8	Other Healthcare	3	Cooling		6781980.586	6707453.866	6627904.102	6543632.294	6454920.086	6362030.51	6265208.788	6164683.247	6060686.258	5953355.234
1	Existing	305	Chiller Tune Up/Diagnostics	11	Other	3	Cooling		14379275.15	14098704.6	13688030.32	13148017.15	12482960.3	11701148.74	10815222.88	9842353.192	8804153.731	7726240.244
1	Existing	326	DX Tune Up/ Advanced Diagnostics	11	Other	3	Cooling		9884885.611	9659190.249	9294969.165	8777498.745	8097528.373	7255640.302	6267651.196	5170066.873	4023330.321	2909213.5
1	Existing	211	Outdoor Lighting Controls (Photocell/Timeclock)	7	Hospital	2	Outdoor Lighting		4405036.741	4358461.784	4310334.871	4260831.559	4210112.689	4158325.398	4105604.103	4052071.444	3997839.175	3943009.019
1	Existing	307	EMS Optimization	11	Other	3	Cooling		14379275.15	14226107.96	14066955.66	13902494.02	13733343.1	13560070.87	13383196.83	13203195.5	13020499.75	12835503.98
1	Existing	402	Variable Speed Drive Control	2	Restaurant/ Services	4	Ventilation		107.3249897	105.3154353	102.5273905	99.04062856	94.94456363	90.33513196	85.31178691	79.97469355	74.42219002	68.74856312
1	Existing	321	DX Packaged System, EER=10.9, 10 tons	9	Warehouse	3	Cooling		1360497.908	1346892.929	1333424	1320089.76	1306888.862	1293819.973	1280881.774	1268072.956	1255392.226	1242838.304
1	Existing	347	Window Film (Standard)	11	Other	3	Cooling		657562.9044	647856.6841	634922.7141	618437.2564	598065.0614	573474.8786	544364.548	510499.2917	471767.2031	428255.3096
1	Existing	314	Roof Insulation	6	College	3	Cooling		8973835.928	8821994.024	8584051.208	8224408.326	7696143.985	6945373.713	5930654.419	4723870.228	3504655.039	2416170.511
1	Existing	601	High Efficiency Water Heater (electric)	1	Office	6	Water Heating		17334927.32	17161578.05	16989962.27	16820062.65	16651862.02	16485343.4	16320489.97	16157285.07	15995712.22	15835755.09
1	Existing	211	Outdoor Lighting Controls (Photocell/Timeclock)	8	Other Healthcare	2	Outdoor Lighting		3956963.022	3915977.232	3874241.627	3831852.504	3788897.584	3745456.676	3701602.297	3657400.255	3612910.2	3568186.129
1	Existing	332	Window Film (Standard)	11	Other	3	Cooling		24771912.75	23670579.66	21568907.6	18411620.62	14363313.24	9896692.901	5747918.867	2775958.104	1153543.911	408533.1446
1	Existing	321	DX Packaged System, EER=10.9, 10 tons	11	Other	3	Cooling		1198167.953	1186186.273	1174324.411	1162581.167	1150955.355	1139445.801	1128051.343	1116770.83	1105603.122	1094547.09
1	Existing	601	High Efficiency Water Heater (electric)	4	FoodStore	6	Water Heating		1593119.876	1577188.677	1561416.79	1545802.622	1530344.596	1515041.15	1499890.739	1484891.831	1470042.913	1455342.484
1	Existing	313	Ceiling Insulation	11	Other	3	Cooling		11503420.12	11373447.44	11221785.42	11034710.91	10787792.03	10435795.64	9893118.038	9041745.918	7776127.044	6150441.944
1	Existing	351	Cool Roof - DX	6	College	3	Cooling		511946.1587	487846.8574	442461.0695	375984.8537	293083.9207	203676.277	121334.7784	61392.21517	27008.90259	10029.70815
1	Existing	336	Cool Roof - DX	6	College	3	Cooling		8368293.474	7983024.816	7256837.469	6188594.29	4847750.372	3389713.487	2033938.269	1036573.897	458658.6681	170931.6986
1	Existing	321	DX Packaged System, EER=10.9, 10 tons	6	College	3	Cooling		533450.0694	528115.5687	522834.413	517606.0688	512430.0082	507305.7081	502232.651	497210.3245	492238.2212	487315.839

Segment		Measure		Bldg	Applicable	End Use	End	Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Number	Segment	Number	Measure	Typ	Building	Number	Use	Yr Index	1	2	3	4	5	6	7	8	9	10
1	Existing	321	DX Packaged System, EER=10.9, 10 tons	1	Office	3	Cooling		5352345.938	5298822.478	5245834.254	5193375.911	5141442.152	5090027.73	5039127.453	4988736.179	4938848.817	4889460.329
1	Existing	211	Outdoor Lighting Controls (Photocell/Timeclock)	3	Retail	2	Outdoor Lighting		18640040.68	18450009.73	18258823.54	18066719.61	17873912.78	17680597.18	17486947.93	17293122.73	17099263.36	16905497.05
1	Existing	321	DX Packaged System, EER=10.9, 10 tons	8	Other Healthcare	3	Cooling		690014.291	683114.1481	676283.0066	669520.1766	662824.9748	656196.7251	649634.7578	643138.4102	636707.0261	630339.9559
1	Existing	321	DX Packaged System, EER=10.9, 10 tons	5	School	3	Cooling		1180527.168	1168721.896	1157034.677	1145464.33	1134009.687	1122669.59	1111442.894	1100328.465	1089325.181	1078431.929
1	Existing	504	Evaporator fan controller for MT walk-ins	4	FoodStore	5	Refrigerati on		35466997.1	35109877.1	34754324.22	34400533.02	34048674.69	33698899.44	33351338.63	33006106.7	32663302.93	32323013
1	Existing	314	Roof Insulation	11	Other	3	Cooling		11503420.12	11345561.28	11125784.23	10811880.9	10353302.21	9672926.221	8664492.987	7286640.442	5651027.565	3982143.044
1	Existing	211	Outdoor Lighting Controls (Photocell/Timeclock)	1	Office	2	Outdoor Lighting		39501348.99	39102014.31	38702955.84	38304438.89	37906701.52	37509956.92	37114395.48	36720186.85	36327481.66	35936413.26
1	Existing	603	Heat Pump Water Heater (air source)	9	Warehouse	6	Water Heating		9719399.009	9622205.019	9525982.969	9430723.139	9336415.908	9243051.749	9150621.231	9059115.019	8968523.869	8878838.63
1	Existing	351	Cool Roof - DX	11	Other	3	Cooling		489713.3178	473086.6618	441881.8008	393697.459	328103.3095	248608.097	164318.7644	92486.24389	44371.66304	17404.09532
1	Existing	336	Cool Roof - DX	11	Other	3	Cooling		18448631.3	17837246.34	16691782.34	14917842.12	12488901.43	9520805.356	6340692.594	3597580.818	1737621.812	684506.1223
1	Existing	211	Outdoor Lighting Controls (Photocell/Timeclock)	4	FoodStore	2	Outdoor Lighting		3957544.966	3917606.7	3877753.867	3838008.11	3798388.782	3758913.144	3719596.549	3680452.604	3641493.326	3602729.281
1	Existing	211	Outdoor Lighting Controls (Photocell/Timeclock)	5	School	2	Outdoor Lighting		16011859.53	15850139.37	15688654.54	15527501.99	15366768.62	15206532.06	15046861.52	14887818.5	14729457.49	14571826.55
1	Existing	601	High Efficiency Water Heater (electric)	9	Warehouse	6	Water Heating		9719399.009	9622205.019	9525982.969	9430723.139	9336415.908	9243051.749	9150621.231	9059115.019	8968523.869	8878838.63
1	Existing	349	Ceiling Insulation	9	Warehouse	3	Cooling		410339.8816	406162.405	401909.1893	397502.4001	392791.947	387461.0888	380756.7499	370876.9117	352303.2306	305537.8281
1	Existing	211	Outdoor Lighting Controls (Photocell/Timeclock)	11	Other	2	Outdoor Lighting		26358855.06	26094580.9	25832336.54	25572144.19	25314021.86	25057983.72	24804040.49	24552199.73	24302466.13	24054841.79
1	Existing	350	Roof Insulation	9	Warehouse	3	Cooling		410339.8816	405993.9038	401310.2277	396046.497	389748.0518	381497.6794	369277.3859	349039.0872	312025.1742	243286.2249
1	Existing	334	Ceiling Insulation	9	Warehouse	3	Cooling		13604979.08	13467416.18	13328822.29	13187586.18	13040586.58	12881176.1	12693272.72	12436752.64	11976236.28	10679724.21
1	Existing	335	Roof Insulation	9	Warehouse	3	Cooling		13604979.08	13463987.91	13316598.89	13157744.96	12977774.92	12756732.95	12448800.57	11952553.65	11000425.96	8892505.658
1	Existing	328	Optimize Controls	9	Warehouse	3	Cooling		11224107.74	11111751.46	11000417.56	10890105.55	10780813.99	10672540.58	10565282.26	10459035.3	10353795.4	10249557.68
1	Existing	305	Chiller Tune Up/Diagnostics	9	Warehouse	3	Cooling		681511.676	674561.6249	667532.2345	660405.1259	653157.5337	645761.1636	638180.6784	630371.6763	622277.9615	613827.8205
1	Existing	307	EMS Optimization	9	Warehouse	3	Cooling		681511.676	674688.3511	667925.8211	661224.0082	654582.7861	648001.9843	641481.393	635020.7662	628619.8265	622278.2672
1	Existing	211	Outdoor Lighting Controls (Photocell/Timeclock)	2	Restaurant/ Services	2	Outdoor Lighting		9512333.73	9417136.266	9322823.263	9229390.479	9136833.284	9045146.696	8954325.423	8864363.892	8775256.285	8686996.566
1	Existing	403	Air Handler Optimization	9	Warehouse	4	Ventilation		172737324	171005237.4	169285893.8	167579189.7	165884998.4	164203170.2	162533531.5	160875884.5	159230006.3	157595647.7
1	Existing	211	Outdoor Lighting Controls (Photocell/Timeclock)	10	Hotel/Motel	2	Outdoor Lighting		19738385.15	19540884.97	19345253.51	19151479.32	18959550.37	18769454.14	18581177.65	18394707.55	18210030.14	18027131.41
1	Existing	347	Window Film (Standard)	9	Warehouse	3	Cooling		237953.3618	235559.5396	233173.1774	230791.217	228409.7546	226023.7441	223626.5692	221209.4184	218760.3474	216262.8421
1	Existing	313	Ceiling Insulation	9	Warehouse	3	Cooling		545209.3408	539739.9815	534297.7531	528863.6286	523400.8288	517830.4551	511957.7516	505270.5002	495801.5376	469026.0065
1	Existing	326	DX Tune Up/ Advanced Diagnostics	9	Warehouse	3	Cooling		11224107.74	11110974.98	10997838.83	10884349.46	10770007.57	10654081.07	10535462.75	10412416.22	10282099.04	10139612.48
1	Existing	314	Roof Insulation	9	Warehouse	3	Cooling		545209.3408	539698.367	534148.7669	528497.7872	522623.8628	516267.953	508802.1734	498649.9967	480358.3719	425287.8285
1	Existing	332	Window Film (Standard)	9	Warehouse	3	Cooling		7889436.668	7805416.511	7714133.582	7610337.347	7484038.391	7314631.119	7055007.444	6601844.055	5686356.238	3643150.131
1	Existing	351	Cool Roof - DX	9	Warehouse	3	Cooling		439283.8891	434499.7511	429149.178	422844.9647	414864.7704	403762.4143	386387.0604	356509.4036	300569.2719	193110.7836
1	Existing	336	Cool Roof - DX	9	Warehouse	3	Cooling		14564628.95	14411220.97	14247089.1	14064326.17	13847919.96	13566968.96	13150926.19	12444764.07	11035124.66	7727437.374

Penetration Model Output Filename: O_Saece_FPL_TRC-H.xls
Annual adoptions as share of eligible market
Input File: P_Saece_FPL_TRC-H.xls

Segment		Measure		Bldg	Applicable	End Use	End	Units	%	%	%	%	%	%	%	%	%	%		
Number	Segment	Number	Measure	Typ	Building	Number	Use	Yr Index	2010 1	2011 2	2012 3	2013 4	2014 5	2015 6	2016 7	2017 8	2018 9	2019 10	weight	kWh savings per ft2
1	Existing	603	Heat Pump Water Heater (air source)	7	Hospital	6	Water Heating		12.4%	18.8%	24.5%	29.6%	34.1%	38.1%	41.6%	44.7%	45.0%	45.2%	0.009067697	1.48146532
1	Existing	601	High Efficiency Water Heater (electric)	7	Hospital	6	Water Heating		18.3%	28.9%	38.5%	47.1%	54.8%	61.7%	68.0%	68.8%	69.2%	69.6%	0.000407198	0.04319433
1	Existing	403	Air Handler Optimization	7	Hospital	4	Ventilation		15.4%	23.8%	31.3%	37.9%	43.9%	49.2%	54.0%	58.2%	60.6%	60.8%	0.007202429	0.87411765
1	Existing	334	Ceiling Insulation	7	Hospital	3	Cooling		5.2%	9.0%	12.6%	15.9%	19.0%	21.9%	24.1%	24.4%	24.7%	24.8%	0.010606842	3.15271456
1	Existing	349	Ceiling Insulation	7	Hospital	3	Cooling		5.2%	9.0%	12.6%	15.9%	19.0%	21.9%	24.1%	24.4%	24.7%	24.8%	0.010398738	3.09129883
1	Existing	328	Optimize Controls	7	Hospital	3	Cooling		9.5%	14.3%	18.6%	22.4%	25.7%	28.7%	31.2%	33.5%	35.5%	37.3%	0.00668042	1.32258783
1	Existing	335	Roof Insulation	7	Hospital	3	Cooling		7.2%	12.6%	17.6%	22.2%	26.6%	30.6%	33.6%	34.1%	34.5%	34.7%	0.005173073	1.09924293
1	Existing	350	Roof Insulation	7	Hospital	3	Cooling		7.2%	12.5%	17.5%	22.2%	26.5%	30.6%	33.6%	34.1%	34.5%	34.7%	0.005065041	1.07646879
1	Existing	334	Ceiling Insulation	2	Restaurant/ Services	3	Cooling		4.7%	8.4%	11.9%	15.3%	18.5%	21.6%	23.8%	24.2%	24.6%	24.8%	0.00794762	2.36792663
1	Existing	349	Ceiling Insulation	2	Restaurant/ Services	3	Cooling		4.6%	8.3%	11.9%	15.3%	18.5%	21.5%	23.7%	24.2%	24.6%	24.8%	0.007792334	2.32209899
1	Existing	305	Chiller Tune Up/Diagnostics	7	Hospital	3	Cooling		13.0%	21.7%	29.6%	36.9%	43.6%	49.7%	55.3%	60.5%	61.1%	61.6%	0.010064297	1.20574318
1	Existing	301	Centrifugal Chiller, 0.51 kW/ton, 500 tons	10	Hotel/Motel	3	Cooling		20.9%	22.1%	23.2%	24.2%	25.1%	25.9%	26.6%	27.3%	28.0%	28.6%	0.002753825	0.71160901
1	Existing	307	EMS Optimization	7	Hospital	3	Cooling		8.5%	13.2%	17.4%	21.2%	24.5%	27.6%	30.3%	32.7%	34.9%	36.9%	0.003781102	0.75638007
1	Existing	404	Electronically Commutated Motors (ECM) on an Air Handler Unit	7	Hospital	4	Ventilation		4.3%	6.8%	9.0%	10.9%	12.7%	14.3%	15.7%	17.0%	18.1%	19.1%	0.003010737	1.16235538
1	Existing	328	Optimize Controls	2	Restaurant/ Services	3	Cooling		6.4%	9.7%	12.7%	15.4%	17.7%	19.8%	21.7%	23.3%	24.8%	26.0%	0.003441427	0.97490406
1	Existing	301	Centrifugal Chiller, 0.51 kW/ton, 500 tons	7	Hospital	3	Cooling		20.3%	21.4%	22.4%	23.3%	24.1%	24.8%	25.5%	26.2%	26.8%	27.3%	0.006071783	1.63991362
1	Existing	335	Roof Insulation	2	Restaurant/ Services	3	Cooling		6.6%	11.8%	16.8%	21.5%	26.0%	30.2%	33.2%	33.8%	34.4%	34.6%	0.003875072	0.82561054
1	Existing	350	Roof Insulation	2	Restaurant/ Services	3	Cooling		6.6%	11.8%	16.8%	21.5%	25.9%	30.2%	33.2%	33.8%	34.4%	34.6%	0.003849125	0.82014044
1	Existing	334	Ceiling Insulation	4	FoodStore	3	Cooling		4.3%	7.9%	11.4%	14.9%	18.1%	21.3%	23.5%	24.0%	24.5%	24.7%	0.006677658	1.99314091
1	Existing	349	Ceiling Insulation	4	FoodStore	3	Cooling		4.2%	7.8%	11.4%	14.8%	18.1%	21.2%	23.5%	24.0%	24.5%	24.7%	0.006546393	1.95440298
1	Existing	326	DX Tune Up/ Advanced Diagnostics	7	Hospital	3	Cooling		13.1%	22.7%	31.6%	39.8%	47.6%	54.8%	61.5%	63.5%	64.3%	65.1%	0.010884306	1.23266689
1	Existing	301	Centrifugal Chiller, 0.51 kW/ton, 500 tons	2	Restaurant/ Services	3	Cooling		18.3%	19.0%	19.7%	20.3%	20.9%	21.5%	22.0%	22.5%	23.0%	23.4%	0.003907752	1.23180826
1	Existing	301	Centrifugal Chiller, 0.51 kW/ton, 500 tons	3	Retail	3	Cooling		17.5%	18.1%	18.7%	19.3%	19.8%	20.3%	20.7%	21.2%	21.6%	22.0%	0.001462642	0.49078869
1	Existing	305	Chiller Tune Up/Diagnostics	2	Restaurant/ Services	3	Cooling		11.0%	18.9%	26.2%	33.0%	39.3%	45.1%	50.5%	55.6%	58.3%	59.0%	0.007239411	0.90568151
1	Existing	161	LED Exit Sign	6	College	1	Indoor Lighting		3.4%	5.4%	7.2%	8.7%	10.1%	11.4%	12.5%	13.5%	14.4%	15.2%	0.000156702	0.07599804
1	Existing	328	Optimize Controls	4	FoodStore	3	Cooling		4.8%	7.3%	9.7%	11.7%	13.5%	15.1%	16.6%	17.9%	19.0%	20.0%	0.002226658	0.82057723
1	Existing	347	Window Film (Standard)	7	Hospital	3	Cooling		11.5%	19.9%	27.7%	35.0%	41.8%	48.1%	54.1%	59.2%	60.0%	60.8%	0.010388231	1.25965889
1	Existing	335	Roof Insulation	4	FoodStore	3	Cooling		6.1%	11.3%	16.2%	21.0%	25.5%	29.8%	32.8%	33.5%	34.3%	34.6%	0.003255234	0.6949385
1	Existing	161	LED Exit Sign	3	Retail	1	Indoor Lighting		3.0%	4.7%	6.3%	7.7%	8.9%	10.0%	11.0%	11.9%	12.7%	13.4%	0.000155915	0.08570631

FPL com existing_TRC annual penetration rates

Docket Nos. 080407-EG, 080408-EG, 080409-EG, 080410-EG, 080411-EG, 080412-EG, 080413-EG
Table of weighted-average measure penetration rate calculations
Exhibit MR-24, Page 000061 of 000071

Docket Nos. 080407-EG, 080408-EG, 080409-EG, 080410-EG, 080411-EG, 080412-EG, 080413-EG
Table of weighted-average measure penetration rate calculations
Exhibit MR-24, Page 000062 of 000071

Segment Number	Segment	Measure Number	Measure	Bldg Typ	Applicable Building	End Use Number	End Use	Year Yr Index	2010 1	2011 2	2012 3	2013 4	2014 5	2015 6	2016 7	2017 8	2018 9	2019 10	weight	kWh savings per ft2
1	Existing	307	EMS Optimization	2	Restaurant/ Services	3	Cooling		5.6%	8.9%	11.9%	14.6%	17.0%	19.2%	21.2%	23.1%	24.7%	26.2%	0.002017164	0.56812443
1	Existing	350	Roof Insulation	4	FoodStore	3	Cooling		6.1%	11.2%	16.1%	20.9%	25.4%	29.7%	32.8%	33.5%	34.2%	34.5%	0.003165998	0.67612578
1	Existing	301	Centrifugal Chiller, 0.51 kW/ton, 500 tons	4	FoodStore	3	Cooling		16.9%	17.5%	18.0%	18.5%	18.9%	19.4%	19.8%	20.2%	20.6%	20.9%	0.002941482	1.03678364
1	Existing	332	Window Film (Standard)	7	Hospital	3	Cooling		14.3%	25.0%	35.0%	44.3%	53.0%	61.1%	67.1%	68.1%	69.0%	69.4%	0.011760978	1.24997559
1	Existing	334	Ceiling Insulation	8	Other Healthcare	3	Cooling		3.3%	6.6%	9.9%	13.4%	16.9%	20.3%	22.7%	23.6%	24.3%	24.6%	0.004601529	1.38047038
1	Existing	349	Ceiling Insulation	8	Other Healthcare	3	Cooling		3.3%	6.5%	9.8%	13.3%	16.8%	20.2%	22.7%	23.5%	24.3%	24.6%	0.004509869	1.35342312
1	Existing	603	Heat Pump Water Heater (air source)	6	College	6	Water Heating		2.3%	4.0%	5.7%	7.3%	8.8%	10.3%	11.7%	13.2%	14.6%	16.0%	0.000632572	0.29251613
1	Existing	361	HE PTAC, EER=9.6, 1 ton	7	Hospital	3	Cooling		4.4%	7.0%	9.3%	11.3%	13.2%	14.8%	16.3%	17.7%	18.9%	19.9%	0.011361116	4.20749669
1	Existing	361	HE PTAC, EER=9.6, 1 ton	10	Hotel/Motel	3	Cooling		4.4%	7.0%	9.3%	11.3%	13.2%	14.8%	16.3%	17.7%	18.9%	19.9%	0.004684068	1.73469897
1	Existing	161	LED Exit Sign	11	Other	1	Indoor Lighting		2.6%	4.2%	5.5%	6.8%	7.9%	8.9%	9.8%	10.6%	11.3%	12.0%	7.26457E-05	0.04474661
1	Existing	326	DX Tune Up/ Advanced Diagnostics	2	Restaurant/ Services	3	Cooling		11.3%	20.1%	28.6%	36.6%	44.2%	51.3%	58.2%	61.2%	62.4%	63.5%	0.007969562	0.92591111
1	Existing	161	LED Exit Sign	2	Restaurant/ Services	1	Indoor Lighting		2.4%	3.8%	5.1%	6.3%	7.3%	8.2%	9.1%	9.8%	10.5%	11.1%	0.000401558	0.26677937
1	Existing	402	Variable Speed Drive Control	7	Hospital	4	Ventilation		8.2%	13.8%	18.8%	23.5%	27.7%	31.6%	35.2%	38.4%	41.4%	44.2%	0.013351761	2.22772844
1	Existing	313	Ceiling Insulation	7	Hospital	3	Cooling		3.5%	6.7%	10.1%	13.6%	17.1%	20.4%	22.9%	23.6%	24.3%	24.6%	0.004813777	1.44310204
1	Existing	403	Air Handler Optimization	4	FoodStore	4	Ventilation		7.0%	11.7%	16.1%	20.1%	23.9%	27.4%	30.6%	33.7%	36.5%	39.2%	0.001786636	0.3366787
1	Existing	305	Chiller Tune Up/Diagnostics	4	FoodStore	3	Cooling		9.4%	16.5%	23.2%	29.4%	35.3%	40.8%	45.9%	50.7%	55.3%	56.4%	0.005548307	0.72559547
1	Existing	161	LED Exit Sign	1	Office	1	Indoor Lighting		2.2%	3.5%	4.7%	5.8%	6.8%	7.6%	8.4%	9.1%	9.8%	10.3%	0.000137629	0.09834265
1	Existing	307	EMS Optimization	4	FoodStore	3	Cooling		4.1%	6.6%	8.9%	11.0%	12.9%	14.6%	16.2%	17.6%	18.9%	20.1%	0.00130194	0.47819038
1	Existing	161	LED Exit Sign	8	Other Healthcare	1	Indoor Lighting		2.0%	3.2%	4.3%	5.2%	6.1%	6.9%	7.6%	8.3%	8.8%	9.4%	0.000121874	0.09612489
1	Existing	161	LED Exit Sign	10	Hotel/Motel	1	Indoor Lighting		2.2%	3.5%	4.7%	5.8%	6.7%	7.6%	8.4%	9.1%	9.7%	10.3%	7.40473E-05	0.05319984
1	Existing	302	High Efficiency Chiller Motors	10	Hotel/Motel	3	Cooling		1.8%	3.1%	4.3%	5.5%	6.5%	7.5%	8.4%	9.3%	10.1%	10.9%	0.000242922	0.16422872
1	Existing	335	Roof Insulation	8	Other Healthcare	3	Cooling		5.2%	9.9%	14.7%	19.4%	24.1%	28.6%	31.8%	32.9%	33.9%	34.4%	0.00224192	0.48130607
1	Existing	350	Roof Insulation	8	Other Healthcare	3	Cooling		5.1%	9.8%	14.6%	19.3%	24.0%	28.6%	31.8%	32.9%	33.9%	34.4%	0.002194384	0.47128381
1	Existing	361	HE PTAC, EER=9.6, 1 ton	2	Restaurant/ Services	3	Cooling		3.5%	5.7%	7.6%	9.4%	10.9%	12.3%	13.6%	14.7%	15.8%	16.7%	0.00714265	3.16035198
1	Existing	328	Optimize Controls	8	Other Healthcare	3	Cooling		2.3%	3.6%	4.8%	5.8%	6.8%	7.6%	8.4%	9.0%	9.7%	10.2%	0.000800525	0.57893127
1	Existing	302	High Efficiency Chiller Motors	7	Hospital	3	Cooling		1.6%	2.8%	3.8%	4.8%	5.8%	6.7%	7.5%	8.3%	9.0%	9.7%	0.000499841	0.37846708
1	Existing	347	Window Film (Standard)	2	Restaurant/ Services	3	Cooling		8.9%	16.0%	22.7%	29.2%	35.4%	41.3%	47.0%	52.5%	55.7%	56.9%	0.006958456	0.90268878
1	Existing	401	High Efficiency Fan Motor, 15hp, 1800rpm, 92.4%	7	Hospital	4	Ventilation		23.1%	25.1%	27.1%	28.9%	30.7%	32.3%	33.9%	35.3%	36.7%	38.1%	0.000425369	0.08240668
1	Existing	334	Ceiling Insulation	10	Hotel/Motel	3	Cooling		3.2%	6.3%	9.6%	13.1%	16.6%	20.1%	22.6%	23.5%	24.3%	24.6%	0.004327977	1.29975096
1	Existing	332	Window Film (Standard)	2	Restaurant/ Services	3	Cooling		12.8%	23.2%	33.1%	42.6%	51.5%	60.0%	66.1%	67.4%	68.7%	69.2%	0.008521779	0.90854488

FPL com existing_TRC annual penetration rates

Segment		Measure		Bldg	Applicable	End Use	End	Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019		
Number	Segment	Number	Measure	Typ	Building	Number	Use	Yr Index	1	2	3	4	5	6	7	8	9	10	weight	kWh savings per ft2
1	Existing	336	Cool Roof - DX	7	Hospital	3	Cooling		12.3%	22.6%	32.4%	41.8%	50.8%	59.4%	65.4%	66.9%	68.4%	69.0%	0.056432017	6.03098811
1	Existing	326	DX Tune Up/ Advanced Diagnostics	4	FoodStore	3	Cooling		10.1%	18.4%	26.4%	34.1%	41.5%	48.6%	55.5%	59.5%	60.9%	62.2%	0.006573561	0.77931567
1	Existing	349	Ceiling Insulation	10	Hotel/Motel	3	Cooling		3.1%	6.2%	9.5%	13.0%	16.5%	20.0%	22.5%	23.4%	24.3%	24.6%	0.004242374	1.27449166
1	Existing	351	Cool Roof - DX	7	Hospital	3	Cooling		12.3%	22.6%	32.4%	41.8%	50.8%	59.4%	65.3%	66.8%	68.4%	69.0%	0.056060472	5.991821
1	Existing	361	HE PTAC, EER=9.6, 1 ton	3	Retail	3	Cooling		3.0%	4.9%	6.6%	8.1%	9.5%	10.8%	11.9%	12.9%	13.8%	14.7%	0.002379654	1.19633101
1	Existing	314	Roof Insulation	7	Hospital	3	Cooling		5.3%	10.2%	15.0%	19.7%	24.3%	28.9%	32.0%	33.0%	34.0%	34.4%	0.002376315	0.50964092
1	Existing	161	LED Exit Sign	5	School	1	Indoor Lighting		1.8%	2.8%	3.8%	4.7%	5.5%	6.2%	6.8%	7.4%	7.9%	8.4%	0.000135232	0.1187281
1	Existing	313	Ceiling Insulation	2	Restaurant/ Services	3	Cooling		2.7%	5.5%	8.6%	12.0%	15.6%	19.3%	22.0%	23.2%	24.1%	24.5%	0.003651544	1.10016421
1	Existing	161	LED Exit Sign	7	Hospital	1	Indoor Lighting		1.6%	2.5%	3.4%	4.2%	4.9%	5.6%	6.1%	6.7%	7.1%	7.6%	2.13963E-05	0.02086432
1	Existing	161	LED Exit Sign	9	Warehouse	1	Indoor Lighting		1.5%	2.4%	3.3%	4.1%	4.8%	5.4%	5.9%	6.5%	6.9%	7.3%	1.7129E-05	0.01724301
1	Existing	301	Centrifugal Chiller, 0.51 kW/ton, 500 tons	11	Other	3	Cooling		13.1%	13.2%	13.4%	13.6%	13.7%	13.9%	14.1%	14.4%	14.6%	14.8%	0.000588905	0.29395129
1	Existing	301	Centrifugal Chiller, 0.51 kW/ton, 500 tons	1	Office	3	Cooling		12.4%	12.5%	12.6%	12.8%	12.9%	13.1%	13.3%	13.5%	13.6%	13.8%	0.000894273	0.47677524
1	Existing	301	Centrifugal Chiller, 0.51 kW/ton, 500 tons	9	Warehouse	3	Cooling		12.6%	12.7%	12.9%	13.0%	13.2%	13.4%	13.6%	13.7%	13.9%	14.1%	0.000140973	0.07353761
1	Existing	328	Optimize Controls	10	Hotel/Motel	3	Cooling		1.9%	3.0%	3.9%	4.8%	5.6%	6.3%	7.0%	7.6%	8.1%	8.6%	0.000620267	0.53513005
1	Existing	301	Centrifugal Chiller, 0.51 kW/ton, 500 tons	5	School	3	Cooling		12.5%	12.6%	12.8%	12.9%	13.1%	13.2%	13.4%	13.6%	13.8%	14.0%	0.001000462	0.52718451
1	Existing	404	Electronically Commutated Motors (ECM) on an Air Handler Unit	6	College	4	Ventilation		0.9%	1.4%	2.0%	2.4%	2.9%	3.3%	3.6%	3.9%	4.2%	4.5%	0.000172803	0.28288974
1	Existing	305	Chiller Tune Up/Diagnostics	8	Other Healthcare	3	Cooling		7.1%	12.8%	18.3%	23.5%	28.5%	33.3%	37.9%	42.3%	46.5%	50.5%	0.00361474	0.52783609
1	Existing	302	High Efficiency Chiller Motors	2	Restaurant/ Services	3	Cooling		1.0%	1.8%	2.5%	3.2%	3.8%	4.4%	5.0%	5.5%	6.0%	6.5%	0.000250701	0.28427758
1	Existing	404	Electronically Commutated Motors (ECM) on an Air Handler Unit	3	Retail	4	Ventilation		0.8%	1.3%	1.8%	2.2%	2.6%	2.9%	3.3%	3.6%	3.8%	4.1%	0.000121358	0.21931902
1	Existing	301	Centrifugal Chiller, 0.51 kW/ton, 500 tons	6	College	3	Cooling		12.3%	12.4%	12.5%	12.7%	12.8%	13.0%	13.1%	13.3%	13.5%	13.7%	0.000714702	0.38492586
1	Existing	301	Centrifugal Chiller, 0.51 kW/ton, 500 tons	8	Other Healthcare	3	Cooling		11.6%	11.6%	11.7%	11.8%	11.9%	12.1%	12.2%	12.4%	12.5%	12.7%	0.001236114	0.71789926
1	Existing	161	LED Exit Sign	4	FoodStore	1	Indoor Lighting		1.3%	2.2%	3.0%	3.6%	4.3%	4.8%	5.3%	5.8%	6.2%	6.6%	4.01057E-05	0.04489365
1	Existing	302	High Efficiency Chiller Motors	3	Retail	3	Cooling		0.9%	1.5%	2.1%	2.7%	3.2%	3.7%	4.2%	4.6%	5.1%	5.5%	8.46541E-05	0.11326217
1	Existing	603	Heat Pump Water Heater (air source)	5	School	6	Water Heating		1.1%	1.9%	2.7%	3.5%	4.3%	5.1%	5.9%	6.7%	7.5%	8.3%	0.00037838	0.3347943
1	Existing	347	Window Film (Standard)	4	FoodStore	3	Cooling		7.8%	14.2%	20.4%	26.4%	32.3%	38.0%	43.5%	48.8%	53.3%	54.8%	0.005860383	0.78940916
1	Existing	335	Roof Insulation	10	Hotel/Motel	3	Cooling		5.0%	9.7%	14.4%	19.1%	23.8%	28.4%	31.6%	32.8%	33.9%	34.3%	0.002108517	0.45318012
1	Existing	403	Air Handler Optimization	8	Other Healthcare	4	Ventilation		3.6%	6.2%	8.7%	11.1%	13.4%	15.6%	17.7%	19.7%	21.6%	23.5%	0.00071544	0.22447157
1	Existing	401	High Efficiency Fan Motor, 15hp, 1800rpm, 92.4%	4	FoodStore	4	Ventilation		21.1%	22.8%	24.3%	25.8%	27.3%	28.6%	30.0%	31.2%	32.4%	33.6%	0.000213455	0.04687557

Docket Nos. 080407-EG, 080408-EG, 080409-EG, 080410-EG, 080411-EG, 080412-EG, 080413-EG
Table of weighted-average measure penetration rate calculations
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Segment Number	Segment	Measure Number	Measure	Bldg Typ	Applicable Building	End Use Number	End Use	Year Yr Index	2010 1	2011 2	2012 3	2013 4	2014 5	2015 6	2016 7	2017 8	2018 9	2019 10	weight	kWh savings per ft2
1	Existing	322	Hybrid Dessicant-DX System (Trane CDQ)	7	Hospital	3	Cooling		0.4%	0.7%	0.9%	1.2%	1.4%	1.7%	1.9%	2.1%	2.3%	2.5%	0.002321309	6.85242287
1	Existing	350	Roof Insulation	10	Hotel/Motel	3	Cooling		4.9%	9.5%	14.2%	18.9%	23.6%	28.3%	31.5%	32.7%	33.8%	34.3%	0.002037535	0.43821446
1	Existing	403	Air Handler Optimization	2	Restaurant/ Services	4	Ventilation		4.2%	7.2%	10.0%	12.7%	15.2%	17.7%	20.0%	22.2%	24.3%	26.4%	0.000865727	0.24220165
1	Existing	332	Window Film (Standard)	4	FoodStore	3	Cooling		12.1%	22.3%	32.1%	41.6%	50.7%	59.3%	65.4%	67.0%	68.5%	69.1%	0.007334162	0.78335927
1	Existing	334	Ceiling Insulation	3	Retail	3	Cooling		2.1%	4.4%	7.3%	10.5%	14.2%	18.1%	21.1%	22.7%	23.9%	24.4%	0.002961101	0.89648309
1	Existing	349	Ceiling Insulation	3	Retail	3	Cooling		2.1%	4.4%	7.2%	10.5%	14.2%	18.1%	21.1%	22.7%	23.9%	24.4%	0.002955026	0.89469137
1	Existing	334	Ceiling Insulation	5	School	3	Cooling		2.3%	4.8%	7.8%	11.1%	14.7%	18.5%	21.5%	22.9%	24.0%	24.4%	0.003186196	0.96287965
1	Existing	349	Ceiling Insulation	5	School	3	Cooling		2.2%	4.7%	7.6%	10.9%	14.6%	18.4%	21.4%	22.8%	24.0%	24.4%	0.003123002	0.94423849
1	Existing	307	EMS Optimization	8	Other Healthcare	3	Cooling		1.8%	3.0%	4.1%	5.1%	6.0%	6.9%	7.7%	8.4%	9.1%	9.8%	0.000437607	0.33108748
1	Existing	336	Cool Roof - DX	2	Restaurant/ Services	3	Cooling		11.1%	21.0%	30.6%	39.9%	49.0%	57.9%	64.0%	65.9%	67.9%	68.7%	0.042739342	4.5874828
1	Existing	322	Hybrid Dessicant-DX System (Trane CDQ)	10	Hotel/Motel	3	Cooling		0.3%	0.6%	0.8%	1.0%	1.2%	1.4%	1.6%	1.8%	2.0%	2.2%	0.000782024	2.68043773
1	Existing	351	Cool Roof - DX	2	Restaurant/ Services	3	Cooling		11.1%	21.0%	30.6%	39.9%	49.0%	57.8%	63.9%	65.9%	67.9%	68.7%	0.042456411	4.55765375
1	Existing	404	Electronically Commutated Motors (ECM) on an Air Handler Unit	4	FoodStore	4	Ventilation		0.6%	1.0%	1.3%	1.7%	2.0%	2.2%	2.5%	2.7%	2.9%	3.1%	0.000186987	0.44091292
1	Existing	601	High Efficiency Water Heater (electric)	6	College	6	Water Heating		11.1%	20.7%	30.1%	39.2%	48.0%	56.4%	63.1%	64.7%	66.4%	68.0%	7.85677E-05	0.00852874
1	Existing	302	High Efficiency Chiller Motors	4	FoodStore	3	Cooling		0.7%	1.3%	1.8%	2.3%	2.8%	3.2%	3.7%	4.1%	4.5%	4.8%	0.000156967	0.23927243
1	Existing	402	Variable Speed Drive Control	4	FoodStore	4	Ventilation		5.5%	9.5%	13.3%	16.7%	19.9%	22.8%	25.6%	28.2%	30.5%	32.8%	0.004455631	1.00321275
1	Existing	404	Electronically Commutated Motors (ECM) on an Air Handler Unit	11	Other	4	Ventilation		0.6%	0.9%	1.3%	1.6%	1.9%	2.1%	2.4%	2.6%	2.8%	3.0%	6.91626E-05	0.1720051
1	Existing	334	Ceiling Insulation	1	Office	3	Cooling		2.0%	4.3%	7.0%	10.3%	13.9%	17.9%	21.0%	22.6%	23.9%	24.4%	0.002874384	0.87090641
1	Existing	314	Roof Insulation	2	Restaurant/ Services	3	Cooling		4.4%	8.7%	13.2%	17.9%	22.7%	27.5%	30.9%	32.3%	33.6%	34.2%	0.001729012	0.37316469
1	Existing	349	Ceiling Insulation	1	Office	3	Cooling		1.9%	4.2%	6.9%	10.1%	13.8%	17.7%	20.9%	22.5%	23.9%	24.3%	0.002817006	0.85398375
1	Existing	404	Electronically Commutated Motors (ECM) on an Air Handler Unit	10	Hotel/Motel	4	Ventilation		0.6%	0.9%	1.3%	1.6%	1.9%	2.1%	2.4%	2.6%	2.8%	3.0%	8.45105E-05	0.21088879
1	Existing	313	Ceiling Insulation	4	FoodStore	3	Cooling		2.2%	4.6%	7.5%	10.8%	14.4%	18.3%	21.3%	22.8%	24.0%	24.4%	0.003061078	0.92597242
1	Existing	304	EMS - Chiller	10	Hotel/Motel	3	Cooling		2.9%	4.9%	6.6%	8.3%	9.7%	11.1%	12.3%	13.4%	14.4%	15.3%	0.001130701	0.54427666
1	Existing	326	DX Tune Up/ Advanced Diagnostics	8	Other Healthcare	3	Cooling		7.2%	13.9%	20.6%	27.3%	34.1%	40.8%	47.6%	54.2%	56.4%	58.5%	0.004279464	0.53961399
1	Existing	304	EMS - Chiller	7	Hospital	3	Cooling		2.8%	4.7%	6.4%	7.9%	9.4%	10.7%	11.8%	12.9%	13.9%	14.8%	0.002564755	1.27888714
1	Existing	322	Hybrid Dessicant-DX System (Trane CDQ)	2	Restaurant/ Services	3	Cooling		0.2%	0.4%	0.5%	0.7%	0.8%	1.0%	1.1%	1.2%	1.4%	1.5%	0.001034823	5.10856113
1	Existing	515	Oversized Air Cooled Condenser	4	FoodStore	5	Refrigeration		0.2%	0.4%	0.5%	0.6%	0.7%	0.8%	0.9%	1.0%	1.0%	1.1%	0.000301234	2.03799329
1	Existing	350	Roof Insulation	3	Retail	3	Cooling		3.8%	7.8%	12.1%	16.7%	21.5%	26.4%	30.1%	31.8%	33.4%	34.0%	0.001457853	0.31599056
1	Existing	335	Roof Insulation	3	Retail	3	Cooling		3.8%	7.7%	12.0%	16.6%	21.4%	26.4%	30.0%	31.8%	33.4%	34.0%	0.00144161	0.31256575
1	Existing	328	Optimize Controls	5	School	3	Cooling		0.8%	1.4%	1.8%	2.3%	2.6%	3.0%	3.3%	3.6%	3.9%	4.1%	0.000219745	0.39642197
1	Existing	335	Roof Insulation	5	School	3	Cooling		4.0%	8.1%	12.5%	17.2%	22.0%	26.8%	30.4%	32.0%	33.5%	34.1%	0.001551426	0.33572073
1	Existing	350	Roof Insulation	5	School	3	Cooling		4.0%	8.1%	12.5%	17.1%	21.9%	26.8%	30.4%	32.0%	33.5%	34.1%	0.001540867	0.33349439

FPL com existing_TRC annual penetration rates

Segment Number	Segment	Measure Number	Measure	Bldg Typ	Applicable Building	End Use Number	End Use	Year Yr Index	2010 1	2011 2	2012 3	2013 4	2014 5	2015 6	2016 7	2017 8	2018 9	2019 10	weight	kWh savings per ft2
1	Existing	404	Electronically Commutated Motors (ECM) on an Air Handler Unit	8	Other Healthcare	4	Ventilation		0.1%	0.2%	0.3%	0.4%	0.5%	0.6%	0.6%	0.7%	0.7%	0.8%	3.18936E-05	0.29855051
1	Existing	335	Roof Insulation	1	Office	3	Cooling		3.7%	7.5%	11.8%	16.4%	21.2%	26.2%	29.9%	31.7%	33.3%	34.0%	0.001399322	0.30364913
1	Existing	328	Optimize Controls	3	Retail	3	Cooling		0.7%	1.1%	1.5%	1.9%	2.2%	2.5%	2.7%	3.0%	3.2%	3.4%	0.000169516	0.36903604
1	Existing	336	Cool Roof - DX	4	FoodStore	3	Cooling		10.5%	20.1%	29.5%	38.8%	47.9%	56.9%	63.1%	65.3%	67.6%	68.5%	0.036959708	3.97812228
1	Existing	322	Hybrid Dessicant-DX System (Trane CDQ)	3	Retail	3	Cooling		0.2%	0.3%	0.4%	0.5%	0.6%	0.7%	0.8%	0.9%	1.0%	1.1%	0.000275757	1.93113915
1	Existing	351	Cool Roof - DX	4	FoodStore	3	Cooling		10.4%	20.0%	29.4%	38.7%	47.8%	56.8%	63.1%	65.3%	67.6%	68.5%	0.036714568	3.95227546
1	Existing	347	Window Film (Standard)	8	Other Healthcare	3	Cooling		4.8%	9.2%	13.6%	18.2%	22.8%	27.4%	32.2%	36.9%	41.7%	46.6%	0.003479703	0.55141142
1	Existing	350	Roof Insulation	1	Office	3	Cooling		3.6%	7.5%	11.7%	16.3%	21.1%	26.1%	29.8%	31.6%	33.3%	34.0%	0.001381751	0.29994409
1	Existing	322	Hybrid Dessicant-DX System (Trane CDQ)	4	FoodStore	3	Cooling		0.2%	0.3%	0.4%	0.5%	0.6%	0.7%	0.8%	0.9%	1.0%	1.1%	0.000676461	4.40190067
1	Existing	328	Optimize Controls	1	Office	3	Cooling		0.6%	1.0%	1.4%	1.7%	2.0%	2.3%	2.5%	2.8%	3.0%	3.1%	0.000152476	0.35850588
1	Existing	404	Electronically Commutated Motors (ECM) on an Air Handler Unit	1	Office	4	Ventilation		0.3%	0.5%	0.7%	0.8%	1.0%	1.1%	1.3%	1.4%	1.5%	1.6%	5.20484E-05	0.23738944
1	Existing	304	EMS - Chiller	2	Restaurant/ Services	3	Cooling		2.2%	3.7%	5.1%	6.4%	7.6%	8.7%	9.7%	10.6%	11.4%	12.2%	0.001583035	0.96059798
1	Existing	404	Electronically Commutated Motors (ECM) on an Air Handler Unit	9	Warehouse	4	Ventilation		0.3%	0.5%	0.7%	0.9%	1.1%	1.2%	1.4%	1.5%	1.6%	1.7%	8.75496E-06	0.03692604
1	Existing	305	Chiller Tune Up/Diagnostics	10	Hotel/Motel	3	Cooling		5.2%	9.7%	14.1%	18.3%	22.5%	26.6%	30.5%	34.4%	38.2%	41.9%	0.002320306	0.40823737
1	Existing	326	DX Tune Up/ Advanced Diagnostics	10	Hotel/Motel	3	Cooling		6.8%	13.1%	19.5%	26.0%	32.6%	39.3%	46.0%	52.6%	55.5%	57.7%	0.00397698	0.50821322
1	Existing	304	EMS - Chiller	3	Retail	3	Cooling		2.0%	3.4%	4.7%	5.9%	7.0%	8.0%	8.9%	9.8%	10.5%	11.2%	0.000582835	0.38272268
1	Existing	314	Roof Insulation	4	FoodStore	3	Cooling		3.8%	7.9%	12.2%	16.8%	21.6%	26.5%	30.2%	31.8%	33.4%	34.1%	0.001476913	0.32000944
1	Existing	332	Window Film (Standard)	8	Other Healthcare	3	Cooling		10.1%	19.5%	29.0%	38.4%	47.8%	57.0%	63.4%	65.6%	67.8%	68.7%	0.005093296	0.54714137
1	Existing	403	Air Handler Optimization	1	Office	4	Ventilation		2.2%	3.9%	5.5%	7.1%	8.6%	10.1%	11.5%	13.0%	14.4%	15.7%	0.000380561	0.17851936
1	Existing	361	HE PTAC, EER=9.6, 1 ton	1	Office	3	Cooling		1.6%	2.7%	3.7%	4.6%	5.4%	6.2%	6.9%	7.5%	8.1%	8.6%	0.001354379	1.16218481
1	Existing	361	HE PTAC, EER=9.6, 1 ton	5	School	3	Cooling		1.6%	2.7%	3.7%	4.7%	5.5%	6.3%	7.0%	7.6%	8.2%	8.7%	0.001517981	1.28508588
1	Existing	403	Air Handler Optimization	5	School	4	Ventilation		2.2%	3.8%	5.4%	7.0%	8.5%	10.0%	11.4%	12.9%	14.2%	15.6%	0.000375881	0.17777052
1	Existing	361	HE PTAC, EER=9.6, 1 ton	8	Other Healthcare	3	Cooling		1.5%	2.6%	3.6%	4.4%	5.3%	6.0%	6.7%	7.3%	7.8%	8.3%	0.002078978	1.84179492
1	Existing	603	Heat Pump Water Heater (air source)	3	Retail	6	Water Heating		0.3%	0.5%	0.8%	1.0%	1.3%	1.5%	1.8%	2.0%	2.3%	2.6%	2.91962E-05	0.08285744
1	Existing	307	EMS Optimization	10	Hotel/Motel	3	Cooling		0.9%	1.6%	2.2%	2.7%	3.3%	3.7%	4.2%	4.6%	5.0%	5.4%	0.000188541	0.2582407
1	Existing	603	Heat Pump Water Heater (air source)	10	Hotel/Motel	6	Water Heating		0.3%	0.6%	0.8%	1.1%	1.3%	1.6%	1.9%	2.2%	2.5%	2.8%	0.000215298	0.57735534
1	Existing	313	Ceiling Insulation	8	Other Healthcare	3	Cooling		1.1%	2.7%	4.7%	7.4%	10.8%	15.0%	18.9%	21.4%	23.4%	24.1%	0.002063461	0.63183837
1	Existing	361	HE PTAC, EER=9.6, 1 ton	6	College	3	Cooling		1.6%	2.6%	3.6%	4.5%	5.4%	6.1%	6.8%	7.4%	8.0%	8.5%	0.001080791	0.93831301
1	Existing	334	Ceiling Insulation	6	College	3	Cooling		1.4%	3.2%	5.5%	8.4%	12.0%	16.1%	19.7%	21.9%	23.6%	24.2%	0.002305534	0.70317563
1	Existing	732	Copier Power Management Enabling	8	Other Healthcare	7	Office Equipment		0.1%	0.2%	0.3%	0.3%	0.4%	0.5%	0.5%	0.6%	0.6%	0.7%	9.32557E-07	0.0105588
1	Existing	403	Air Handler Optimization	6	College	4	Ventilation		2.0%	3.5%	5.0%	6.5%	7.9%	9.3%	10.6%	11.9%	13.2%	14.5%	0.000337537	0.17145784
1	Existing	603	Heat Pump Water Heater (air source)	8	Other Healthcare	6	Water Heating		0.5%	0.8%	1.2%	1.6%	2.0%	2.3%	2.7%	3.1%	3.5%	3.9%	0.000763751	1.43342032

Segment		Measure		Bldg	Applicable	End Use	End	Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019		
Number	Segment	Number	Measure	Typ	Building	Number	Use	Yr Index	1	2	3	4	5	6	7	8	9	10	weight	kWh savings per ft2
1	Existing	362	Occupancy Sensor (hotels)	7	Hospital	3	Cooling		0.9%	1.7%	2.4%	3.1%	3.8%	4.4%	5.0%	5.7%	6.3%	6.9%	0.003802754	4.0905766
1	Existing	362	Occupancy Sensor (hotels)	10	Hotel/Motel	3	Cooling		0.9%	1.7%	2.4%	3.1%	3.8%	4.4%	5.0%	5.7%	6.3%	6.9%	0.001567845	1.68649409
1	Existing	349	Ceiling Insulation	6	College	3	Cooling		1.3%	3.1%	5.3%	8.2%	11.8%	15.9%	19.5%	21.8%	23.6%	24.2%	0.00225894	0.68944201
1	Existing	601	High Efficiency Water Heater (electric)	5	School	6	Water Heating		9.1%	17.8%	26.6%	35.4%	44.3%	53.1%	60.4%	62.8%	65.0%	67.2%	8.89473E-05	0.00976143
1	Existing	404	Electronically Commutated Motors (ECM) on an Air Handler Unit	5	School	4	Ventilation		0.2%	0.4%	0.5%	0.6%	0.8%	0.9%	1.0%	1.1%	1.2%	1.2%	3.98387E-05	0.23638814
1	Existing	302	High Efficiency Chiller Motors	11	Other	3	Cooling		0.3%	0.5%	0.7%	0.9%	1.1%	1.3%	1.4%	1.6%	1.8%	1.9%	1.78807E-05	0.06783909
1	Existing	603	Heat Pump Water Heater (air source)	2	Restaurant/ Services	6	Water Heating		0.2%	0.4%	0.6%	0.8%	1.0%	1.2%	1.5%	1.7%	1.9%	2.1%	0.000278213	0.96106944
1	Existing	347	Window Film (Standard)	10	Hotel/Motel	3	Cooling		4.2%	8.2%	12.2%	16.4%	20.6%	25.0%	29.5%	34.1%	38.8%	43.5%	0.003011201	0.51056882
1	Existing	404	Electronically Commutated Motors (ECM) on an Air Handler Unit	2	Restaurant/ Services	4	Ventilation		0.2%	0.3%	0.5%	0.6%	0.7%	0.8%	0.9%	1.0%	1.1%	1.1%	4.94221E-05	0.32207344
1	Existing	302	High Efficiency Chiller Motors	9	Warehouse	3	Cooling		0.2%	0.4%	0.6%	0.8%	1.0%	1.1%	1.3%	1.4%	1.6%	1.7%	3.99855E-06	0.01697107
1	Existing	304	EMS - Chiller	4	FoodStore	3	Cooling		1.9%	3.2%	4.4%	5.5%	6.6%	7.5%	8.4%	9.2%	9.9%	10.6%	0.001157244	0.80852789
1	Existing	302	High Efficiency Chiller Motors	1	Office	3	Cooling		0.2%	0.4%	0.6%	0.7%	0.9%	1.0%	1.2%	1.3%	1.4%	1.6%	2.27886E-05	0.10791349
1	Existing	401	High Efficiency Fan Motor, 15hp, 1800rpm, 92.4%	11	Other	4	Ventilation		15.3%	16.0%	16.7%	17.4%	18.0%	18.7%	19.4%	20.1%	20.8%	21.6%	4.12087E-05	0.01410745
1	Existing	332	Window Film (Standard)	10	Hotel/Motel	3	Cooling		9.6%	18.8%	28.1%	37.6%	47.0%	56.3%	62.9%	65.3%	67.6%	68.6%	0.004709259	0.5066567
1	Existing	402	Variable Speed Drive Control	11	Other	4	Ventilation		3.3%	5.9%	8.4%	10.7%	12.8%	14.9%	16.8%	18.6%	20.3%	22.0%	0.000982081	0.32969815
1	Existing	302	High Efficiency Chiller Motors	6	College	3	Cooling		0.2%	0.4%	0.5%	0.7%	0.8%	1.0%	1.1%	1.3%	1.4%	1.5%	1.79347E-05	0.08712555
1	Existing	302	High Efficiency Chiller Motors	8	Other Healthcare	3	Cooling		0.2%	0.3%	0.5%	0.6%	0.7%	0.9%	1.0%	1.1%	1.2%	1.3%	2.98456E-05	0.16567413
1	Existing	302	High Efficiency Chiller Motors	5	School	3	Cooling		0.2%	0.4%	0.5%	0.7%	0.8%	1.0%	1.1%	1.2%	1.3%	1.5%	2.30019E-05	0.11559521
1	Existing	305	Chiller Tune Up/Diagnostics	5	School	3	Cooling		3.5%	6.7%	9.9%	13.1%	16.3%	19.6%	22.8%	26.1%	29.3%	32.6%	0.001387778	0.31391963
1	Existing	328	Optimize Controls	6	College	3	Cooling		0.3%	0.6%	0.8%	0.9%	1.1%	1.3%	1.4%	1.5%	1.6%	1.8%	6.87416E-05	0.28945171
1	Existing	322	Hybrid Dessicant-DX System (Trane CDQ)	9	Warehouse	3	Cooling		0.1%	0.1%	0.2%	0.2%	0.3%	0.3%	0.4%	0.4%	0.5%	0.5%	2.44681E-05	0.35004477
1	Existing	335	Roof Insulation	6	College	3	Cooling		2.9%	6.2%	10.0%	14.4%	19.2%	24.4%	28.5%	30.8%	32.9%	33.8%	0.001121982	0.24516945
1	Existing	350	Roof Insulation	6	College	3	Cooling		2.9%	6.1%	9.9%	14.3%	19.1%	24.4%	28.5%	30.8%	32.9%	33.8%	0.001114083	0.24350371
1	Existing	362	Occupancy Sensor (hotels)	2	Restaurant/ Services	3	Cooling		0.6%	1.1%	1.5%	2.0%	2.4%	2.8%	3.2%	3.6%	4.0%	4.4%	0.001850681	3.07247333
1	Existing	314	Roof Insulation	8	Other Healthcare	3	Cooling		2.5%	5.5%	9.1%	13.4%	18.2%	23.5%	27.8%	30.4%	32.7%	33.6%	0.001017421	0.22312159
1	Existing	326	DX Tune Up/ Advanced Diagnostics	5	School	3	Cooling		4.4%	8.9%	13.8%	19.0%	24.6%	30.5%	36.8%	43.3%	49.7%	52.9%	0.002699355	0.37650187
1	Existing	305	Chiller Tune Up/Diagnostics	3	Retail	3	Cooling		2.9%	5.6%	8.4%	11.1%	14.0%	16.8%	19.7%	22.7%	25.7%	28.8%	0.001098607	0.28155502
1	Existing	336	Cool Roof - DX	8	Other Healthcare	3	Cooling		8.4%	16.8%	25.5%	34.5%	43.6%	53.0%	59.8%	63.1%	66.4%	67.8%	0.02427238	2.64019468
1	Existing	326	DX Tune Up/ Advanced Diagnostics	3	Retail	3	Cooling		3.9%	8.0%	12.4%	17.3%	22.6%	28.3%	34.3%	40.7%	47.4%	51.5%	0.002445163	0.35050723
1	Existing	351	Cool Roof - DX	8	Other Healthcare	3	Cooling		8.4%	16.8%	25.4%	34.4%	43.6%	52.9%	59.8%	63.0%	66.4%	67.8%	0.024109926	2.62305921

Segment		Measure		Bldg	Applicable	End Use	End	Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019		
Number	Segment	Number	Measure	Typ	Building	Number	Use	Yr Index	1	2	3	4	5	6	7	8	9	10	weight	kWh savings per ft2
1	Existing	313	Ceiling Insulation	10	Hotel/Motel	3	Cooling		1.0%	2.4%	4.4%	7.0%	10.3%	14.5%	18.5%	21.2%	23.3%	24.1%	0.001968408	0.60383721
1	Existing	211	Outdoor Lighting Controls (Photocell/Timeclock)	6	College	2	Outdoor Lighting		0.4%	0.7%	1.0%	1.2%	1.5%	1.7%	1.9%	2.1%	2.3%	2.5%	8.34066E-05	0.24860152
1	Existing	402	Variable Speed Drive Control	1	Office	4	Ventilation		2.8%	5.1%	7.2%	9.2%	11.1%	12.9%	14.6%	16.2%	17.7%	19.2%	0.001338324	0.51461516
1	Existing	305	Chiller Tune Up/Diagnostics	1	Office	3	Cooling		2.8%	5.4%	8.1%	10.8%	13.5%	16.3%	19.2%	22.1%	25.0%	28.1%	0.001049464	0.27580888
1	Existing	307	EMS Optimization	5	School	3	Cooling		0.4%	0.7%	1.0%	1.3%	1.6%	1.8%	2.0%	2.2%	2.4%	2.6%	7.04301E-05	0.19691739
1	Existing	326	DX Tune Up/ Advanced Diagnostics	1	Office	3	Cooling		3.7%	7.6%	11.9%	16.6%	21.8%	27.3%	33.3%	39.7%	46.3%	50.9%	0.002347116	0.34049904
1	Existing	403	Air Handler Optimization	3	Retail	4	Ventilation		1.0%	1.9%	2.7%	3.5%	4.3%	5.1%	5.9%	6.7%	7.5%	8.3%	0.000149848	0.13292648
1	Existing	603	Heat Pump Water Heater (air source)	11	Other	6	Water Heating		0.1%	0.2%	0.3%	0.5%	0.6%	0.7%	0.8%	0.9%	1.1%	1.2%	2.35026E-05	0.1439084
1	Existing	732	Copier Power Management Enabling	3	Retail	7	Office Equipment		0.1%	0.2%	0.3%	0.3%	0.4%	0.5%	0.5%	0.6%	0.6%	0.7%	1.08508E-06	0.01228108
1	Existing	506	Compressor VSD retrofit	4	FoodStore	5	Refrigeration		0.1%	0.2%	0.2%	0.3%	0.3%	0.4%	0.4%	0.4%	0.5%	0.5%	0.000100236	1.45486328
1	Existing	732	Copier Power Management Enabling	2	Restaurant/ Services	7	Office Equipment		0.1%	0.2%	0.3%	0.3%	0.4%	0.5%	0.5%	0.6%	0.6%	0.7%	1.19268E-06	0.01349874
1	Existing	732	Copier Power Management Enabling	6	College	7	Office Equipment		0.1%	0.2%	0.3%	0.3%	0.4%	0.5%	0.5%	0.6%	0.6%	0.7%	2.33925E-06	0.02647561
1	Existing	362	Occupancy Sensor (hotels)	3	Retail	3	Cooling		0.4%	0.8%	1.1%	1.4%	1.7%	2.0%	2.3%	2.6%	3.0%	3.3%	0.00051269	1.16304465
1	Existing	501	High-efficiency fan motors	4	FoodStore	5	Refrigeration		0.1%	0.1%	0.1%	0.2%	0.2%	0.2%	0.2%	0.3%	0.3%	0.3%	0.000106894	2.72209312
1	Existing	732	Copier Power Management Enabling	9	Warehouse	7	Office Equipment		0.1%	0.2%	0.3%	0.3%	0.4%	0.5%	0.5%	0.6%	0.6%	0.7%	9.40507E-07	0.0106446
1	Existing	732	Copier Power Management Enabling	1	Office	7	Office Equipment		0.1%	0.2%	0.3%	0.3%	0.4%	0.5%	0.5%	0.6%	0.6%	0.7%	5.11147E-06	0.05785095
1	Existing	732	Copier Power Management Enabling	4	FoodStore	7	Office Equipment		0.1%	0.2%	0.3%	0.3%	0.4%	0.5%	0.5%	0.6%	0.6%	0.7%	8.96184E-07	0.0101429
1	Existing	732	Copier Power Management Enabling	10	Hotel/Motel	7	Office Equipment		0.1%	0.2%	0.3%	0.3%	0.4%	0.5%	0.5%	0.6%	0.6%	0.7%	5.23459E-07	0.00592444
1	Existing	334	Ceiling Insulation	11	Other	3	Cooling		0.8%	2.0%	3.6%	5.9%	9.0%	13.2%	17.4%	20.6%	23.1%	23.9%	0.001742919	0.53744488
1	Existing	732	Copier Power Management Enabling	7	Hospital	7	Office Equipment		0.1%	0.2%	0.3%	0.3%	0.4%	0.5%	0.5%	0.6%	0.6%	0.7%	1.42348E-06	0.01611049
1	Existing	732	Copier Power Management Enabling	11	Other	7	Office Equipment		0.1%	0.2%	0.3%	0.3%	0.4%	0.5%	0.5%	0.6%	0.6%	0.7%	1.25857E-06	0.01424399
1	Existing	403	Air Handler Optimization	10	Hotel/Motel	4	Ventilation		0.9%	1.7%	2.4%	3.2%	3.9%	4.6%	5.4%	6.1%	6.8%	7.6%	0.000131242	0.12782297
1	Existing	322	Hybrid Dessicant-DX System (Trane CDQ)	1	Office	3	Cooling		0.0%	0.1%	0.1%	0.1%	0.2%	0.2%	0.2%	0.3%	0.3%	0.3%	8.11774E-05	1.94664171
1	Existing	349	Ceiling Insulation	11	Other	3	Cooling		0.8%	1.9%	3.5%	5.7%	8.8%	12.9%	17.2%	20.4%	23.1%	23.9%	0.001705786	0.52651709
1	Existing	732	Copier Power Management Enabling	5	School	7	Office Equipment		0.1%	0.2%	0.3%	0.3%	0.4%	0.5%	0.5%	0.6%	0.6%	0.7%	1.46605E-06	0.01659184
1	Existing	307	EMS Optimization	1	Office	3	Cooling		0.3%	0.6%	0.8%	1.0%	1.2%	1.4%	1.5%	1.7%	1.9%	2.0%	4.83356E-05	0.17808302
1	Existing	402	Variable Speed Drive Control	5	School	4	Ventilation		2.4%	4.4%	6.2%	8.0%	9.7%	11.3%	12.8%	14.2%	15.6%	17.0%	0.001133226	0.49302547
1	Existing	347	Window Film (Standard)	5	School	3	Cooling		2.2%	4.5%	6.9%	9.5%	12.3%	15.3%	18.6%	22.2%	26.0%	30.1%	0.001509117	0.36973659
1	Existing	307	EMS Optimization	3	Retail	3	Cooling		0.3%	0.5%	0.8%	1.0%	1.2%	1.3%	1.5%	1.7%	1.8%	2.0%	4.68435E-05	0.17660694
1	Existing	401	High Efficiency Fan Motor, 15hp, 1800rpm, 92.4%	1	Office	4	Ventilation		12.4%	12.7%	13.1%	13.5%	14.0%	14.4%	14.9%	15.4%	15.9%	16.4%	4.25401E-05	0.01909463
1	Existing	321	DX Packaged System, EER=10.9, 10 tons	10	Hotel/Motel	3	Cooling		16.8%	18.1%	19.4%	20.6%	21.9%	23.2%	24.5%	25.9%	27.2%	28.6%	0.001994455	0.51517458
1	Existing	347	Window Film (Standard)	3	Retail	3	Cooling		1.9%	3.9%	6.0%	8.4%	10.9%	13.7%	16.8%	20.1%	23.7%	27.7%	0.001305874	0.34829212

Segment		Measure		Bldg	Applicable	End Use	End	Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019		
Number	Segment	Number	Measure	Typ	Building	Number	Use	Yr Index	1	2	3	4	5	6	7	8	9	10	weight	kWh savings per ft2
1	Existing	322	Hybrid Dessicant-DX System (Trane CDQ)	8	Other Healthcare	3	Cooling		0.0%	0.1%	0.1%	0.1%	0.1%	0.2%	0.2%	0.2%	0.2%	0.3%	0.000106874	2.99954505
1	Existing	347	Window Film (Standard)	1	Office	3	Cooling		2.0%	4.0%	6.2%	8.6%	11.2%	14.0%	17.1%	20.5%	24.1%	28.1%	0.001340115	0.35197652
1	Existing	322	Hybrid Dessicant-DX System (Trane CDQ)	11	Other	3	Cooling		0.0%	0.1%	0.1%	0.1%	0.2%	0.2%	0.2%	0.2%	0.3%	0.3%	4.37186E-05	1.10913609
1	Existing	332	Window Film (Standard)	5	School	3	Cooling		7.6%	15.5%	24.1%	33.3%	42.9%	52.8%	60.1%	63.5%	66.8%	68.1%	0.003433236	0.37213394
1	Existing	322	Hybrid Dessicant-DX System (Trane CDQ)	5	School	3	Cooling		0.0%	0.1%	0.1%	0.1%	0.1%	0.2%	0.2%	0.2%	0.2%	0.3%	7.14977E-05	2.01674914
1	Existing	304	EMS - Chiller	11	Other	3	Cooling		1.1%	2.0%	2.7%	3.5%	4.1%	4.8%	5.3%	5.8%	6.3%	6.8%	0.000211201	0.22925163
1	Existing	313	Ceiling Insulation	3	Retail	3	Cooling		0.5%	1.2%	2.2%	3.8%	6.3%	10.0%	14.5%	18.8%	22.5%	23.6%	0.001331491	0.41650641
1	Existing	401	High Efficiency Fan Motor, 15hp, 1800rpm, 92.4%	3	Retail	4	Ventilation		11.7%	12.0%	12.3%	12.7%	13.1%	13.5%	13.9%	14.4%	14.9%	15.3%	3.67391E-05	0.01767064
1	Existing	304	EMS - Chiller	9	Warehouse	3	Cooling		1.0%	1.8%	2.6%	3.3%	3.9%	4.5%	5.0%	5.5%	6.0%	6.4%	4.99432E-05	0.0573517
1	Existing	332	Window Film (Standard)	3	Retail	3	Cooling		7.0%	14.5%	22.9%	32.0%	41.6%	51.7%	59.3%	63.0%	66.5%	67.9%	0.003170528	0.34443703
1	Existing	332	Window Film (Standard)	1	Office	3	Cooling		7.1%	14.7%	23.1%	32.2%	41.9%	51.9%	59.4%	63.1%	66.6%	67.9%	0.003216456	0.34927924
1	Existing	314	Roof Insulation	10	Hotel/Motel	3	Cooling		2.3%	5.1%	8.5%	12.6%	17.3%	22.7%	27.2%	30.0%	32.6%	33.5%	0.000942626	0.20735057
1	Existing	328	Optimize Controls	11	Other	3	Cooling		0.1%	0.2%	0.3%	0.4%	0.5%	0.6%	0.7%	0.7%	0.8%	0.8%	2.46762E-05	0.22104748
1	Existing	313	Ceiling Insulation	5	School	3	Cooling		0.6%	1.3%	2.5%	4.3%	7.0%	10.9%	15.4%	19.3%	22.7%	23.7%	0.001436582	0.44736232
1	Existing	601	High Efficiency Water Heater (electric)	3	Retail	6	Water Heating		5.9%	12.4%	19.6%	27.6%	36.2%	45.4%	54.4%	58.4%	62.1%	65.7%	2.15057E-05	0.00241583
1	Existing	321	DX Packaged System, EER=10.9, 10 tons	7	Hospital	3	Cooling		15.9%	17.0%	18.1%	19.3%	20.5%	21.7%	22.9%	24.1%	25.3%	26.6%	0.004176404	1.15830214
1	Existing	322	Hybrid Dessicant-DX System (Trane CDQ)	6	College	3	Cooling		0.0%	0.1%	0.1%	0.1%	0.1%	0.1%	0.2%	0.2%	0.2%	0.2%	4.56437E-05	1.44466963
1	Existing	601	High Efficiency Water Heater (electric)	10	Hotel/Motel	6	Water Heating		6.1%	12.6%	20.0%	28.0%	36.7%	45.8%	54.7%	58.6%	62.3%	65.8%	0.00015005	0.01683366
1	Existing	402	Variable Speed Drive Control	6	College	4	Ventilation		2.0%	3.7%	5.3%	6.9%	8.3%	9.7%	11.1%	12.3%	13.6%	14.8%	0.001114766	0.55596915
1	Existing	401	High Efficiency Fan Motor, 15hp, 1800rpm, 92.4%	5	School	4	Ventilation		11.5%	11.8%	12.1%	12.5%	12.9%	13.3%	13.7%	14.1%	14.6%	15.1%	3.81218E-05	0.01867388
1	Existing	335	Roof Insulation	11	Other	3	Cooling		1.9%	4.4%	7.5%	11.4%	16.1%	21.5%	26.3%	29.4%	32.3%	33.4%	0.000847899	0.18737745
1	Existing	601	High Efficiency Water Heater (electric)	8	Other Healthcare	6	Water Heating		7.0%	14.3%	22.2%	30.6%	39.3%	48.4%	56.8%	60.1%	63.3%	66.3%	0.00037544	0.04179351
1	Existing	350	Roof Insulation	11	Other	3	Cooling		1.9%	4.4%	7.4%	11.3%	16.0%	21.4%	26.2%	29.4%	32.3%	33.4%	0.000841182	0.18596142
1	Existing	304	EMS - Chiller	1	Office	3	Cooling		0.9%	1.6%	2.3%	2.9%	3.5%	4.0%	4.5%	5.0%	5.4%	5.8%	0.000277893	0.35325396
1	Existing	313	Ceiling Insulation	1	Office	3	Cooling		0.4%	1.1%	2.0%	3.6%	5.9%	9.5%	14.1%	18.5%	22.3%	23.5%	0.00128295	0.40226593
1	Existing	304	EMS - Chiller	6	College	3	Cooling		1.0%	1.7%	2.4%	3.0%	3.6%	4.2%	4.7%	5.2%	5.6%	6.0%	0.000239319	0.29440868
1	Existing	402	Variable Speed Drive Control	3	Retail	4	Ventilation		1.9%	3.5%	5.0%	6.4%	7.8%	9.1%	10.4%	11.6%	12.8%	13.9%	0.000748601	0.39608553
1	Existing	304	EMS - Chiller	8	Other Healthcare	3	Cooling		0.9%	1.6%	2.2%	2.8%	3.4%	3.9%	4.4%	4.8%	5.2%	5.6%	0.000424734	0.55983609
1	Existing	304	EMS - Chiller	5	School	3	Cooling		0.9%	1.7%	2.4%	3.0%	3.6%	4.1%	4.6%	5.1%	5.5%	5.9%	0.000312022	0.39060608
1	Existing	351	Cool Roof - DX	10	Hotel/Motel	3	Cooling		7.4%	15.2%	23.4%	32.2%	41.3%	50.9%	58.1%	61.9%	65.8%	67.4%	0.020373636	2.22891312
1	Existing	601	High Efficiency Water Heater (electric)	2	Restaurant/ Services	6	Water Heating		5.4%	11.5%	18.3%	26.1%	34.6%	43.8%	53.1%	57.5%	61.5%	65.4%	0.00024827	0.02802141
1	Existing	305	Chiller Tune Up/Diagnostics	6	College	3	Cooling		1.8%	3.5%	5.4%	7.3%	9.2%	11.3%	13.5%	15.8%	18.2%	20.7%	0.000620636	0.22082565
1	Existing	326	DX Tune Up/ Advanced Diagnostics	6	College	3	Cooling		2.4%	5.1%	8.2%	11.8%	15.8%	20.5%	25.7%	31.5%	37.9%	44.8%	0.001669069	0.27490229
1	Existing	336	Cool Roof - DX	10	Hotel/Motel	3	Cooling		7.3%	15.0%	23.2%	31.9%	41.1%	50.6%	57.9%	61.7%	65.7%	67.4%	0.019982197	2.18761354
1	Existing	401	High Efficiency Fan Motor, 15hp, 1800rpm, 92.4%	10	Hotel/Motel	4	Ventilation		10.9%	11.2%	11.5%	11.8%	12.1%	12.5%	12.9%	13.3%	13.7%	14.2%	3.36836E-05	0.01751444

Segment		Measure		Bldg	Applicable	End Use	End	Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019		
Number	Segment	Number	Measure	Typ	Building	Number	Use	Yr Index	1	2	3	4	5	6	7	8	9	10	weight	kWh savings per ft2
1	Existing	401	High Efficiency Fan Motor, 15hp, 1800rpm, 92.4%	8	Other Healthcare	4	Ventilation		7.3%	7.4%	7.5%	7.7%	7.8%	8.0%	8.3%	8.5%	8.8%	9.1%	2.60625E-05	0.02117772
1	Existing	603	Heat Pump Water Heater (air source)	1	Office	6	Water Heating		0.1%	0.1%	0.1%	0.2%	0.2%	0.3%	0.4%	0.4%	0.5%	0.5%	8.13578E-06	0.11310873
1	Existing	402	Variable Speed Drive Control	9	Warehouse	4	Ventilation		1.7%	3.1%	4.5%	5.8%	7.1%	8.3%	9.4%	10.6%	11.7%	12.7%	0.000122059	0.07078804
1	Existing	307	EMS Optimization	6	College	3	Cooling		0.2%	0.3%	0.4%	0.5%	0.6%	0.7%	0.8%	0.9%	1.0%	1.1%	2.14468E-05	0.1437816
1	Existing	321	DX Packaged System, EER=10.9, 10 tons	3	Retail	3	Cooling		13.4%	14.2%	15.0%	15.8%	16.7%	17.6%	18.6%	19.5%	20.5%	21.6%	0.00104189	0.35599523
1	Existing	321	DX Packaged System, EER=10.9, 10 tons	2	Restaurant/ Services	3	Cooling		13.8%	14.6%	15.4%	16.3%	17.3%	18.2%	19.2%	20.2%	21.2%	22.3%	0.002611715	0.86352756
1	Existing	513	High R-Value Glass Doors	4	FoodStore	5	Refrigeration		0.0%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.2%	0.2%	7.39615E-06	0.3179994
1	Existing	402	Variable Speed Drive Control	10	Hotel/Motel	4	Ventilation		1.6%	3.0%	4.3%	5.5%	6.7%	7.8%	9.0%	10.0%	11.1%	12.1%	0.00062548	0.38087844
1	Existing	401	High Efficiency Fan Motor, 15hp, 1800rpm, 92.4%	6	College	4	Ventilation		9.9%	10.1%	10.4%	10.6%	10.9%	11.2%	11.6%	11.9%	12.3%	12.7%	3.47195E-05	0.02016244
1	Existing	603	Heat Pump Water Heater (air source)	4	FoodStore	6	Water Heating		0.0%	0.1%	0.1%	0.2%	0.2%	0.3%	0.3%	0.4%	0.4%	0.5%	1.19698E-05	0.19097527
1	Existing	403	Air Handler Optimization	11	Other	4	Ventilation		0.4%	0.7%	1.1%	1.4%	1.7%	2.0%	2.4%	2.7%	3.1%	3.4%	4.3917E-05	0.09400849
1	Existing	314	Roof Insulation	3	Retail	3	Cooling		1.2%	2.8%	5.1%	8.2%	12.4%	17.8%	23.2%	27.5%	31.5%	32.9%	0.000638899	0.14331851
1	Existing	402	Variable Speed Drive Control	8	Other Healthcare	4	Ventilation		1.2%	2.3%	3.3%	4.3%	5.3%	6.2%	7.1%	8.0%	8.9%	9.7%	0.000752826	0.5721116
1	Existing	351	Cool Roof - DX	3	Retail	3	Cooling		5.9%	12.4%	19.8%	28.1%	37.1%	46.9%	54.8%	59.6%	64.6%	66.7%	0.015574575	1.72246261
1	Existing	336	Cool Roof - DX	1	Office	3	Cooling		6.0%	12.6%	20.1%	28.4%	37.4%	47.2%	55.1%	59.8%	64.7%	66.8%	0.015865586	1.75318196
1	Existing	351	Cool Roof - DX	1	Office	3	Cooling		5.9%	12.5%	20.0%	28.3%	37.3%	47.1%	55.0%	59.7%	64.7%	66.7%	0.015757682	1.74179168
1	Existing	314	Roof Insulation	5	School	3	Cooling		1.4%	3.2%	5.6%	9.0%	13.3%	18.8%	24.0%	28.0%	31.7%	33.0%	0.000682912	0.15259515
1	Existing	211	Outdoor Lighting Controls (Photocell/Timeclock)	9	Warehouse	2	Outdoor Lighting		0.1%	0.2%	0.2%	0.3%	0.4%	0.4%	0.5%	0.5%	0.6%	0.6%	5.07146E-06	0.06054997
1	Existing	336	Cool Roof - DX	3	Retail	3	Cooling		5.6%	12.0%	19.3%	27.4%	36.4%	46.3%	54.3%	59.3%	64.4%	66.6%	0.014993251	1.66109321
1	Existing	314	Roof Insulation	1	Office	3	Cooling		1.2%	2.8%	5.0%	8.1%	12.3%	17.7%	23.1%	27.5%	31.4%	32.9%	0.000632923	0.14205902
1	Existing	347	Window Film (Standard)	6	College	3	Cooling		1.0%	2.1%	3.3%	4.6%	6.2%	7.9%	10.0%	12.3%	14.9%	17.9%	0.00065225	0.26873928
1	Existing	336	Cool Roof - DX	5	School	3	Cooling		5.9%	12.5%	19.9%	28.2%	37.3%	47.1%	54.9%	59.7%	64.7%	66.7%	0.015705603	1.73629424
1	Existing	351	Cool Roof - DX	5	School	3	Cooling		5.9%	12.4%	19.8%	28.1%	37.1%	46.9%	54.8%	59.7%	64.6%	66.7%	0.015598661	1.7250052
1	Existing	321	DX Packaged System, EER=10.9, 10 tons	4	FoodStore	3	Cooling		12.7%	13.4%	14.1%	14.9%	15.7%	16.5%	17.4%	18.3%	19.3%	20.3%	0.002042705	0.74407706
1	Existing	401	High Efficiency Fan Motor, 15hp, 1800rpm, 92.4%	9	Warehouse	4	Ventilation		9.0%	9.2%	9.4%	9.6%	9.8%	10.1%	10.4%	10.7%	11.1%	11.4%	4.05715E-06	0.00262027
1	Existing	601	High Efficiency Water Heater (electric)	11	Other	6	Water Heating		4.0%	8.8%	14.6%	21.5%	29.6%	38.7%	48.8%	54.4%	59.6%	64.4%	3.65977E-05	0.00419586
1	Existing	332	Window Film (Standard)	6	College	3	Cooling		5.2%	11.4%	18.7%	27.3%	36.9%	47.5%	56.0%	61.0%	65.6%	67.3%	0.002468847	0.27045887
1	Existing	401	High Efficiency Fan Motor, 15hp, 1800rpm, 92.4%	2	Restaurant/ Services	4	Ventilation		8.7%	8.8%	9.0%	9.2%	9.4%	9.7%	9.9%	10.2%	10.6%	10.9%	4.26365E-05	0.02884142
1	Existing	362	Occupancy Sensor (hotels)	5	School	3	Cooling		0.1%	0.2%	0.3%	0.4%	0.5%	0.6%	0.7%	0.8%	0.9%	1.0%	0.000161689	1.24934992
1	Existing	362	Occupancy Sensor (hotels)	1	Office	3	Cooling		0.1%	0.2%	0.3%	0.4%	0.5%	0.6%	0.7%	0.7%	0.8%	0.9%	0.00014189	1.12985725
1	Existing	313	Ceiling Insulation	6	College	3	Cooling		0.3%	0.7%	1.3%	2.3%	4.0%	7.0%	11.3%	16.4%	21.6%	23.1%	0.001024626	0.32665767
1	Existing	362	Occupancy Sensor (hotels)	6	College	3	Cooling		0.1%	0.2%	0.3%	0.4%	0.5%	0.6%	0.6%	0.7%	0.8%	0.9%	0.000111637	0.91222703
1	Existing	362	Occupancy Sensor (hotels)	8	Other Healthcare	3	Cooling		0.1%	0.2%	0.3%	0.4%	0.4%	0.5%	0.6%	0.7%	0.8%	0.9%	0.000209543	1.79056155
1	Existing	305	Chiller Tune Up/Diagnostics	11	Other	3	Cooling		1.0%	1.9%	3.0%	4.1%	5.3%	6.6%	8.1%	9.6%	11.4%	13.2%	0.000302305	0.16864123
1	Existing	326	DX Tune Up/ Advanced Diagnostics	11	Other	3	Cooling		1.3%	2.8%	4.6%	6.8%	9.5%	12.7%	16.7%	21.4%	27.0%	33.4%	0.00094998	0.20992357

FPL com existing_TRC annual penetration rates

Segment		Measure		Bldg	Applicable	End Use	End	Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019		
Number	Segment	Number	Measure	Typ	Building	Number	Use	Yr Index	1	2	3	4	5	6	7	8	9	10	weight	kWh savings per ft2
1	Existing	211	Outdoor Lighting Controls (Photocell/Timeclock)	7	Hospital	2	Outdoor Lighting		0.1%	0.1%	0.1%	0.2%	0.2%	0.3%	0.3%	0.3%	0.4%	0.4%	5.66451E-06	0.10256859
1	Existing	307	EMS Optimization	11	Other	3	Cooling		0.1%	0.1%	0.2%	0.2%	0.3%	0.3%	0.3%	0.4%	0.4%	0.5%	6.61012E-06	0.10578653
1	Existing	402	Variable Speed Drive Control	2	Restaurant/ Services	4	Ventilation		0.9%	1.7%	2.4%	3.2%	3.9%	4.6%	5.3%	6.0%	6.7%	7.4%	0.000570586	0.57088145
1	Existing	321	DX Packaged System, EER=10.9, 10 tons	9	Warehouse	3	Cooling		9.8%	10.2%	10.7%	11.2%	11.8%	12.4%	13.0%	13.7%	14.4%	15.2%	0.000121662	0.05916949
1	Existing	347	Window Film (Standard)	11	Other	3	Cooling		0.5%	1.0%	1.6%	2.3%	3.1%	4.1%	5.3%	6.7%	8.3%	10.3%	0.000287566	0.20618862
1	Existing	314	Roof Insulation	6	College	3	Cooling		0.7%	1.7%	3.2%	5.5%	8.8%	13.7%	19.5%	25.1%	30.4%	32.3%	0.000485617	0.11102795
1	Existing	601	High Efficiency Water Heater (electric)	1	Office	6	Water Heating		2.4%	5.6%	9.7%	15.0%	21.8%	30.3%	40.5%	48.8%	55.9%	62.5%	2.79406E-05	0.00329785
1	Existing	211	Outdoor Lighting Controls (Photocell/Timeclock)	8	Other Healthcare	2	Outdoor Lighting		0.0%	0.1%	0.1%	0.1%	0.1%	0.2%	0.2%	0.2%	0.2%	0.3%	2.69303E-06	0.07606389
1	Existing	332	Window Film (Standard)	11	Other	3	Cooling		3.5%	8.0%	13.8%	21.2%	30.4%	41.3%	51.2%	58.0%	64.2%	66.5%	0.001870941	0.20742484
1	Existing	321	DX Packaged System, EER=10.9, 10 tons	11	Other	3	Cooling		9.1%	9.4%	9.8%	10.3%	10.8%	11.4%	11.9%	12.6%	13.2%	14.0%	0.000400311	0.21146465
1	Existing	601	High Efficiency Water Heater (electric)	4	FoodStore	6	Water Heating		2.2%	5.1%	8.9%	13.9%	20.5%	28.8%	39.0%	47.7%	55.2%	62.1%	4.6898E-05	0.00556817
1	Existing	313	Ceiling Insulation	11	Other	3	Cooling		0.1%	0.3%	0.7%	1.3%	2.3%	4.2%	7.7%	13.1%	20.1%	22.4%	0.000759164	0.24951118
1	Existing	351	Cool Roof - DX	6	College	3	Cooling		3.7%	8.4%	14.2%	21.3%	29.8%	39.8%	48.9%	55.6%	62.5%	65.4%	0.010733028	1.2111141
1	Existing	336	Cool Roof - DX	6	College	3	Cooling		3.6%	8.2%	13.9%	20.9%	29.4%	39.4%	48.5%	55.3%	62.4%	65.3%	0.010520685	1.18867125
1	Existing	321	DX Packaged System, EER=10.9, 10 tons	6	College	3	Cooling		8.3%	8.7%	9.0%	9.4%	9.9%	10.4%	10.9%	11.5%	12.1%	12.8%	0.000479447	0.27595179
1	Existing	321	DX Packaged System, EER=10.9, 10 tons	1	Office	3	Cooling		8.0%	8.4%	8.7%	9.1%	9.6%	10.0%	10.6%	11.1%	11.7%	12.4%	0.000552162	0.32905086
1	Existing	211	Outdoor Lighting Controls (Photocell/Timeclock)	3	Retail	2	Outdoor Lighting		0.0%	0.0%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	7.78197E-06	0.3921425
1	Existing	321	DX Packaged System, EER=10.9, 10 tons	8	Other Healthcare	3	Cooling		7.5%	7.8%	8.2%	8.5%	8.9%	9.4%	9.9%	10.4%	11.0%	11.6%	0.000797551	0.50702778
1	Existing	321	DX Packaged System, EER=10.9, 10 tons	5	School	3	Cooling		7.5%	7.8%	8.1%	8.5%	8.9%	9.4%	9.9%	10.4%	11.0%	11.6%	0.000535123	0.34090189
1	Existing	504	Evaporator fan controller for MT walk-ins	4	FoodStore	5	Refrigeration		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	6.48344E-07	0.10576592
1	Existing	314	Roof Insulation	11	Other	3	Cooling		0.4%	0.9%	1.8%	3.3%	5.6%	9.5%	15.1%	21.7%	28.8%	31.4%	0.000362335	0.0851009
1	Existing	211	Outdoor Lighting Controls (Photocell/Timeclock)	1	Office	2	Outdoor Lighting		0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%	0.1%	1.16065E-06	0.10172048
1	Existing	603	Heat Pump Water Heater (air source)	9	Warehouse	6	Water Heating		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	6.76696E-08	0.00957973
1	Existing	351	Cool Roof - DX	11	Other	3	Cooling		2.4%	5.7%	10.0%	15.8%	23.5%	33.2%	43.1%	51.5%	60.4%	64.1%	0.008094285	0.93206862
1	Existing	336	Cool Roof - DX	11	Other	3	Cooling		2.3%	5.5%	9.7%	15.4%	23.0%	32.7%	42.7%	51.2%	60.2%	64.0%	0.007930814	0.91476844
1	Existing	211	Outdoor Lighting Controls (Photocell/Timeclock)	4	FoodStore	2	Outdoor Lighting		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%	3.64548E-06	0.37883054
1	Existing	211	Outdoor Lighting Controls (Photocell/Timeclock)	5	School	2	Outdoor Lighting		0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%	0.1%	1.24605E-06	0.11904691
1	Existing	601	High Efficiency Water Heater (electric)	9	Warehouse	6	Water Heating		0.4%	0.9%	1.7%	2.9%	4.8%	8.0%	13.4%	22.6%	36.8%	52.4%	1.98562E-06	0.00027931
1	Existing	349	Ceiling Insulation	9	Warehouse	3	Cooling		0.0%	0.0%	0.1%	0.2%	0.4%	0.7%	1.6%	4.0%	12.4%	18.3%	0.000292963	0.11815297
1	Existing	211	Outdoor Lighting Controls (Photocell/Timeclock)	11	Other	2	Outdoor Lighting		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.40161E-07	0.19107728
1	Existing	350	Roof Insulation	9	Warehouse	3	Cooling		0.1%	0.2%	0.3%	0.6%	1.1%	2.2%	4.5%	9.7%	21.2%	27.2%	0.000152376	0.041339

Segment		Measure		Bldg	Applicable	End Use	End	Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019		
Number	Segment	Number	Measure	Typ	Building	Number	Use	Yr Index	1	2	3	4	5	6	7	8	9	10	weight	kWh savings per ft2
1	Existing	334	Ceiling Insulation	9	Warehouse	3	Cooling		0.0%	0.0%	0.1%	0.1%	0.2%	0.5%	1.0%	2.7%	9.9%	16.5%	0.000220559	0.09861456
1	Existing	335	Roof Insulation	9	Warehouse	3	Cooling		0.0%	0.1%	0.2%	0.4%	0.7%	1.4%	3.0%	7.0%	18.3%	25.4%	0.000118395	0.03438085
1	Existing	328	Optimize Controls	9	Warehouse	3	Cooling		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	4.03673E-08	0.04055028
1	Existing	305	Chiller Tune Up/Diagnostics	9	Warehouse	3	Cooling		0.0%	0.0%	0.1%	0.1%	0.1%	0.2%	0.2%	0.3%	0.4%	0.5%	2.59774E-06	0.04218911
1	Existing	307	EMS Optimization	9	Warehouse	3	Cooling		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.47758E-08	0.02646383
1	Existing	211	Outdoor Lighting Controls (Photocell/Timeclock)	2	Restaurant/ Services	2	Outdoor Lighting		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.09841E-07	0.59022254
1	Existing	403	Air Handler Optimization	9	Warehouse	4	Ventilation		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	7.15184E-08	0.01745671
1	Existing	211	Outdoor Lighting Controls (Photocell/Timeclock)	10	Hotel/Motel	2	Outdoor Lighting		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	4.73102E-08	0.07218491
1	Existing	347	Window Film (Standard)	9	Warehouse	3	Cooling		0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%	0.2%	1.23923E-06	0.04813618
1	Existing	313	Ceiling Insulation	9	Warehouse	3	Cooling		0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.3%	0.9%	4.4%	10.5%	8.81594E-05	0.06181365
1	Existing	326	DX Tune Up/ Advanced Diagnostics	9	Warehouse	3	Cooling		0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.2%	0.3%	0.4%	0.6%	3.23676E-06	0.03851038
1	Existing	314	Roof Insulation	9	Warehouse	3	Cooling		0.0%	0.0%	0.1%	0.1%	0.2%	0.5%	1.0%	2.7%	10.6%	19.3%	5.69902E-05	0.02182415
1	Existing	332	Window Film (Standard)	9	Warehouse	3	Cooling		0.1%	0.2%	0.3%	0.7%	1.3%	2.6%	5.5%	13.0%	35.3%	49.9%	0.000263921	0.03903065
1	Existing	351	Cool Roof - DX	9	Warehouse	3	Cooling		0.1%	0.2%	0.5%	0.9%	1.7%	3.3%	6.8%	14.8%	35.1%	47.9%	0.001492416	0.23007321
1	Existing	336	Cool Roof - DX	9	Warehouse	3	Cooling		0.1%	0.1%	0.3%	0.5%	1.0%	2.1%	4.4%	10.4%	29.3%	43.5%	0.001116682	0.18931359
																weighted average penet			52.1%	73.7793832