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FILED
MAR 0 9 2010
Clerk's Office
N.C. Utilities Commission

March 9, 2010

Ms. Renné C. Vance, Chief Clerk
North Carolina Utilities Commission
4325 Mail Service Center
Raleigh, North Carolina 27699-4325

RE: Docket No. E-100, Sub 118 and E-100, Sub 124

Dear Ms. Vance:

Enclosed for filing are the original and thirty (30) copies of the following:

1) Duke Energy Carolinas, LLC's Revised Pages 19 and 20 of the Direct Testimony of Richard G. Stevie originally filed on January 11, 2010;

2) Duke Energy Carolinas, LLC's Revised Exhibit Nos. 1 and 3 of the Direct Testimony of James A. Riddle originally filed on January 11, 2010;

3) Duke Energy Carolinas, LLC's Rebuttal Testimony of Robert A. McMurry (17 copies of the CONFIDENTIAL version of McMurry's Rebuttal Testimony are being provided under seal); and

4) Duke Energy Carolinas, LLC's Rebuttal Testimony of Richard G. Stevie, Ph.D.

All of the aforementioned are being filed in the above referenced dockets.

Sincerely,

Robert W. Kaylor

Robert W. Kaylor

Enclosures

cc: Parties of Record

(RC)
w/confidential:
7 Comm
Bennink
Kirby
Watson
Hoover
Kiti
Hilburn
Sessoms
Ericson
Jones

w/out confidential:
AG
Exec. Dir.
3 Legal
3 Accts
2 Econ
3 Elect.

Another complicating factor affecting a comparison between the IRP and the goals is that the Company began implementing the programs in the middle of 2009. The year 2010 is the first full year during which the programs will have been in place. For the Revised IRP, the cumulative impact value for 2010 reported on page 47 of the Annual Plan includes the partial year impacts from 2009. The table below provides a quick summary for the Base Case.

	EE and DSM Base Case	
	Load Impacts in IRP (1)	
Year	EE MWH	EE & DSM MW
2010	309,917	496
2011	584,555	744
2012	1,014,730	932
2013	1,317,350	971
2014	1,572,072	1,001
2015	1,919,128	1,043
2016	2,385,480	1,100
2017	2,613,110	1,143
2018	2,859,958	1,173
2019	3,210,799	1,201
2020	3,684,262	1,259
(1) Excludes Impacts from IS and SG		

This demonstrates that the Base Case peak MW impacts in the IRP analysis align closely with the goals previously provided and that the MWh impacts follow the goals for the first three years. The fourth year goal is above the impacts in the IRP and falls between the IRP MWh impacts for 2013 and 2014. This shift can occur due to the differences in the way impacts are assumed to increase within each year, linear growth through the year in the IRP versus a full annual value.

Q. DID YOU ALSO PREPARE AN ALTERNATE FORECAST OF ENERGY EFFICIENCY IMPACTS?

A. Yes. I prepared an alternate High Case energy efficiency impact forecast. For the High Case energy efficiency forecast, I assumed that the level of energy efficiency impacts initially follow the Base Case for the first five years but then increase at the rate of 1% of retail sales each year until the economic potential is reached as estimated in the Company's energy efficiency market potential studies. The table below provides the forecast of impacts for this High Case:

	EE and DSM High Case Load Impacts in IRP (1)	
Year	EE MWH	EE & DSM MW
2010	309,917	496
2011	687,711	757
2012	1,193,800	954
2013	1,317,350	970
2014	1,572,072	1,001
2015	2,098,426	1,065
2016	2,698,371	1,138
2017	3,299,643	1,232
2018	3,922,556	1,309
2019	4,638,791	1,377
2020	5,360,536	1,464
(1) Excludes Impacts from IS and SG		

This demonstrates how much faster the MWh and MW impacts would increase under the assumptions of the High Case. A more detailed summary of the High Case projected energy efficiency load impacts is provided on page 48 of the 2009 Annual Plan.

Q. HOW DO THESE PROJECTIONS AFFECT THE FORECAST OF LOAD?

A. These projected EE and DSM impacts are included in the IRP analysis. This essentially reduces the load forecast for these projected impacts.

2008 Forecast			2009 Forecast			2009 Forecast Rev 1		
Year	Energy	Demand	Year	Energy	Demand	Year	Energy	Demand
2008	94,282	18,011	2009	89,515	17,489	2009	89,515	17,489
2009	95,552	18,400	2010	89,315	17,668	2010	89,315	17,668
2010	96,729	18,730	2011	90,427	17,995	2011	92,138	18,635
2011	99,640	19,384	2012	91,550	18,246	2012	94,539	18,897
2012	101,637	19,853	2013	91,946	18,450	2013	94,509	19,035
2013	102,144	20,017	2014	93,338	18,791	2014	95,530	19,317
2014	102,611	20,194	2015	95,118	19,198	2015	96,967	19,670
2015	103,717	20,471	2016	97,205	19,650	2016	98,743	20,072
2016	105,063	20,769	2017	98,194	19,867	2017	100,446	20,446
2017	106,311	21,054	2018	99,411	20,136	2018	102,417	20,877
2018	107,315	21,337	2019	100,776	20,405	2019	104,349	21,266
2019	108,680	21,625	2020	102,480	20,705	2020	106,224	21,596
2020	110,243	21,951	2021	104,311	21,009	2021	108,226	21,930
2021	112,127	22,271	2022	106,306	21,324	2022	110,390	22,277
2022	114,042	22,569	2023	108,511	21,658	2023	112,761	22,639
2023	116,005	22,884	2024	110,861	22,012	2024	115,276	23,021
15 Year Growth Rate	1.4%	1.6%	15 Year Growth Rate	1.4%	1.5%	15 Year Growth Rate	1.7%	1.8%

2008 Forecast

Year	Energy Efficiency Impacts	Energy	Energy Efficiency Impacts	Demand
2008	0	94,282	0	18,011
2009	98	95,454	39	18,361
2010	289	96,440	110	18,620
2011	474	99,166	176	19,208
2012	657	100,980	239	19,614
2013	840	101,304	306	19,711
2014	1,031	101,580	377	19,817
2015	1,216	102,501	443	20,028
2016	1,401	103,662	506	20,263
2017	1,582	104,729	572	20,482
2018	1,773	105,542	644	20,693
2019	1,958	106,722	709	20,916
2020	2,146	108,097	773	21,178
2021	2,227	109,900	800	21,471
2022	2,227	111,815	800	21,769
2023	2,227	113,778	800	22,084
15 Year Growth Rate		1.3%		1.4%

2009 Forecast

Year	Energy Efficiency Impacts	Energy	Energy Efficiency Impacts	Demand
2009	74	89,441	10	17,479
2010	310	89,005	39	17,629
2011	585	89,842	72	17,923
2012	1,015	90,535	125	18,121
2013	1,317	90,629	164	18,286
2014	1,572	91,766	194	18,597
2015	1,919	93,199	236	18,962
2016	2,385	94,820	293	19,357
2017	2,613	95,581	336	19,531
2018	2,860	96,551	366	19,770
2019	3,211	97,565	394	20,011
2020	3,684	98,796	452	20,253
2021	3,817	100,494	483	20,526
2022	3,817	102,489	483	20,841
2023	3,817	104,694	483	21,175
2024	3,827	107,034	483	21,529
15 Year Growth Rate		1.2%		1.4%

2009 Forecast Rev 1

Year	Energy Efficiency Impacts	Energy	Energy Efficiency Impacts	Demand
2009	74	89,441	10	17,479
2010	310	89,005	39	17,629
2011	585	91,553	72	18,563
2012	1,015	93,524	125	18,772
2013	1,317	93,192	164	18,871
2014	1,572	93,958	194	19,123
2015	1,919	95,048	236	19,434
2016	2,385	96,358	293	19,779
2017	2,613	97,833	336	20,110
2018	2,860	99,557	366	20,511
2019	3,211	101,138	394	20,872
2020	3,684	102,540	452	21,144
2021	3,817	104,409	483	21,447
2022	3,817	106,573	483	21,794
2023	3,817	108,944	483	22,156
2024	3,827	111,449	483	22,538
15 Year Growth Rate		1.5%		1.7%

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

DOCKET NO. E-100, SUB 118
DOCKET NO. E-100, SUB 124

DOCKET NO. E-100, SUB 118 In the Matter of Investigation of Integrated Resource Planning in North Carolina – 2008 DOCKET NO. E-100, SUB 124 In the Matter of Investigation of Integrated Resource Planning in North Carolina – 2009	)))))))))))	**REBUTTAL TESTIMONY OF ROBERT A. MC MURRY FOR DUKE ENERGY CAROLINAS, LLC**

I. INTRODUCTION AND PURPOSE

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Robert A. Mc Murry, and my business address is 526 South Church Street, Charlotte, North Carolina.

Q. HAVE YOU PREVIOUSLY FILED DIRECT TESTIMONY IN SUPPORT OF DUKE ENERGY CAROLINAS IN THIS DOCKET?

A. Yes, I have.

Q. HAVE YOU REVIEWED THE PRE-FILED DIRECT TESTIMONY OF INTERVENOR WITNESSES IN THIS CASE?

A. Yes, I have.

Q. WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY IN THIS PROCEEDING?

A. The purpose of my rebuttal testimony is to clarify one statement in the Affidavit of Kennie D. Ellis and to respond to several issues raised in the testimony of David A. Schlissel on behalf of Environmental Defense Fund, The Sierra Club, Southern Alliance for Clean Energy and the Southern Environmental Law Center and Dr. Blackburn on behalf of NC WARN.

II. CLARIFICATION TO TESTIMONY OF MR. ELLIS

Q. WHAT CLARIFICATION DO YOU WANT TO MAKE WITH REGARDS TO THE AFFIDAVIT OF KENNIE D. ELLIS?

A. On page 2 of his Affidavit, Mr. Ellis states, "Duke witness Mc Murray indicates in his prefiled direct testimony filed on January 11, 2010 in this proceeding that preliminary results indicate that the inclusion of the *undesignated* wholesale load increases the need for additional peaking generation in the 2017 to 2026

1 timeframe, *and increases the need for additional baseload generation in the 2018*
2 *to 2021 timeframe*." (emphasis supplied). I will clarify my original testimony in
3 order to eliminate any misunderstanding as to both the need for peaking and
4 baseload resource needs during the listed timeframes.

5 My prefiled direct testimony states on page 5, lines 12 through 15, that "*the*
6 *inclusion of the Central load as a firm requirement,* and the undesignated load
7 associated with wholesale customers we have a reasonable expectation to serve,
8 increased the need of combustion turbine generation in the 2017 and 2026
9 timeframe." (emphasis supplied). It is both the inclusion of the Central load and
10 the specified undesignated wholesale load increased the need for additional
11 peaking generation within the subject timeframe.

12 Likewise, the additional wholesale undesignated load in the Revised 2009
13 IRP did not create a need for additional baseload resources over and above that
14 called for in the 2009 IRP as filed on September 1, 2009, nor does this additional
15 undesignated wholesale load alone support the need for Lee Nuclear. My prefiled
16 testimony on page 5, lines 15 & 16, states "the inclusion of these wholesale
17 customers *further* supports the need for Lee Nuclear in the 2018 to 2021
18 timeframe." Duke Energy Carolinas needs Lee Nuclear with or without the
19 inclusion of the undesignated wholesale load in the IRP. The inclusion of the
20 undesignated wholesale load does *further* support that need, but the need for Lee
21 Nuclear is not dependent on the addition of the undesignated load.

III. RESPONSE TO TESTIMONY OF MR. SCHLISSEL

Q. WHAT ARE THE SPECIFIC ISSUES WITH REGARDS TO THE TESTIMONY OF DAVID A. SCHLISSEL THAT ARE ADDRESSED IN YOUR REBUTTAL TESTIMONY?

A. Specifically, I am responding to following points and claims concerning:

Points and claims raised by David A. Schlissel:

- Duke Energy Carolinas' emissions are "going in the wrong direction" (page 8) when mandated emission levels are going down.
- The Company's increase in carbon dioxide ("CO2") emissions between 2010 and 2029 is due to the addition of Cliffside Unit 6.
- Duke Energy Carolinas will need to reduce its reliance on coal-fired generation to further reduce CO2 emissions.
- Duke Energy Carolinas can add additional natural gas-fired generation combined cycle units to replace coal fired generating capacity without concern regarding becoming unreasonably dependent on natural gas as a fuel source.
- Duke Energy Carolinas should be including the potential cost of additional air emission requirements and the regulation of Coal Combustion Byproducts in its IRP.
- Although Duke Energy Carolinas' CO2 base price assumption is reasonable, the Company needs to consider a wider range of scenarios of CO2 prices than +/- 15% around the base price.

1 **Q. HOW DO YOU RESPOND TO MR. SCHLISSEL'S CRITICISMS ON**
2 **PAGE 8 OF HIS TESTIMONY REGARDING DUKE ENERGY**
3 **CAROLINAS' PROJECTED CO2 EMISSIONS BETWEEN 2009 AND**
4 **2029?**

5 A. Mr. Schlissel correctly points out on page 6 of his testimony that Duke Energy
6 Corporation ("Duke Energy") is part of the US Climate Action Partnership, which
7 recommended emission reductions similar to those in the Waxman-Markey
8 proposed legislation. Duke Energy has been a vocal proponent of CO2 legislation
9 that is economy-wide, based on a cap and trade methodology, and includes an
10 appropriate level of emission allocations to protect customers from rate shock.
11 Most federal climate change legislation proposed to date has included an economy-
12 wide greenhouse gas ("GHG") cap-and-trade program to bring about reductions of
13 GHG emissions through 2050. Under a cap-and-trade program, utilities have the
14 option of reducing carbon emissions, purchasing allowances or credits, or a
15 combination of the two.

16 From the time the Company began to incorporate potential GHG regulation
17 into its resource planning process in 2006, Duke Energy Carolinas has assumed a
18 cap-and-trade program would be enacted. Under this assumption, the Company
19 has sought to develop a cost-effective portfolio of resources that meets customer
20 energy needs while complying with the assumed GHG regulation. Our results
21 consistently demonstrate that this is best achieved through a balanced portfolio that
22 includes nuclear, coal, gas, hydro and renewable energy generation, end-use
23 energy efficiency, and the purchase of GHG emission allowances. As the proposed
24 emissions cap declines over time, the price of GHG allowances will likely

increase. As the prices of GHG allowances increase, additional end-use energy efficiency, nuclear, natural gas, and renewable generation will likely be more cost-effective and, over time, will lead the Company to replace coal-fired generation resources as those resources near or reach the end of its economic lives. Duke Energy Carolinas' economic analyses to date, however, show that coal-fired generation resources, particularly those with environmental controls (commonly referred to as "scrubbed" units), will continue to be an important part of the portfolio through at least 2029, over a range of potential GHG allowance prices.

Duke Energy Carolinas continues to believe that it is likely that federal climate change legislation will be enacted. The Company is aware, however, that the Environmental Protection Agency ("EPA") has proposed to regulate GHG emissions. It is very unclear at this time what those regulatory requirements might consist of beyond the application of prevention of significant deterioration ("PSD") permitting requirements for new and modified electric generating facilities that will take effect in 2011. The EPA has given some indications that it wants to develop new source performance standards for GHG emissions from electric generating facilities and that such standards could possibly include a cap-and-trade program, but this is uncertain.

Q. ON PAGE 3 OF HIS TESTIMONY, MR. SCHLISSEL TESTIFIES THAT THE COMPANY'S CO2 EMISSIONS ARE INCREASING BETWEEN 2010 AND 2029 BECAUSE OF THE ADDITION OF CLIFFSIDE UNIT 6. DO YOU AGREE?

A. No, I do not. Mr. Schlissel compares the emissions of Cliffside Unit 6 with the emissions of the cycling plants Duke Energy Carolinas will be retiring. What

1 Mr. Schlissel misses is that with the addition of the Cliffside Unit 6 unit, all other
2 coal resources are moved down in the dispatch order and will run less often than
3 they would have without the addition of Cliffside 6. Cliffside Unit 6 is critical to
4 the Company's fleet modernization program. It will be the most efficient coal
5 generating unit on Duke Energy Carolinas' system and will generate
6 approximately 25% less CO2 per megawatt-hour ("MWhr") than the 1,600
7 megawatts ("MWs") of coal generation that the 2009 IRP shows will be retired by
8 2020. As a result of the above-referenced retirements, and the additions of
9 Cliffside Unit 6, Buck and Dan River Combined Cycle plants and Lee Nuclear, the
10 system average CO2 per MWhr will decrease from actual 1.0 #CO2/MWhr in
11 2008 to a projected system average in 2029 of under 0.7 #CO2/MWhr in 2029.
12 This represents a 30% decrease in CO2/MWhr emissions.
13 The addition of Cliffside Unit 6 means the emissions from the remaining
14 coal assets will decrease. Mr. Schlissel suggests that Duke Energy Carolinas could
15 have used natural gas generation (which has a lower CO2 emission level than coal
16 generation) to reduce its CO2 emissions. What Mr. Schlissel fails to realize is that
17 adding efficient natural gas generation does not significantly alter the dispatch
18 order; where baseload coal is dispatched ahead of natural gas generations even
19 considering the value of CO2 emission allowances. Thus, the addition of natural
20 gas generation may not significantly reduce CO2 emissions.
21 The increase in emissions over the planning horizon reflected in Chart A3 (page
22 72) of the 2009 IRP is due in part to the inclusion of approximately 1800MW of
23 additional wholesale load without taking into consideration the carbon emissions
24 associated with these customers prior to being served by Duke Energy Carolinas.

These customers are currently being served by other energy providers that emit CO2. If Chart A3 included the emissions of these customers from 2009 to 2029, the chart likely would have reflected a reduction in CO2 emissions over the same period as compared to Chart A3 at present.

[BEGIN CONFIDENTIAL]

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[redacted]

[redacted]

[redacted]

[END CONFIDENTIAL]

Q. ON PAGE 11 OF HIS TESTIMONY, MR. SCHLISSEL ASKED IF THE COMMISSION SHOULD BE CONCERNED BY THE COMPANY'S RETIREMENT OF ADDITIONAL COAL GENERATION BEYOND THE PLANNED 1,600 MWS AND REPLACING IT WITH NATURAL GAS COMBINED CYCLE GENERATION. HOW DO YOU RESPOND?

A. Mr. Schlissel suggests that natural gas is going to be cheap and plentiful well into the future, and thus less volatile over the planning horizen. I think we've all heard those predictions before. Perhaps this prediction will come to fruition, perhaps not. As suggested by Mr. Schlissel, there were signals in 2009 that natural gas prices may drop near term due to the recession and longer term due increased domestic supply. However, the long term price remains uncertain. Natural gas pricing has historically been volatile and if Duke Energy Carolinas and other utilities were to start to retire significant amounts of coal fired generation and to invest significantly in natural gas resources, there would be almost certainly be a price response.

Notwithstanding these concerns, the Company addressed the issue of a potential reduction in gas price with its sensitivity analyses. In the 2009 IRP, the "low gas price" sensitivity was based on a minus 40% price sensitivity from the base fundamental gas forecast. During screening phase, when the natural gas price was reduced 40%, some amount of natural gas combined cycle generation was

selected in lieu of combustion turbine generation in the 2025 to 2030 timeframe. The capacity factor of some of the existing coal generation decreased, but in no way did these sensitivities indicated that the retirement of additional coal generation would be cost effective.

Duke Energy Carolinas welcomes the news of the potential for lower natural gas prices because it would lower fuel costs to customers. However, our analysis shows, at lower gas prices, that although natural gas combined cycle generation may displace some of the 4,400 MWs of projected combustion turbine need through 2029, it would not be cost effective to retire additional coal generation.

Q. ON PAGE 15 OF HIS TESTIMONY, MR. SCHLISSEL STATES THAT ELECTRIC UTILITIES SHOULD INCLUDE THE COSTS OF NEW OR REVISED AIR EMISSION REQUIREMENTS AND THE COSTS OF THE PROPER DISPOSAL AND MANAGEMENT OF COAL COMBUSTION WASTES IN THEIR RESOURCE PLANS. HOW DO YOU RESPOND?

A. First, I would like to correct Mr. Schlissel's use of the term "Coal Combustion Waste" used on pages 15-24. The EPA and multiple state regulatory agencies have referred to these products as Coal Combustion "Products", or "By-products", and "Residuals" but not waste.

The beneficial re-use of Coal Combustion By-Products ("CCBs") goes back more than 40 years and the EPA, federal agencies, universities and other research institutes have extensively studied their impact on the environment. Studies associated with the use of CCBs for cement, wallboard, structural fill, road projects and other similar application show that these applications pose no public health

1 risks when used properly. The EPA, as recently as 2000, reaffirmed the
2 designation of coal ash as a non-hazardous waste.

3 On page 15, lines 21 and 22, Mr. Schlissel states that fly ash and
4 desulfurization sludge are typically disposed of in a landfill without
5 acknowledging any potential reuse. All of the Flue Gas Desulfurization ("FGDs")
6 systems installed on Duke Energy Carolinas' system produce a wallboard grade
7 gypsum by-product and the majority of this by-product is, or will be, used in
8 wallboard production. Also, a large quantity of the fly ash produced is used in the
9 production of cement and structural fills.

10 Though not explicitly addressed in the IRP, the Company's resource
11 planning analysis accounts for the risks associated with future regulations of CCBs
12 and other pending air quality regulations. For example, the Revised 2009 IRP
13 reflects that all the Company's coal-fired units that currently do not have the
14 ability to dispose of the fly ash in a landfill will be retired by 2020. The scrubbed
15 coal units on Duke Energy Carolinas' system handle fly ash in a dry manner and
16 have the ability to dispose of the ash in on-site lined landfills. Depending on the
17 requirements of future CCB regulation, these stations could incur additional
18 compliance costs, but are positioned well to meet future requirements. These units
19 have advanced SO2 and NOx controls due in large part due to the 2002 North
20 Carolina Clean Smokestacks Act. The SO2 and NOx controls have an ancillary
21 benefit of also reducing mercury. It is too early to tell if Duke Energy Carolinas
22 will have to incur additional costs due to emerging environmental regulations; but
23 given the planned retirements, the flexibility to move up these retirements, and
24 existing air emission controls on the remaining units, the Company is positioned

well to meet these emerging requirements.

I would also like to make some clarifications to the following statements:

- Page 16, lines 7-9 – Mr. Schlissel states that North Carolina law exempts CCB surface impoundments and certain new CCB landfills from solid waste regulation. He is mistaken. Surface impoundments for ash are currently regulated by the North Carolina Division of Water Quality.
- Page 16, line 9 – Mr. Schlissel says that a liner may not be required for CCB landfills. Again, he is mistaken. Mr. Schlissel references 15A N.C.A.C. 13B.0503, but this regulation applies only to sanitary landfills. CCB landfill designs follow the requirements at N.C.A.C. 13B .1600, which does require a liner system. Although Mr. Schlissel correctly references NC Gen. Stat. § 130A-295.4 and correctly notes that the regulation does allow exemptions, he fails to acknowledge that the statute requires a more stringent liner system in exchange for being able to construct the landfill over formerly used CCB storage areas. The statute is a "win-win" in that it requires more stringent liners while allowing the landfill to be built on previously used areas. This regulatory structure allows the landfill to cap the existing CCB material and allows a landfill to be built without creating a new footprint.
- Page 16, lines 11-12 – Mr. Schlissel's reference to the statute for CCB structural fill sites is incorrect. However, he is correct that liners are not required for structural fills; they are exempted from landfill design type requirements due to their application for beneficial re-use.

1 **Q. DO YOU AGREE WITH MR. SCHLISSEL'S TESTIMONY THAT DUKE**
2 **SHOULD HAVE USED A WIDER RANGE OF SCENARIOS FOR CO2**
3 **PRICE PROJECTIONS IN ITS 2009 IRP?**
4 A. No. The Company developed its CO2 price projections using the
5 Waxman/Markey CO2 legislation (House Bill - HR2454). During the
6 development of the 2009 IRP, this bill passed the House of Representatives and,
7 for purposes of the 2009 IRP, the Company presumed that something similar to the
8 regulatory scheme set forth in the bill would become law. The plus or minus 15%
9 range was developed based on a range of international offsets that were being
10 evaluated at the time.
11 There is less certainty today that CO2 legislation will become law than
12 there was in 2009. In the development of the 2010 IRP, Duke Energy Carolinas
13 may consider a broader range of CO2 prices to reflect this increase uncertainty.
14 **IV. <u>RESPONSE TO TESTIMONY OF DR. BLACKBURN</u>**
15 **Q. WHAT ARE THE SPECIFIC ISSUES WITH REGARD TO THE**
16 **TESTIMONY OF DR. BLACKBURN THAT YOU WILL ADDRESS IN**
17 **YOUR REBUTTAL TESTIMONY?**
18 A. In the testimony of Dr. Blackburn, North Carolina Waste Awareness and
19 Reduction Network ("NC WARN") presents the same arguments, albeit with more
20 aggressive assumptions, as in its comments filed in the 2006 IRP proceeding,
21 Docket No. E-100, Sub 109; 2007 IRP proceeding, Docket No. E-100, Sub 114;
22 2008 IRP Initial Comments and Request for Hearing, Docket No. E-100, Sub 118;
23 and now in the Investigation of the 2008 and 2009 IRP, Docket No. E-100, Sub
24 124.

Duke Energy Carolinas addressed each of NC WARN's claims in the Company's reply comments filed In the Matter of Investigation of Integrated Resource Planning in North Carolina 2008 (Docket No E-100, Sub 118). The reply comments focused mainly on the NC WARN report entitled North Carolina's Energy Future, which is Exhibit 2 to Dr. Blackburn's testimony.

In this filing, NC WARN added a supplement to that report entitled, North Carolina's Energy Future 2010: Phasing Out the Generation of Electricity by Coal. This new report is attached as Blackburn Exhibit 3. In this report, the theme is the same but with much more aggressive assumptions than used in 2009. I will respond to following points and claims concerning the 2010 supplement:

- Load growth is overstated
- Future energy demands can be met with:
    - Saving associated with energy efficiency increasing at 1.5% per year;
    - 20% generation produced with renewable energy requirement;
    - 18% energy produced with combined heat and power ("CHP") systems installed by customers;
    - No new nuclear (other than planned up rates);
    - Completion of the Buck and Dan River Combined Cycle facilities; and
    - Retirement of the existing fossil fleet and not completing Cliffside Unit 6.

Dr. Blackburn suggests that load growth is overstated in the 2009 IRP. Company witness Dr. Stevie addresses this allegation by Dr. Blackburn in his

rebuttal testimony. Dr. Blackburn also again arbitrarily deletes new wholesale load included in the Duke Energy Carolinas forecast. All of these additional wholesale customers, including Central Electric Power Cooperative Inc. and those that make up the undesignated wholesale load, have been historically served by Duke Energy Carolinas and are located within its Balancing Authority Area. The Advance Notice process established under the Regulatory Conditions adopted in Docket No. E-7, Sub 795 provides the Commission and interested parties with the opportunity to review in advance proposed wholesale power agreements with such customers prior to Duke Energy Carolinas' provision of native load priority service to these customers. Dr. Blackburn ignores the Commission's *Order on Advance Notice* in Docket No. E-7, Sub 923 (November 10, 2009), in which the Commission specifically rejected NC WARN's arguments against the Company serving this customer. .

These wholesale customers will be served by someone; the only question is by whom. The rates paid by these historically-served customers contributed to the funding of Duke Energy Carolinas' existing transmission and generation infrastructure and these citizens should have the opportunity to be served by an efficient, low-cost electricity provider such as Duke Energy Carolinas.

Q. PLEASE ADDRESS DR. BLACKBURN'S SUGGESTIONS ABOUT RENEWABLE ENERGY.

A. Dr. Blackburn states that 20% of Duke Energy Carolinas generation needs should be and can be met with renewable generation. He suggests that this recommendation is not significantly different than the current Renewable Energy and Energy Efficiency Portfolio Standards ("REPS") requirement of 12.5%.

However, the REPS requirement includes the ability to meet 40% of the Company's requirements with energy efficiency (equivalent to 5% of the 12.5%) and 25% of the standard with out of state Renewable Energy Credits ("RECs") (equivalent to 3.1% of the 12.5%). Assuming the Company is able to maximize the use of energy efficiency and take advantage of low cost out-of-state RECs, Duke Energy Carolinas would only need to use renewable energy resources for approximately 4.5% of its generation needs to meet the REPS requirements. Currently, renewable energy resources are typically more expensive for customers than traditional generation. To the extent some renewable energy resources become cost effective as compared to traditional generation, Duke Energy Carolinas will include additional renewable energy resources in its portfolio beyond that required by REPS. Should these resources remain more expensive, going beyond the REPS requirement will result in a resource mix that is not least cost to the Company's customers.

Dr. Blackburn generously allows a portion of his proposed 20% of renewable energy to be met through the Company's existing hydroelectric resources. However, if the credit for existing hydro is removed, the 20% amount becomes approximately 18%, which is four times the amount of renewable energy that would currently be required from Duke Energy Carolinas in terms of indigenous North Carolina resources under REPS (4.5% vs. 18%). This recommendation is unrealistically high and is not sustainable. To put it in perspective, to achieve this level of renewable generation would exhaust all biomass resources and require thousands of MWs of wind and solar resources.

I must also note that nowhere in NC WARN's plan did Dr. Blackburn address the need for a reserve margin to assure reliable energy for Duke Energy Carolinas' customers. It is simply reckless to include thousands of MWs of wind and solar resources without any consideration of reserve margin when those resources are not dispatchable and only contribute approximately 15 and 50%, respectively, of their name plate capacity during the Company's peak energy needs. In summary, Dr. Blackburn provides no support for the operational feasibility of his recommendation, nor does he provide any detailed cost analysis.

Q. PLEASE ADDRESS DR. BLACKBURN'S SUGGESTIONS ABOUT COMBINED HEAT AND POWER ("CHP").

A. As noted above, Dr. Blackburn Exhibit 2 has been filed in various proceedings and was addressed specifically by Duke Energy Carolinas in its Response to NC WARN's motion to revoke the Cliffside Unit 6 CPCN in Docket No. E-7, Sub 790 as well as its Reply Comments in the 2008 IRP proceeding in Docket No. E-100, Sub 118. In Exhibit 2, Dr. Blackburn included an additional 800 MWs of CHP. In its 2008 IRP Reply Comments[1] , Duke Energy Carolinas noted that although cogeneration or CHP has been available to customers since 1978, the Company only has about 200 MWs of cogeneration on its system. Based upon historical participation, the economics simply do not appear to be favorable for customers to construct CHP facilities on a large scale. Despite these facts, in the updated analysis (Blackburn Exhibit 3), Dr. Blackburn includes an incredible 3,000 MWs

[1] *Duke Energy Carolinas, LLC Reply Comments*, Docket No. E-100, Sub 118 (May 29, 2009) at pages 17-18. These Reply Comments are incorporated into this testimony by reference.

of cogeneration to meet Duke Energy Carolinas' customers' energy needs. This is clearly unrealistic.

Q. WHAT POSITION DOES DR. BLACKBURN TAKE WITH REGARD TO NUCLEAR GENERATION?

A. Dr. Blackburn does not include any new nuclear generation beyond the nuclear uprates. The 2008 and 2009 Duke Energy Carolinas IRPs focused on a carbon constrained future. Both of these plans clearly demonstrate the need for additional nuclear generation when meeting future energy needs in a carbon constrained future.

Q. HAVING REVIEWED DR. BLACKBURN'S EXHIBIT 3, DO YOU AGREE WITH HIS CONCLUSION THAT ALL EXISTING COAL CAN BE RETIRED AND THAT CLIFFSIDE UNIT 6 IS NOT NEEDED?

A. No. Both the 2008 and 2009 IRPs clearly demonstrate that coal generation will be an important part of the Company's generation resources over the next 20 years. This conclusion is best illustrated by reviewing how these units are projected to operate. For example, in 2029, even when incorporating the impacts of carbon, Duke Energy Carolinas' scrubbed base load coal assets will still operate at a capacity factor of 70% and above. If these units were not cost effective in a carbon constrained future, the capacity factors for coal units would have been depressed and the capacity factors for natural gas generation would have been much higher. This was simply not the case. Also, Cliffside Unit 6 is the most efficient coal resource on the system and has the most flexibility to burn a variety of coals and lead the way for the Company's fossil fleet.

Dr. Blackburn's plan is so flawed as to be completely unreliable. NC WARN has developed a plan that is not realistic and would result in a higher cost and decreased reliability for customers, which is counter to the cornerstone of resource planning.

V. CONCLUSION

Q. DOES THIS CONCLUDE YOUR PRE-FILED REBUTTAL TESTIMONY?

A. Yes, it does.

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

DOCKET NO. E-100, SUB 118
DOCKET NO. E-100, SUB 124

DOCKET NO. E-100, SUB 118 In the Matter of Investigation of Integrated Resource Planning in North Carolina – 2008 DOCKET NO. E-100, SUB 124 In the Matter of Investigation of Integrated Resource Planning in North Carolina – 2009	)))))))))))	**REBUTTAL TESTIMONY OF RICHARD G. STEVIE, Ph.D. FOR DUKE ENERGY CAROLINAS, LLC**

I. INTRODUCTION AND PURPOSE

1 **Q. PLEASE STATE YOUR NAME, BUSINESS ADDRESS, BY WHOM YOU**
2 **ARE EMPLOYED, AND IN WHAT CAPACITY.**

3 A. My name is Richard G. Stevie. My business address is 139 E. Fourth St.,
4 Cincinnati, Ohio. I am Managing Director of Customer Market Analytics for
5 Duke Energy Business Services, Inc. ("Duke Energy Business Services"), a
6 wholly-owned service company subsidiary of Duke Energy Corporation ("Duke
7 Energy"). Duke Energy Business Services provides various administrative
8 services to Duke Energy Carolinas, LLC ("Duke Energy Carolinas" or the
9 "Company") and other Duke Energy affiliates including Duke Energy Ohio, Inc.,
10 Duke Energy Indiana, Inc., and Duke Energy Kentucky, Inc.

11 **Q. HAVE YOU PREVIOUSLY FILED DIRECT TESTIMONY IN SUPPORT**
12 **OF DUKE ENERGY CAROLINAS IN THIS DOCKET?**

13 A. Yes, I have.

14 **Q. HAVE YOU REVIEWED THE PRE-FILED DIRECT TESTIMONY OF DR.**
15 **JOHN O. BLACKBURN FILED ON BEHALF OF NC WARN AND MR.**
16 **JOHN D. WILSON FILED ON BEHALF OF ENVORONMENTAL**
17 **DEFENSE FUND, THE SIERRA CLUB, SOUTHERN ALLIANCE FOR**
18 **CLEAN ENERGY, AND THE SOUTHERN ENVIRONMENTAL LAW**
19 **CENTER?**

20 A. Yes, I have.

21 **Q. WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY IN THIS**
22 **PROCEEDING?**

1 A. The purpose of my rebuttal testimony is to respond to several issues raised by Dr.
2 Blackburn and Mr. Wilson. I am concerned with the comments in Dr.
3 Blackburn's testimony related to his assessment of Duke Energy Carolinas'
4 projected load growth rate and his recommendation on efficiency gains of 1.5% to
5 2.0% annually. I am also concerned about numerous statements in Mr. Wilson's
6 testimony concerning the Company's IRP. Unfortunately, his statements
7 originate from mis-interpretations or mis-understandings about the Company's
8 IRP and its processes.

9 **II. RESPONSE TO TESTIMONY OF DR. BLACKBURN**

10 **Q. WHAT IS YOUR CONCERN ABOUT DR. BLACKBURN'S COMMENTS**
11 **ON THE COMPANY'S PROJECTED LOAD GROWTH?**

12 A. On page 5 of his testimony, lines 3 to 5 and lines 14 to 19, Dr. Blackburn refers to
13 projected annual load growth rates of 1.5% to 1.8% and then makes the claim that
14 he believes that "electricity demand is likely to grow more slowly than the two
15 utilities project." As evidence, he references a document from Duke Energy
16 Carolinas' recent rate case showing flat sales for the 2009 to 2014 period. He also
17 assumes this forecast is without any effects of the present recession.

18 My concern is that Dr. Blackburn has erred in his assessment in three
19 ways. First, in referring to the growth rates of 1.5% to 1.8%, Dr. Blackburn has
20 overlooked the fact that that growth rate includes sales to wholesale customers.
21 To get a true picture of the projected growth for retail sales, he should have relied
22 upon Table 3.1 on page 36 of the Revised 2009 IRP. That shows a projected
23 growth rate of 1.0%. Second, in referencing the document from the rate case

showing flat sales, Dr. Blackburn overlooked the fact that those sales numbers are after the forecast has been reduced for the impacts of the Company's energy efficiency programs. Stevie Rebuttal Exhibit No. 1 provides the forecast of retail sales both before and after the impacts of the energy efficiency programs. This exhibit reveals that after the inclusion of the energy efficiency programs, retail sales projected for 2014 are actually below the level for 2009. And third, the Company's load forecast does include impacts from the recent recession. According to the National Bureau of Economic Research, which identifies the beginning and end of recessions, the recession began December 2007. Given that this forecast was prepared in 2009, it would have been improper for the Company to have ignored the impacts of the recession in preparing this forecast.

Dr. Blackburn's comments concerning the Company's load growth projections are unfounded.

Q. WHAT IS YOUR CONCERN ABOUT DR. BLACKBURN'S RECOMMENDATION OF ENERGY EFFICIENCY GAINS ON 1.5% TO 2.0%?

A. On pages 5 and 6 of his testimony, Dr. Blackburn refers to two studies: a recent report from the National Academy of Sciences (NAS) and a presentation to the North Carolina Energy Policy Council by the American Council for an Energy-Efficient Economy ("ACEEE"). Dr. Blackburn reports that the NAS study concludes that a cumulative 25-31% energy savings can be achieved by 2030 and that ACEEE recommends that annual gains can be achieved in energy efficiency of 1.5% in 2016, rising to 2.0% by 2020.

1 I have reviewed both studies. My concern with the NAS study is that the
2 numbers cited by Dr. Blackburn include all energy, including transportation fuels,
3 not just electricity. From my reading, the NAS study cites 1.2% per year
4 electricity impacts. However, it is not clear from the report whether this
5 represents total energy reductions or reductions above current standards, which is
6 the normal approach taken. With regard to the ACEEE presentation, one needs to
7 understand that it merely presents recommendations, which are not based upon an
8 up-to-date analysis of cost effective market potential. All of the studies surveyed
9 in ACEEE's meta-analysis were prepared before the passage of the EISA (Energy
10 Independence and Security Act of 2007) legislation, and thus are out of date. The
11 only study I have seen that estimated the energy efficiency potential incorporating
12 the EISA impacts is a study conducted by the Electric Power Research Institute
13 ("EPRI") for the period 2010 to 2030. It was published January 2009. For the
14 South Census region, the EPRI study found a maximum achievable potential of
15 11.1% by the year 2030 and a 13.4% economic potential by the year 2030. This
16 result implies that a more reasonable annual savings recommendation would be
17 something approaching 0.6% per year, not 1.5% to 2.0%. The EPRI study was
18 not cited by Dr. Blackburn or ACEEE in evaluating a reasonable range to
19 recommend for achievement of energy efficiency.
20 Two other points to consider are: the level of price driven conservation
21 already included in the load forecast and the opt-out provision. First, the load
22 forecast is based upon an expectation that the real price of electricity will rise
23 approximately 26% from 2008 to 2029. As part of the forecasting process, this

increase in price results in a price-induced reduction in energy use of 5% by 2029. In achieving this reduction in energy consumption, it is likely that consumers will utilize the Company's energy efficiency programs. As a result, the Company reduced the projected energy efficiency impacts in its High Case for price-induced conservation associated with only the increases in prices due to the cost of carbon (approximately 2% load reduction). As a result, the Company could be underestimating its load forecast by not reducing its Base Case and High Case energy efficiency impacts for all of the price-induced conservation impacts. And second, industrial and large commercial customers that opt-out of the Company's energy efficiency programs (as permitted under North Carolina law) reduce the ability of the Company to achieve the impacts from its programs. As of February 2010, approximately 550 customer locations have opted out of the programs representing over 6,000,000 MWH or 8% of total retail sales, i.e., the Company's market for energy efficiency. Reductions in the size of the market makes it more difficult to achieve the types of reductions recommended by Dr. Blackburn.

Based upon my review and my experience, Dr. Blackburn's recommendations for energy efficiency achievement are unreasonable.

II. RESPONSE TO TESTIMONY OF MR. WILSON

Q. WHAT IS YOUR CONCERN WITH MR. WILSON'S COMMENTS ON THE COMPANY'S IRP?

A. Although I may agree with several statements made in Mr. Wilson's testimony, there are numerous others throughout his testimony that need correction or suffer

from a mis-interpretation or mis-understanding of the Company's IRP and related energy efficiency processes.

Q. PLEASE PROCEED WITH YOUR REVIEW AND ASSESSMENT OF THE STATEMENTS IN MR. WILSON'S TESTIMONY.

A. There are seventeen (17) such areas that deserve comment. I will address each one in the following paragraphs.

(1) On page 6, lines 4 to 7, Mr. Wilson mentions that the utilities include cumulative energy savings of 3.1% over the next fifteen years.

Comment: If one adjusts for the load that has opted out of participating in utility sponsored energy efficiency programs as well as for price-induced conservation, this percentage for Duke Energy Carolinas is actually over 7% in fifteen years.

(2) On pages 10 and 11, Mr. Wilson mentions that North Carolina ranks poorly on energy efficiency achievement.

Comment: It is inappropriate to criticize the achievements in the State using historical data from 2007 when he is well aware that Duke Energy Carolinas' programs were not approved for implementation until 2009 and did not start until June 2009.

(3) On page 11, lines 8 to 12 and Exhibit 4, Mr. Wilson makes the claim that low electric rates are not a barrier to investment in energy efficiency.

Comment: Barriers to energy efficiency is a complex area and drawing conclusions from just one factor is difficult. However, on investigating this issue using data from the Energy Information Administration Form

861 for the year 2007, the last year available with details at the utility level, I find that if one looks at the results for investor owned utilities, there is direct and significant relationship between the price of electricity and the percent annual incremental energy efficiency achievement. This relationship is shown on Stevie Rebuttal Exhibit No. 2. In addition, on Stevie Rebuttal Exhibit No. 3, I replicated Mr. Wilson's graph included on his Exhibit 4, except that I added a trend line to the data. His own data demonstrates that there is a relationship between investment in energy efficiency and the level of electric prices. I do not think one can ignore the idea that low prices are a barrier to investment in energy efficiency. To ignore this concept does not make economic sense and is not borne out in the data.

(4) On page 11, line 16, Mr. Wilson references his Exhibit 5 on which a number of barriers to energy efficiency are listed. On this exhibit, there is a sentence that reads as follows:

> "One technique that leading efficiency programs use to address these barriers is to ramp up gradually over time as the program builds success in overcoming customer and market barriers such as lack of information."

Comment: I agree with this statement and it is in fact exactly how Duke Energy Carolinas is approaching the implementation of its programs. Yet, Mr. Wilson ignores the Company's use of a gradual ramp up in making unreasonable assumptions about the level of energy efficiency that is

1 achievable for the Company.

2 (5) On page 12, lines 21 to 25, Mr. Wilson makes the claim that energy
3 efficiency "remains confined to a second-class status" in the Company's
4 resource plan and that the Company has not made a long-term
5 commitment to implement cost-effective energy efficiency as a resource.
6 Comment: I totally disagree with this comment, having lived with the
7 effort to support the development of the portfolio of programs put forward
8 for approval to this Commission as well as other regulatory agencies. The
9 Company has incorporated energy efficiency programs into its IRP
10 process and is relying on it to meet the energy demands of its customers
11 over the long-term.

12 (6) On page 14, lines 11 to 14, Mr. Wilson mentions that one of the ways
13 energy efficiency can be evaluated is through a portfolio modeling
14 exercise in which supply and demand-side resources compete with each
15 other in an optimization model.
16 Comment: I agree with this and in fact this is the approach the Company
17 has undertaken with the Revised 2009 IRP.

18 (7) Beginning on line 23 of page 15 and continuing to page 16 line 3, Mr.
19 Wilson mentions a bottom up approach to study the economic potential of
20 energy efficiency.
21 Comment: Again, I agree with his comment and that is exactly how Duke
22 Energy has approached its analysis of energy efficiency.

23 (8) On page 16, footnote 18, Mr. Wilson states: "Neither a potential study nor

industry experience can provide a precise measure of 'cost-effective energy efficiency' in the same way that a supply-side generation plan can anticipate generation capacity with reasonable accuracy. These methods may either under- or over-state the potential for energy efficiency to meet system resource needs in much the same way that a system load forecast is unable to provide an accurate prediction of future energy demand and use."

Comment: I agree with the statement in the footnote. It highlights the fact that the implementation of energy efficiency has greater uncertainty as a resource and as such implies to me that one needs to gain that experience with energy efficiency programs to be sure that it can be counted on over the long-term.

(9) On page 17, lines 9 to 14, Mr. Wilson mentions that some utilities are evaluating two energy efficiency resources options, either no energy efficiency or one with programs.

Comment: If Mr. Wilson believes Duke Energy Carolinas is one of the utilities that is using only the no energy efficiency case and one with programs, he is mistaken. Duke Energy Carolinas evaluated a Base Case with energy efficiency impacts and a High Case with even greater energy efficiency impacts. .

(10) On page 17 line 22, Mr. Wilson refers to his Exhibit 7 on which he computed energy efficiency impacts as a percent of load. He comments on the declining trend represented in the data.

Comment: As previously mentioned, Mr. Wilson has not adjusted his calculation for the fact that the impacts are for retail sales only, nor has he adjusted for impacts from price induced conservation and the customers that opt-out. These necessary adjustments essentially double the level of impacts for Duke Energy Carolinas as a percent of retail sales. In addition, Mr. Wilson's own testimony (footnote 18) implies that the level of energy efficiency potential cannot be known accurately. In the context of uncertainty, the Company believes it is prudent to plan based on the level of energy efficiency impacts as represented by the Base Case of energy efficiency impacts, but also to evaluate the possible outcome under a High Case.

(11) On page 19, lines 3 to 7, Mr. Wilson points out that Duke Energy Carolinas did not include information on the capacity, energy, number of customers, and other required information.

Comment: Duke Energy Carolinas agrees that this should have been included in the filing. In response to a data request from the Public Staff (Set 3, Number 1), the Company provided the forecast of load impacts for each measure. This response is attached as Stevie Rebuttal Exhibit No. 4.

(12) Beginning on page 19 line 8 and ending with page 20, line 15, Mr. Wilson contends there are technical defects in the way that the Company put together the forecast of energy efficiency impacts, because there is an irregular trend in the impacts. He goes on to comment (page 20, line12 to 15) that the High Case falls short of the savings needed by the year 2020.

Comments: While the pattern for incremental impacts might not be smooth as desired by Mr. Wilson, there is a method to the approach used by the Company. For the Base Case, the programs and impact levels from the Company's original filing were used for the first four years. However, the impacts for the third and fourth year were scaled up to comply with the settlement agreement in the case. As a result, over the first four years, there is a ramp-up period, considered a reasonable approach by Mr. Wilson on page 11 of his testimony. Then, for the next four years, the Company assumed that a new bundle of programs would be implemented for the next four years, utilizing the same ramp-up approach. Then, a third bundle of programs would start, with a ramp-up, after the end of the second bundle. This is how the Company prepared the forecast of energy efficiency impacts. As a result, it produced a forecast of energy efficiency impacts with the uneven pattern of incremental impacts highlighted by Mr. Wilson.

With respect to the High Case energy efficiency impact forecast, the Company utilized the same approach as under the Base Case forecast except that in 2015, the impacts were increased to 1% of retail sales. Once that was completed, the impacts were reduced to eliminate some of the double counting that can result from price-induced conservation. This is why the level under the High Case may not reach that expected by Mr. Wilson, though it is not clear how he arrived at the value of 6,784 GWH in 2020 as set out on page 20, line 14 of his testimony.

(13) On pages 25 and 26, Mr. Wilson criticizes the Company for not including a comprehensive set of energy efficiency measures in its analysis.

Comment: I disagree completely with Mr. Wilson's criticism. Early on through a collaborative process, the Company sought input on the types of measures that should be included in its energy efficiency plans. In addition, the Company conducted a market potential study to also identify cost-effective measures. As a result, the Company proposed a comprehensive set of measures (contained within five residential and three non-residential programs) to the North Carolina Utilities Commission in May 2007. These were subsequently approved for implementation in early 2009. There are over 120 non-residential measures, including a custom incentive measure that can be used for any type of application by any non-residential customer.

(14) On page 29 line 15 to page 31, line 13, Mr. Wilson contends that the Company's market potential study (the Forefront study) identified a low level of energy efficiency potential and that the residential sector analysis only identified two cost-effective measures.

Comment: First, I need to make it clear that the Company's market potential study found roughly seventeen cost-effective residential measures; not the two cited by Mr. Wilson. And second, as mentioned before in the response to Dr. Blackburn's testimony, the other market potential studies cited by Mr. Wilson are out of date and not applicable since they were prepared prior to the passage of the EISA. As previously

stated, the only study I have seen that estimated the energy efficiency potential incorporating the EISA impacts is a study conducted by the Electric Power Research Institute for the period 2010 to 2030. For the South Census region, the study found a maximum achievable potential of 11.1% by the year 2030 and a 13.4% economic potential by the year 2030. This implies that a more reasonable recommendation would be something approaching 0.6% per year, not 1.0% as recommended by Mr. Wilson.

(15) On page 31, lines 16 to 21, Mr. Wilson recommends three new programs: a Home Energy Comparison Report program, a building re/retro/commissioning program, and various energy recycling technologies.

Comment: I believe by "energy recycling technologies," Mr. Wilson may be talking about Combined Heat and Power ("CHP"). Company witness Mc Murry addresses the Company's approach to CHP. With regard to the other two programs, the Company is discussing the design of three new programs with the Public Staff, including a Home Energy Comparison Report and a residential retrofit program.

(16) On page 33, lines 3 to 9, Mr. Wilson again comments that the High Case scenario should have been higher if it were to match the level of economic potential identified in the market potential study. Further on, on page 34, lines 1 to 2, Mr. Wilson mentions that the IRP does not discuss why the Base Case was the preferred option.

Comment: Mr. Wilson is correct that the level is below the economic

potential found by the Company's market potential study. However, increasing impacts at 1% per year of retail sales imposes a constraint on the level of achievement by the year 2026 as expected by Mr. Wilson. Also, as previously mentioned, the Company reduced the High Case energy efficiency impacts to remove the portion of the price-induced load impacts attributable to the expected cost of carbon compliance.

As to why the Base Case was preferred, it would seem that this should be clear from page 9 of the Revised 2009 IRP, which raises the question as to whether DSM and EE can deliver anticipated capacity and energy savings reliably and whether customers are ready to embrace EE as some of the key uncertainties the Company must face in developing its IRP. Further page 48 explains that the Base Case utilizes three bundles of the save-a-watt portfolio of programs. The impacts from the save-a-watt portfolio represent what the Company believes it can reasonably achieve until it has more experience with customer response and acceptance of the programs.

(17) On page 39 line 20 through page 41, line 2, Mr. Wilson seems to recommend the creation of a regional energy efficiency collaborative and a measures database for impacts.

Comment: I disagree with the need for a regional collaborative. The Company already has a collaborative that is able to focus of issues specific to the Company's customers. I believe creating a regional one will dilute the focus on the Company's needs to implement energy efficiency

programs. With respect to the database, the Company agrees that one should be created and kept up to date. In fact, one was developed by Morgan Marketing Partners. It was created and was shared with the Public Staff. It formed the basis for the load impact assumptions utilized by he Company in its save-a-watt application.

III. CONCLUSION

Q. WERE STEVIE REBUTTAL EXHIBIT NOS. 1 THROUGH 4 PREPARED BY YOU OR UNDER YOUR SUPERVISION?

A. Yes.

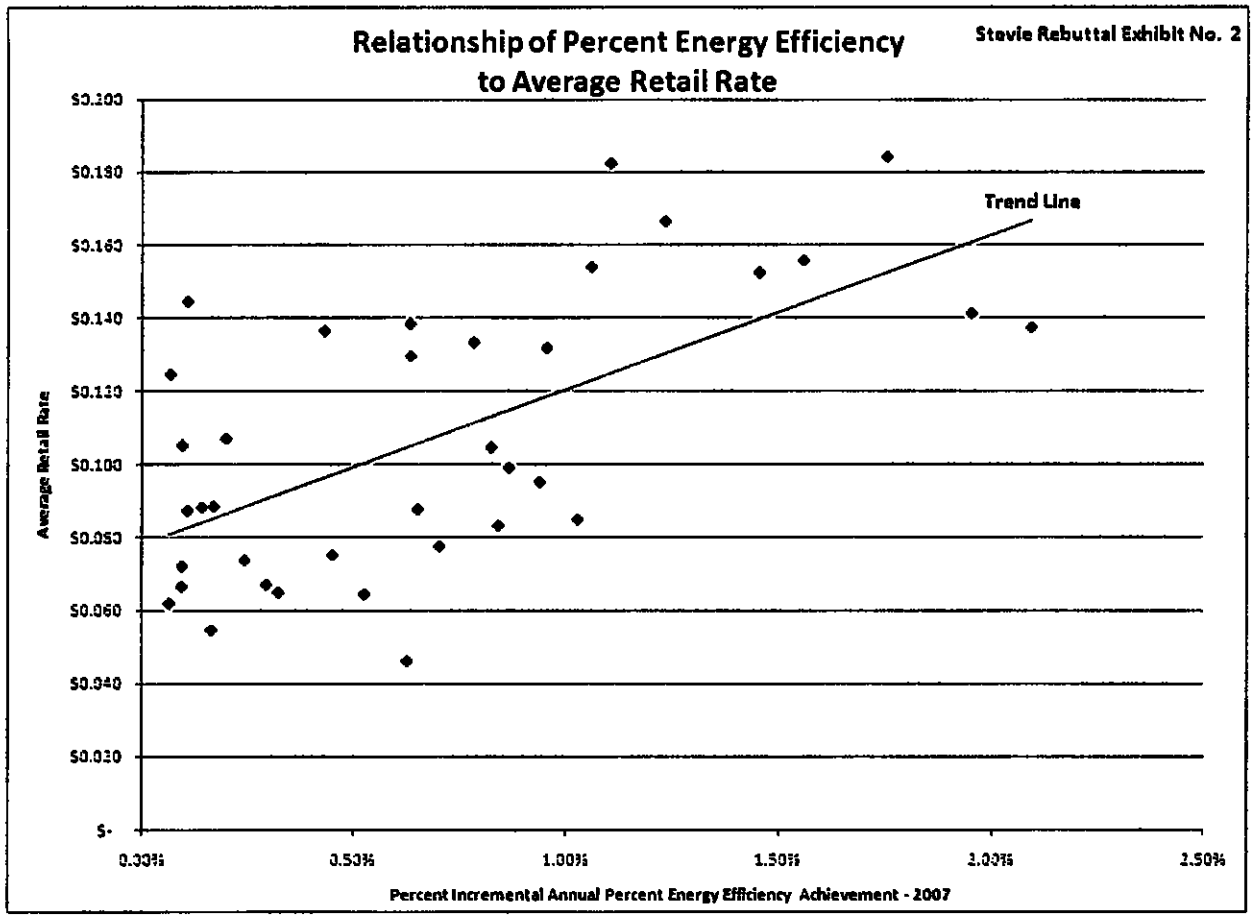
Q. DOES THIS CONCLUDE YOUR PRE-FILED REBUTTAL TESTIMONY?

A. Yes.

Stevie Rebuttal Exhibit No. 1

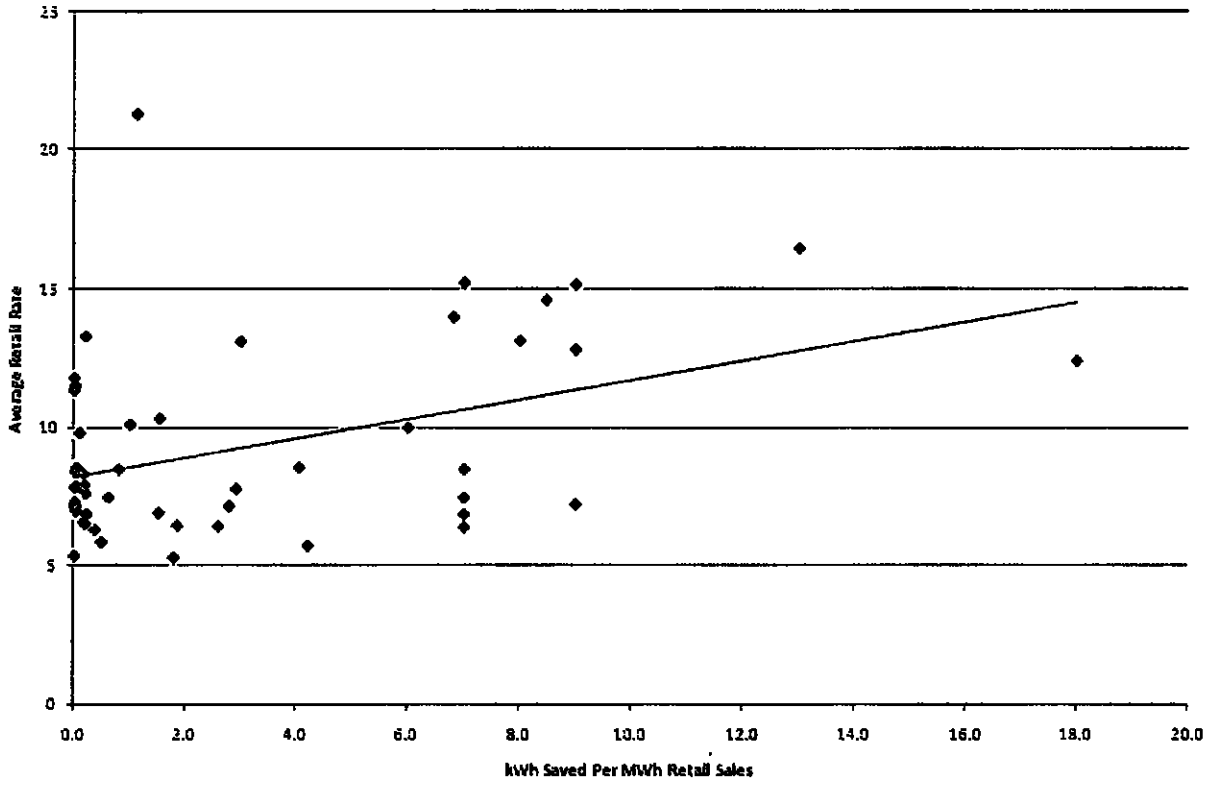
2009 Retail Sales MWH Forecast

	MWH Forecasts		Energy Efficiency Impacts			
				Base Case	High Case	High Case
Year	Before Reductions for Energy Efficiency	After Reductions for Energy Efficiency	Energy Efficiency Impacts	Impacts as % of Sales	Energy Efficiency Impacts	Impacts as % of Sales
2009	75,041,668	74,968,401	73,267	0.10%	73,682	0.10%
2010	74,472,111	74,162,195	309,917	0.42%	309,917	0.42%
2011	75,371,180	74,786,626	584,555	0.78%	687,711	0.91%
2012	76,382,845	75,368,115	1,014,730	1.33%	1,193,800	1.56%
2013	75,687,296	74,369,946	1,317,350	1.74%	1,317,350	1.74%
2014	75,926,198	74,354,127	1,572,072	2.07%	1,572,072	2.07%
2015	76,593,252	74,674,123	1,919,128	2.51%	2,098,426	2.74%
2016	77,416,110	75,030,629	2,385,480	3.08%	2,698,371	3.49%
2017	78,286,777	75,673,666	2,613,110	3.34%	3,299,643	4.21%
2018	79,341,710	76,481,752	2,859,958	3.60%	3,922,556	4.94%
2019	80,556,243	77,345,445	3,210,799	3.99%	4,638,791	5.76%
2020	81,925,335	78,241,073	3,684,262	4.50%	5,360,536	6.54%
2021	83,488,162	79,671,622	3,816,540	4.57%	6,332,978	7.59%
2022	85,225,748	81,409,164	3,816,584	4.48%	7,135,189	8.37%
2023	87,198,193	83,381,569	3,816,624	4.38%	7,967,988	9.14%
2024	89,292,457	85,465,597	3,826,859	4.29%	8,855,769	9.92%
2025	91,494,742	87,678,216	3,816,525	4.17%	9,714,364	10.62%
2026	93,772,715	89,956,146	3,816,569	4.07%	10,620,738	11.33%
2027	95,979,046	92,162,506	3,816,540	3.98%	11,548,230	12.03%
2028	98,107,642	94,280,788	3,826,855	3.90%	12,531,554	12.77%
2029	100,122,768	96,306,334	3,816,433	3.81%	13,463,567	13.45%


Relationship of Percent Energy Efficiency
to Average Retail Rate
Stevie Rebuttal Exhibit No. 2
Trend Line
Average Retail Rate
$0.200
$0.180
$0.160
$0.140
$0.120
$0.100
$0.080
$0.060
$0.040
$0.020
$-
0.00%
0.50%
1.00%
1.50%
2.00%
2.50%
Percent Incremental Annual Percent Energy Efficiency Achievement - 2007

Stevie Rebuttal Exhibit No. 3

Mr. Wilson's Exhibit 4 with Trend Line
Relationship of Percent Energy Efficiency to Average Retail Rate



	MWH	BASE CASE														
	Year	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
	Residential	59,710	251,430	470,897	805,626	1,042,262	1,249,931	1,523,586	1,884,568	2,064,230	2,266,115	2,542,551	2,908,695	3,009,326	3,009,414	3,009,438
	Non-residential	13,972	58,487	113,657	209,104	275,088	322,141	395,542	500,912	548,881	593,843	668,247	775,567	807,214	807,170	807,186
	Total	73,682	309,917	584,555	1,014,730	1,317,350	1,572,072	1,919,128	2,385,480	2,613,110	2,859,958	3,210,799	3,684,262	3,816,540	3,816,584	3,816,624
	Residential															
1 -	Agency Kit and CFLs.xls	9,618	40,499	75,850	129,766	167,882	201,333	245,412	303,557	332,496	365,015	409,542	468,518	484,728	484,742	484,746
2 -	Home Energy House Call - KIT.xls	2,238	9,424	17,651	30,198	39,068	46,852	57,109	70,640	77,374	84,942	95,304	109,028	112,800	112,803	112,804
3 -	K-12 Education Program- CFL Distribution.xls	14,636	61,629	115,424	197,471	255,473	306,376	373,453	461,935	505,972	555,457	623,216	712,963	737,629	737,651	737,657
4 -	K-12 Education Program- Curriculum.xls	11,414	48,061	90,013	153,997	199,231	238,927	291,237	360,240	394,582	433,173	486,015	556,004	575,240	575,257	575,261
5 -	Low Income Weatherization- Refrigerator Replacement.xls	195	822	1,540	2,634	3,408	4,087	4,982	6,163	6,750	7,410	8,314	9,512	9,841	9,841	9,841
6 -	Low Income Weatherization- Tier 1.xls	88	372	696	1,190	1,540	1,847	2,251	2,785	3,050	3,349	3,757	4,298	4,447	4,447	4,447
7 -	Low Income Weatherization- Tier 2.xls	706	2,972	5,567	9,524	12,321	14,777	18,012	22,279	24,403	26,790	30,058	34,386	35,576	35,577	35,577
8 -	Multi-Family Assessments- KIT ONLY.xls	67	283	530	908	1,174	1,408	1,716	2,123	2,325	2,553	2,864	3,277	3,390	3,390	3,390
9 -	Online Audit w_EE kit.xls	974	4,101	7,681	13,142	17,002	20,389	24,853	30,742	33,672	36,966	41,475	47,448	49,089	49,091	49,091
10 -	Personalized Energy Report.xls	8,117	34,178	64,012	109,514	141,681	169,911	207,111	256,181	280,604	308,047	345,625	395,397	409,077	409,089	409,092
11 -	Smart Saver - CAC.xls	1,361	5,732	10,734	18,365	23,759	28,493	34,731	42,960	47,056	51,658	57,959	66,306	68,600	68,602	68,602
12 -	Smart Saver - Heat Pump.xls	604	2,543	4,763	8,148	10,541	12,642	15,409	19,060	20,878	22,919	25,715	29,418	30,436	30,437	30,437
13 -	Smart Saver - Res CFL Promo.xls	9,692	40,812	76,436	130,769	169,180	202,889	247,309	305,903	335,066	367,836	412,707	472,140	488,474	488,489	488,493
	Total	59,710	251,430	470,897	805,626	1,042,262	1,249,931	1,523,586	1,884,568	2,064,230	2,266,115	2,542,551	2,908,695	3,009,326	3,009,414	3,009,438
	Non Residential															
1 -	1 Lamp T-5 HO with Elec Ballast replacing T-12.xls	0.6	2.7	5.2	9.6	12.6	14.7	18.1	22.9	25.1	27.2	30.6	35.5	36.9	36.9	36.9
2 -	1 Lamp T-5 with Elec Ballast replacing T-12.xls	0.3	1.1	2.1	3.8	5.1	5.9	7.3	9.2	10.1	10.9	12.3	14.3	14.9	14.9	14.9
3 -	2 Lamp T-5 replacing T-12.xls	0.3	1.1	2.1	3.8	5.1	5.9	7.3	9.2	10.1	10.9	12.3	14.3	14.9	14.9	14.9
4 -	2 Lamp T-5HO replacing T-12.xls	2.4	10.1	19.7	36.2	47.6	55.8	68.5	86.7	95.0	102.8	115.6	134.2	139.7	139.7	139.7
5 -	3 Lamp T-5 replacing T-12.xls	0.6	2.4	4.7	8.6	11.4	13.3	16.3	20.7	22.7	24.5	27.6	32.0	33.3	33.3	33.3
6 -	3 Lamp T-5HO replacing T-12.xls	1.1	4.5	8.7	16.0	21.1	24.7	30.3	38.4	42.0	45.5	51.2	59.4	61.8	61.8	61.8
7 -	4 Lamp T-5 replacing T-12.xls	5.1	21.2	41.3	75.9	99.9	116.9	143.6	181.8	199.2	215.6	242.6	281.5	293.0	293.0	293.0
8 -	4 Lamp T-5HO replacing T-12.xls	12.5	52.4	101.8	187.3	246.4	288.5	354.2	448.6	491.6	531.8	598.5	694.6	722.9	722.9	722.9
9 -	42W 8 Lamp HI Bay CFL.xls	1.1	4.5	8.7	16.0	21.0	24.6	30.2	38.3	41.9	45.4	51.1	59.3	61.7	61.7	61.7
10 -	80Plus NC_Desktop Unit.xls	337.4	1,412.2	2,744.3	5,049.0	6,642.2	7,778.4	9,550.7	12,095.0	13,253.2	14,338.8	16,135.4	18,726.7	19,490.9	19,489.8	19,490.2
11 -	80Plus NC_Server Unit.xls	23.9	100.0	194.4	357.6	470.4	550.9	676.4	856.6	938.6	1,015.5	1,142.7	1,326.2	1,380.4	1,380.3	1,380.3
12 -	AC 65,000 - 135,000.xls	21.9	91.5	177.8	327.2	430.4	504.0	618.9	783.7	858.8	929.1	1,045.5	1,213.4	1,262.9	1,262.9	1,262.9
13 -	AC 135,000 - 240,000.xls	104.8	438.9	852.9	1,569.1	2,064.2	2,417.3	2,968.1	3,758.8	4,118.7	4,456.1	5,014.4	5,819.7	6,057.2	6,056.8	6,057.0
14 -	AC 240,000 - 760,000.xls	14.9	62.5	121.5	223.6	294.1	344.4	422.9	535.6	586.9	635.0	714.5	829.3	863.1	863.1	863.1
15 -	AC greater than 760,000.xls	2.2	9.1	17.7	32.6	42.9	50.2	61.7	78.1	85.6	92.6	104.2	120.9	125.8	125.8	125.8
16 -	AC less than 65,000 1 Ph Rooftop & Unitary.xls	8.4	35.3	68.6	126.2	166.0	194.4	238.7	302.3	331.2	358.3	403.2	468.0	487.1	487.0	487.1
17 -	AC less than 65,000 3 Ph.xls	6.1	25.4	49.4	91.0	119.7	140.1	172.1	217.9	238.8	258.3	290.7	337.4	351.2	351.1	351.2
18 -	Barrel Wraps (Inj Mold & Extruders).xls	38.9	162.8	316.4	582.2	765.9	896.9	1,101.3	1,394.7	1,528.2	1,653.4	1,860.6	2,159.4	2,247.5	2,247.4	2,247.4
19 -	CFL Fixture.xls	127.7	534.5	1,038.7	1,910.9	2,513.9	2,943.9	3,614.7	4,577.6	5,015.9	5,426.8	6,106.8	7,087.5	7,376.7	7,376.3	7,376.5
20 -	CFL Screw in.xls	1,282.1	5,367.1	10,429.7	19,188.4	25,243.4	29,561.2	36,296.9	45,966.2	50,368.0	54,493.9	61,321.6	71,169.8	74,073.9	74,069.8	74,071.3
21 -	Chilled Air EE Cooled Chillers.xls	200.9	841.1	1,634.5	3,007.1	3,956.0	4,632.7	5,688.2	7,203.5	7,893.4	8,540.0	9,610.0	11,153.3	11,608.4	11,607.8	11,608.0
22 -	Chilled Water EE Cooled Chillers 150 - 300 ton.xls	322.6	1,350.3	2,624.0	4,827.6	6,350.9	7,437.2	9,131.8	11,564.5	12,671.9	13,710.0	15,427.7	17,905.4	18,636.0	18,635.0	18,635.4
23 -	Chilled Water EE Cooled Chillers greater than 300 ton.xls	650.8	2,724.4	5,294.4	9,740.5	12,814.2	15,006.0	18,425.2	23,333.5	25,568.0	27,662.4	31,128.3	36,127.5	37,601.7	37,599.6	37,600.4
24 -	Chilled Water EE Cooled Chillers less than150 ton.xls	18.6	77.8	151.1	278.0	365.7	428.3	525.9	666.0	729.8	789.5	888.5	1,031.2	1,073.2	1,073.2	1,073.2
25 -	Chilled Water Reset Air Cooled 300-400 tons.xls	1.3	5.3	10.2	18.8	24.8	29.0	35.6	45.1	49.4	53.5	60.2	69.9	72.7	72.7	72.7

	MWH	BASE CASE														
	Year	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
26 -	Chilled Water Reset Air Cooled 400-500 tons.xls	1.6	6.8	13.2	24.2	31.9	37.3	45.8	58.0	63.6	68.8	77.4	89.8	93.5	93.5	93.5
27 -	Chilled Water Reset Water Cooled 0-1000 tons.xls	8.3	34.7	67.5	124.2	163.4	191.4	235.0	297.6	326.0	352.8	396.9	460.7	479.5	479.5	479.5
28 -	Chilled Water Reset Water Cooled 1000-2000 tons.xls	2.5	10.4	20.3	37.3	49.0	57.4	70.5	89.3	97.8	105.8	119.1	138.2	143.8	143.8	143.8
29 -	Chilled Water Reset Water Cooled 2000-3000 tons.xls	4.1	17.4	33.8	62.1	81.7	95.7	117.5	148.8	163.0	176.4	198.5	230.3	239.7	239.7	239.7
30 -	Combi Oven, (90 lbs_hr).xls	42.8	179.0	347.9	640.0	842.0	986.0	1,210.6	1,533.1	1,680.0	1,817.6	2,045.3	2,373.8	2,470.6	2,470.5	2,470.6
31 -	Commercial Clothes Washers - Electric Dryer & Washer.xls	79.4	332.3	645.7	1,187.9	1,562.8	1,830.1	2,247.0	2,845.6	3,118.1	3,373.6	3,796.3	4,405.9	4,585.7	4,585.5	4,585.6
32 -	Commercial Clothes Washers - Washer Only.xls	33.4	139.9	271.9	500.2	658.0	770.5	946.1	1,198.2	1,312.9	1,420.5	1,598.4	1,855.1	1,930.8	1,930.7	1,930.8
33 -	Convection Oven.xls	17.1	71.4	138.8	255.4	336.0	393.4	483.1	611.8	670.4	725.3	816.1	947.2	985.9	985.8	985.8
34 -	Custom Rebate.xls	3,833.8	16,048.7	31,187.3	57,377.7	75,483.6	88,394.7	108,535.9	137,449.3	150,611.6	162,949.2	183,365.5	212,813.9	221,497.8	221,485.6	221,490.0
35 -	Engineered Nozzles - COMPRESS AIR.xls	238.6	998.7	1,940.8	3,570.7	4,697.5	5,501.0	6,754.4	8,553.7	9,372.9	10,140.6	11,411.2	13,243.8	13,784.2	13,783.5	13,783.8
36 -	ES Sleeve AC over 14,000 Btu hr.xls	1.6	6.5	12.7	23.4	30.7	36.0	44.2	56.0	61.3	66.4	74.7	86.7	90.2	90.2	90.2
37 -	ES Sleeve AC under 14,000 Btu hr.xls	0.7	2.9	5.7	10.5	13.8	16.2	19.9	25.2	27.6	29.9	33.6	39.0	40.6	40.6	40.6
38 -	ES Window AC over 14,000 Btu hr.xls	3.5	14.8	28.8	53.0	69.8	81.7	100.3	127.0	139.2	150.6	169.5	196.7	204.7	204.7	204.7
39 -	ES Window AC under 14,000 Btu hr.xls	1.6	6.8	13.2	24.3	32.0	37.5	46.0	58.3	63.8	69.1	77.7	90.2	93.9	93.9	93.9
40 -	Fryer.xls	8.5	35.8	69.5	127.9	168.3	197.0	241.9	306.4	335.7	363.2	408.7	474.4	493.7	493.7	493.7
41 -	Griddles.xls	14.2	59.6	115.9	213.2	280.5	328.4	403.3	510.7	559.6	605.4	681.3	790.7	823.0	822.9	822.9
42 -	Head Pressure Control.xls	258.5	1,082.2	2,103.0	3,869.1	5,090.0	5,960.6	7,318.8	9,268.4	10,156.0	10,987.9	12,364.7	14,350.4	14,936.0	14,935.2	14,935.5
43 -	High Bay 2L T5HO.xls	53.1	222.1	431.6	794.0	1,044.6	1,223.3	1,502.0	1,902.1	2,084.3	2,255.0	2,537.5	2,945.1	3,065.2	3,065.1	3,065.1
44 -	High Bay 4L T5HO.xls	765.5	3,204.4	6,227.1	11,456.4	15,071.5	17,649.5	21,671.0	27,444.0	30,072.1	32,535.5	36,612.0	42,491.8	44,225.7	44,223.2	44,224.1
45 -	High Bay 6L T5HO.xls	216.9	908.0	1,764.4	3,246.1	4,270.5	5,000.9	6,140.4	7,776.2	8,520.9	9,218.9	10,373.9	12,040.0	12,531.3	12,530.6	12,530.8
46 -	High Bay 8L T5HO.xls	2,274.0	9,519.4	18,499.0	34,034.0	44,773.6	52,432.0	64,378.9	81,529.0	89,336.4	96,654.5	108,764.6	126,232.1	131,383.0	131,375.8	131,378.4
47 -	High Bay Fluorescent 4LF32T8.xls	35.7	149.3	290.1	533.7	702.2	822.3	1,009.6	1,278.6	1,401.0	1,515.8	1,705.7	1,979.6	2,060.4	2,060.3	2,060.4
48 -	High Bay Fluorescent 6LF32T8.xls	222.7	932.4	1,811.9	3,333.6	4,385.5	5,135.6	6,305.8	7,985.6	8,750.3	9,467.1	10,653.3	12,364.2	12,868.7	12,868.0	12,868.2
49 -	High Bay Fluorescent 8LF32T8.xls	150.4	629.8	1,223.8	2,251.5	2,962.0	3,468.6	4,259.0	5,393.5	5,910.0	6,394.1	7,195.3	8,350.8	8,691.6	8,691.1	8,691.3
50 -	High Efficiency Pumps HP 5.xls	0.3	1.3	2.6	4.8	6.3	7.3	9.0	11.4	12.5	13.5	15.2	17.7	18.4	18.4	18.4
51 -	Holding Cabinet Full Size Insulated.xls	15.3	64.1	124.5	229.1	301.4	352.9	433.3	548.7	601.3	650.5	732.1	849.6	884.3	884.2	884.3
52 -	Holding Cabinet Half Size Insulated.xls	5.2	21.7	42.2	77.6	102.1	119.5	146.8	185.9	203.7	220.4	248.0	287.8	299.5	299.5	299.5
53 -	Holding Cabinet Three Quarter Size Insulated.xls	8.2	34.4	66.8	122.9	161.7	189.3	232.5	294.4	322.6	349.0	392.8	455.9	474.5	474.4	474.4
54 -	HP 65,000 - 135,000.xls	0.3	1.1	2.0	3.8	4.9	5.8	7.1	9.0	9.9	10.7	12.0	13.9	14.5	14.5	14.5
55 -	HP 135,000 - 240,000.xls	0.5	2.2	4.3	8.0	10.5	12.3	15.1	19.1	21.0	22.7	25.5	29.6	30.8	30.8	30.8
56 -	HP greater than 240,000.xls	1.2	5.2	10.1	18.5	24.3	28.5	35.0	44.3	48.6	52.6	59.1	68.6	71.4	71.4	71.4
57 -	HP less than 65,000 1 Ph.xls	4.1	17.1	33.3	61.2	80.5	94.3	115.8	146.6	160.7	173.8	195.6	227.0	236.3	236.3	236.3
58 -	HP less than 65,000 3 Ph.xls	0.1	0.3	0.6	1.0	1.4	1.6	2.0	2.5	2.7	3.0	3.3	3.9	4.0	4.0	4.0
59 -	HP Water Heater 500 gal_day.xls	135.6	567.5	1,102.8	2,029.0	2,669.2	3,125.8	3,838.0	4,860.4	5,325.9	5,762.2	6,484.1	7,525.4	7,832.5	7,832.1	7,832.2
60 -	HP Water Heater 1000 gal_day.xls	91.1	381.5	741.5	1,364.1	1,794.6	2,101.5	2,580.4	3,267.8	3,580.7	3,874.0	4,359.4	5,059.5	5,266.0	5,265.7	5,265.8
61 -	HP Water Heater 1500 gal_day.xls	137.1	573.9	1,115.3	2,051.9	2,699.4	3,161.1	3,881.4	4,915.4	5,386.1	5,827.3	6,557.4	7,610.6	7,921.1	7,920.7	7,920.8
62 -	Icemaker, (100 to 500 lbs_day).xls	4.8	20.1	39.0	71.7	94.3	110.5	135.7	171.8	188.3	203.7	229.2	266.0	276.9	276.8	276.8
63 -	Icemaker, (500 to 1000 lbs_day).xls	7.8	32.7	63.6	117.0	153.9	180.2	221.3	280.2	307.1	332.2	373.8	433.9	451.6	451.6	451.6
64 -	Icemaker, (Greater Than 1000 lbs_day).xls	17.5	73.4	142.7	262.5	345.3	404.4	496.5	628.8	689.0	745.5	838.9	973.6	1,013.3	1,013.3	1,013.3
65 -	LED Auto Traffic Signals.xls	101.8	426.1	828.0	1,523.4	2,004.1	2,346.9	2,881.7	3,649.4	3,998.8	4,326.4	4,868.5	5,650.3	5,880.9	5,880.6	5,880.7
66 -	LED Exit Signs Electronic Fixtures (Retrofit Only).xls	137.6	575.9	1,119.1	2,059.0	2,708.7	3,172.0	3,894.7	4,932.3	5,404.6	5,847.3	6,579.9	7,636.7	7,948.3	7,947.8	7,948.0
67 -	LED Pedestrian Signals.xls	27.8	116.4	226.2	416.2	547.6	641.3	787.4	997.1	1,092.6	1,182.1	1,330.2	1,543.8	1,606.8	1,606.8	1,606.8
68 -	Light Tube.xls	2.7	11.2	21.8	40.1	52.7	61.7	75.8	95.9	105.1	113.8	128.0	148.6	154.6	154.6	154.6
69 -	Motors 1-5 HP - Incentives per participant.xls	0.2	0.6	1.2	2.3	3.0	3.5	4.3	5.5	6.0	6.5	7.3	8.5	8.8	8.8	8.8
70 -	Motors 25-100 HP - Incentives per participant.xls	0.7	3.0	5.8	10.7	14.0	16.4	20.2	25.6	28.0	30.3	34.1	39.6	41.2	41.2	41.2
71 -	Night covers for displays.xls	0.6	2.7	5.3	9.7	12.8	15.0	18.4	23.3	25.5	27.6	31.1	36.1	37.5	37.5	37.5

	MWH	BASE CASE														
	Year	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
72 -	Occupancy Sensors over 500 Watts.xls	12.5	52.2	101.4	186.5	245.3	287.3	352.7	446.7	489.5	529.6	595.9	691.6	719.9	719.8	719.8
73 -	Occupancy Sensors under 500 Watts .xls	57.9	242.3	470.9	866.3	1,139.7	1,334.7	1,638.8	2,075.4	2,274.1	2,460.4	2,768.6	3,213.3	3,344.4	3,344.2	3,344.3
74 -	Packaged Terminal AC.xls	2.0	8.5	16.5	30.4	40.0	46.8	57.5	72.8	79.8	86.3	97.1	112.7	117.3	117.3	117.3
75 -	Pellet Dryer Tanks & Ducts 3in dia.xls	0.1	0.3	0.5	1.0	1.3	1.5	1.9	2.4	2.6	2.8	3.2	3.7	3.8	3.8	3.8
76 -	Pellet Dryer Tanks & Ducts 5in dia.xls	0.1	0.5	1.0	1.8	2.3	2.7	3.4	4.2	4.6	5.0	5.7	6.6	6.8	6.8	6.8
77 -	Pellet Dryer Tanks & Ducts 8in dia.xls	0.2	0.9	1.7	3.1	4.0	4.7	5.8	7.4	8.1	8.7	9.8	11.4	11.9	11.9	11.9
78 -	Plug Load Occupancy Sensors Document Stations.xls	20.1	84.1	163.3	300.5	395.4	463.0	568.5	719.9	788.9	853.5	960.4	1,114.6	1,160.1	1,160.1	1,160.1
79 -	Pulse Start Metal Halide (retrofit only).xls	24.9	104.1	202.3	372.1	489.5	573.3	703.9	891.4	976.8	1,056.8	1,189.2	1,380.2	1,436.5	1,436.4	1,436.4
80 -	Pumps HP 7l5.xls	0.5	2.0	3.9	7.1	9.4	11.0	13.5	17.1	18.8	20.3	22.8	26.5	27.6	27.6	27.6
81 -	Pumps HP 10.xls	0.3	1.3	2.6	4.8	6.3	7.3	9.0	11.4	12.5	13.5	15.2	17.7	18.4	18.4	18.4
82 -	Pumps HP 15.xls	0.5	2.0	3.9	7.1	9.4	11.0	13.5	17.1	18.8	20.3	22.8	26.5	27.6	27.6	27.6
83 -	Pumps HP 20.xls	0.6	2.7	5.2	9.5	12.5	14.7	18.0	22.8	25.0	27.0	30.4	35.3	36.8	36.8	36.8
84 -	Setback_Programmable Thermostat.xls	174.4	730.0	1,418.6	2,609.9	3,433.5	4,020.7	4,936.9	6,252.1	6,850.8	7,411.9	8,340.6	9,680.1	10,075.1	10,074.5	10,074.8
85 -	Solid Door Reach-In Freezer, (19 to 60 cu ft).xls	1.5	6.2	12.0	22.0	29.0	33.9	41.7	52.8	57.8	62.6	70.4	81.7	85.0	85.0	85.0
86 -	Solid Door Reach-In Freezer, (Greater Than 60cu ft).xls	1.4	5.9	11.4	21.0	27.6	32.3	39.7	50.3	55.1	59.6	67.1	77.9	81.0	81.0	81.0
87 -	Solid Door Reach-In Freezer, (Less Than19 cu ft).xls	1.5	6.3	12.3	22.6	29.7	34.7	42.7	54.0	59.2	64.0	72.1	83.6	87.1	87.1	87.1
88 -	Solid Door Reach-In Refrig, (19 to 60 cu ft).xls	3.1	13.0	25.2	46.4	61.1	71.5	87.8	111.2	121.8	131.8	148.3	172.1	179.1	179.1	179.1
89 -	Solid Door Reach-In Refrig, (Greater Than 60cu ft).xls	3.9	16.5	32.1	59.1	77.7	91.0	111.7	141.5	155.0	167.7	188.8	219.1	228.0	228.0	228.0
90 -	Solid Door Reach-In Refrig, (Less Than 19 cu ft).xls	2.6	11.0	21.3	39.3	51.7	60.5	74.3	94.1	103.1	111.5	125.5	145.7	151.6	151.6	151.6
91 -	Steamer.xls	98.0	410.3	797.4	1,467.0	1,930.0	2,260.1	2,775.1	3,514.3	3,850.9	4,166.3	4,688.3	5,441.3	5,663.3	5,663.0	5,663.1
92 -	T-8 2ft 1 lamp.xls	0.9	3.6	7.1	13.0	17.1	20.0	24.6	31.2	34.1	36.9	41.6	48.2	50.2	50.2	50.2
93 -	T-8 2ft 2 lamp.xls	4.3	18.0	35.1	64.5	84.8	99.4	122.0	154.5	169.3	183.2	206.1	239.2	249.0	248.9	248.9
94 -	T-8 2ft 3 lamp.xls	4.2	17.7	34.5	63.4	83.4	97.7	120.0	152.0	166.5	180.1	202.7	235.3	244.9	244.9	244.9
95 -	T-8 2ft 4 lamp.xls	139.7	584.6	1,136.0	2,090.1	2,749.6	3,219.9	3,953.6	5,006.8	5,486.2	5,935.7	6,679.4	7,752.1	8,068.4	8,067.9	8,068.1
96 -	T-8 3ft 1 lamp.xls	1.2	4.9	9.6	17.7	23.3	27.2	33.4	42.4	46.4	50.2	56.5	65.6	68.3	68.3	68.3
97 -	T-8 3ft 2 lamp.xls	2.2	9.0	17.5	32.2	42.4	49.7	61.0	77.2	84.6	91.6	103.0	119.6	124.5	124.5	124.5
98 -	T-8 3ft 3 lamp.xls	1.3	5.4	10.5	19.2	25.3	29.6	36.4	46.1	50.5	54.6	61.5	71.4	74.3	74.3	74.3
99 -	T-8 3ft 4 lamp.xls	84.8	354.8	689.6	1,268.6	1,669.0	1,954.4	2,399.8	3,039.0	3,330.1	3,602.8	4,054.3	4,705.4	4,897.4	4,897.1	4,897.2
100 -	T-8 4ft 1 lamp.xls	12.0	50.0	97.2	178.9	235.3	275.6	338.4	428.5	469.5	508.0	571.7	663.5	690.5	690.5	690.5
101 -	T-8 4ft 2 lamp.xls	36.1	151.3	293.9	540.8	711.4	833.1	1,022.9	1,295.4	1,419.4	1,535.7	1,728.1	2,005.7	2,087.5	2,087.4	2,087.4
102 -	T-8 4ft 3 lamp.xls	13.6	57.0	110.8	203.8	268.1	314.0	385.6	488.3	535.0	578.9	651.4	756.0	786.9	786.8	786.8
103 -	T-8 4ft 4 lamp.xls	813.1	3,403.6	6,614.1	12,168.6	16,008.4	18,746.6	23,018.1	29,150.0	31,941.4	34,558.0	38,887.8	45,133.2	46,974.8	46,972.2	46,973.2
104 -	T-8 8ft 1 lamp.xls	2.4	9.9	19.2	35.4	46.5	54.5	66.9	84.7	92.8	100.4	113.0	131.2	136.5	136.5	136.5
105 -	T-8 8ft 2 lamp.xls	12.7	53.2	103.4	190.3	250.3	293.2	360.0	455.9	499.5	540.4	608.1	705.8	734.6	734.6	734.6
106 -	T-8 HO 8 ft 1 Lamp.xls	1.1	4.5	8.7	16.0	21.1	24.7	30.3	38.4	42.0	45.5	51.2	59.4	61.8	61.8	61.8
107 -	T-8 HO 8 ft 2 Lamp.xls	10.6	44.5	86.5	159.1	209.3	245.1	301.0	381.1	417.6	451.9	508.5	590.1	614.2	614.2	614.2
108 -	Thermal Storage lrg C&I.xls	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
109 -	Variable Frequency Drive Pumps HP 5.xls	7.7	32.2	62.5	115.1	151.4	177.3	217.6	275.6	302.0	326.8	367.7	426.8	444.2	444.1	444.2
110 -	Vending Equipment Controller.xls	39.2	163.9	318.6	586.1	771.1	903.0	1,108.8	1,404.1	1,538.6	1,664.6	1,873.2	2,174.0	2,262.7	2,262.6	2,262.7
111 -	VFD HP 1l5.xls	2.3	9.7	18.8	34.5	45.4	53.2	65.3	82.7	90.6	98.0	110.3	128.0	133.3	133.2	133.2
112 -	VFD HP 2.xls	3.1	12.9	25.0	46.0	60.5	70.9	87.1	110.3	120.8	130.7	147.1	170.7	177.7	177.7	177.7
113 -	VFD HP 3.xls	4.6	19.3	37.5	69.0	90.8	106.4	130.6	165.4	181.2	196.1	220.6	256.1	266.5	266.5	266.5
114 -	VFD HP 7l5.xls	11.5	48.3	93.8	172.6	227.1	265.9	326.5	413.4	453.0	490.1	551.6	640.1	666.3	666.2	666.2
115 -	VFD HP 10.xls	19.2	80.5	156.3	287.6	378.4	443.1	544.1	689.1	755.1	816.9	919.3	1,066.9	1,110.4	1,110.4	1,110.4
116 -	VFD HP 15.xls	28.8	120.7	234.5	431.5	567.6	664.7	816.2	1,033.6	1,132.6	1,225.4	1,378.9	1,600.3	1,665.6	1,665.5	1,665.6
117 -	VFD HP 20.xls	38.4	160.9	312.7	575.3	756.8	886.3	1,088.2	1,378.1	1,510.1	1,633.8	1,838.5	2,133.8	2,220.8	2,220.7	2,220.8

	MWH	BASE CASE														
	Year	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
118 -	VFD HP 25.xls	14.1	58.8	114.3	210.4	276.8	324.1	397.9	504.0	552.2	597.5	672.3	780.3	812.1	812.1	812.1
119 -	VFD HP 30.xls	16.9	70.6	137.2	252.5	332.1	388.9	477.5	604.8	662.7	716.9	806.8	936.3	974.6	974.5	974.5
120 -	VFD HP 40.xls	22.5	94.1	183.0	336.6	442.8	518.6	636.7	806.3	883.6	955.9	1,075.7	1,248.5	1,299.4	1,299.3	1,299.4
121 -	VFD HP 50.xls	28.1	117.7	228.7	420.8	553.5	648.2	795.9	1,007.9	1,104.4	1,194.9	1,344.6	1,560.6	1,624.3	1,624.2	1,624.2
122 -	Window Film.xls	10.0	41.7	81.1	149.2	196.2	229.8	282.2	357.3	391.6	423.6	476.7	553.3	575.8	575.8	575.8
123 -	Zone Shutoff Valves -COMPRESSED AIR.xls	23.8	99.6	193.5	356.0	468.4	548.5	673.5	852.9	934.6	1,011.2	1,137.8	1,320.6	1,374.5	1,374.4	1,374.4
	Total	13,971.6	58,487.0	113,657.2	209,104.0	275,088.1	322,140.8	395,542.1	500,912.4	548,880.6	593,843.0	668,247.1	775,566.9	807,214.1	807,169.6	807,185.8

	MWH										
	Year	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
	Residential	3,017,662	3,009,337	3,009,263	3,009,326	3,017,663	3,009,254	3,009,257	3,009,337	3,017,641	3,009,414
	Non-residential	809,197	807,189	807,306	807,214	809,192	807,179	807,298	807,189	809,167	807,170
	Total	3,826,859	3,816,525	3,816,569	3,816,540	3,826,855	3,816,433	3,816,554	3,816,525	3,826,808	3,816,584
	Residential										
1 -	Agency Kit and CFLs.xls	486,070	484,729	484,717	484,728	486,070	484,716	484,716	484,729	486,067	484,742
2 -	Home Energy House Call - KIT.xls	113,112	112,800	112,798	112,800	113,112	112,797	112,797	112,800	113,112	112,803
3 -	K-12 Education Program- CFL Distribution.xls	739,672	737,632	737,614	737,629	739,672	737,611	737,612	737,632	739,667	737,651
4 -	K-12 Education Program- Curriculum.xls	576,833	575,242	575,228	575,240	576,833	575,226	575,226	575,242	576,829	575,257
5 -	Low Income Weatherization- Refrigerator Replacement.xls	9,868	9,841	9,841	9,841	9,868	9,841	9,841	9,841	9,868	9,841
6 -	Low Income Weatherization- Tier 1.xls	4,459	4,447	4,447	4,447	4,459	4,447	4,447	4,447	4,459	4,447
7 -	Low Income Weatherization- Tier 2.xls	35,674	35,576	35,575	35,576	35,674	35,575	35,575	35,576	35,674	35,577
8 -	Multi-Family Assessments- KIT ONLY.xls	3,399	3,390	3,390	3,390	3,399	3,390	3,390	3,390	3,399	3,390
9 -	Online Audit w_EE kit.xls	49,225	49,089	49,088	49,089	49,225	49,088	49,088	49,089	49,225	49,091
10 -	Personalized Energy Report.xls	410,210	409,078	409,068	409,077	410,210	409,067	409,067	409,078	410,207	409,089
11 -	Smart Saver - CAC.xls	68,790	68,600	68,598	68,600	68,790	68,598	68,598	68,600	68,789	68,602
12 -	Smart Saver - Heat Pump.xls	30,521	30,436	30,436	30,436	30,521	30,435	30,436	30,436	30,520	30,437
13 -	Smart Saver - Res CFL Promo.xls	489,827	488,476	488,464	488,474	489,828	488,463	488,463	488,476	489,824	488,489
	Total	**3,017,662**	**3,009,337**	**3,009,263**	**3,009,326**	**3,017,663**	**3,009,254**	**3,009,257**	**3,009,337**	**3,017,641**	**3,009,414**
	Non Residential										
1 -	1 Lamp T-5 HO with Elec Ballast replacing T-12.xls	37.0	36.9	36.9	36.9	37.0	36.9	36.9	36.9	37.0	36.9
2 -	1 Lamp T-5 with Elec Ballast replacing T-12.xls	14.9	14.9	14.9	14.9	14.9	14.9	14.9	14.9	14.9	14.9
3 -	2 Lamp T-5 replacing T-12.xls	14.9	14.9	14.9	14.9	14.9	14.9	14.9	14.9	14.9	14.9
4 -	2 Lamp T-5HO replacing T-12.xls	140.0	139.7	139.7	139.7	140.0	139.7	139.7	139.7	140.0	139.7
5 -	3 Lamp T-5 replacing T-12.xls	33.4	33.3	33.3	33.3	33.4	33.3	33.3	33.3	33.4	33.3
6 -	3 Lamp T-5HO replacing T-12.xls	62.0	61.8	61.8	61.8	62.0	61.8	61.8	61.8	62.0	61.8
7 -	4 Lamp T-5 replacing T-12.xls	293.7	293.0	293.1	293.0	293.7	293.0	293.1	293.0	293.7	293.0
8 -	4 Lamp T-5HO replacing T-12.xls	724.7	722.9	723.0	722.9	724.7	722.9	723.0	722.9	724.7	722.9
9 -	42W 8 Lamp HI Bay CFL.xls	61.8	61.7	61.7	61.7	61.8	61.7	61.7	61.7	61.8	61.7
10 -	80Plus NC_Desktop Unit.xls	19,538.8	19,490.3	19,493.1	19,490.9	19,538.6	19,490.0	19,492.9	19,490.3	19,538.0	19,489.8
11 -	80Plus NC_Server Unit.xls	1,383.7	1,380.3	1,380.5	1,380.4	1,383.7	1,380.3	1,380.5	1,380.3	1,383.7	1,380.3
12 -	AC 65,000 - 135,000.xls	1,266.0	1,262.9	1,263.1	1,262.9	1,266.0	1,262.9	1,263.1	1,262.9	1,266.0	1,262.9
13 -	AC 135,000 - 240,000.xls	6,072.1	6,057.0	6,057.9	6,057.2	6,072.0	6,056.9	6,057.8	6,057.0	6,071.8	6,056.8
14 -	AC 240,000 - 760,000.xls	865.2	863.1	863.2	863.1	865.2	863.1	863.2	863.1	865.2	863.1
15 -	AC greater than 760,000.xls	126.1	125.8	125.8	125.8	126.1	125.8	125.8	125.8	126.1	125.8
16 -	AC less than 65,000 1 Ph Rooftop & Unitary.xls	488.3	487.1	487.1	487.1	488.3	487.1	487.1	487.1	488.3	487.0
17 -	AC less than 65,000 3 Ph.xls	352.0	351.2	351.2	351.2	352.0	351.2	351.2	351.2	352.0	351.1
18 -	Barrel Wraps (Inj Mold & Extruders).xls	2,253.0	2,247.4	2,247.7	2,247.5	2,253.0	2,247.4	2,247.7	2,247.4	2,252.9	2,247.4
19 -	CFL Fixture.xls	7,394.8	7,376.5	7,377.6	7,376.7	7,394.8	7,376.4	7,377.5	7,376.5	7,394.6	7,376.3
20 -	CFL Screw In.xls	74,255.9	74,071.6	74,082.3	74,073.9	74,255.4	74,070.7	74,081.6	74,071.6	74,253.1	74,069.8
21 -	Chilled Air EE Cooled Chillers.xls	11,636.9	11,608.1	11,609.7	11,608.4	11,636.9	11,607.9	11,609.6	11,608.1	11,636.5	11,607.8
22 -	Chilled Water EE Cooled Chillers 150 - 300 ton.xls	18,681.8	18,635.4	18,638.1	18,636.0	18,681.7	18,635.2	18,638.0	18,635.4	18,681.1	18,635.0
23 -	Chilled Water EE Cooled Chillers greater than 300 ton.xls	37,694.1	37,600.5	37,606.0	37,601.7	37,693.8	37,600.1	37,605.6	37,600.5	37,692.7	37,599.6
24 -	Chilled Water EE Cooled Chillers less than150 ton.xls	1,075.9	1,073.2	1,073.4	1,073.2	1,075.9	1,073.2	1,073.3	1,073.2	1,075.8	1,073.2
25 -	Chilled Water Reset Air Cooled 300-400 tons.xls	72.9	72.7	72.7	72.7	72.9	72.7	72.7	72.7	72.9	72.7

	MWH										
	Year	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
26 -	Chilled Water Reset Air Cooled 400-500 tons.xls	93.7	93.5	93.5	93.5	93.7	93.5	93.5	93.5	93.7	93.5
27 -	Chilled Water Reset Water Cooled 0-1000 tons.xls	480.7	479.5	479.6	479.5	480.7	479.5	479.5	479.5	480.7	479.5
28 -	Chilled Water Reset Water Cooled 1000-2000 tons.xls	144.2	143.8	143.9	143.8	144.2	143.8	143.9	143.8	144.2	143.8
29 -	Chilled Water Reset Water Cooled 2000-3000 tons.xls	240.3	239.7	239.8	239.7	240.3	239.7	239.8	239.7	240.3	239.7
30 -	Combi Oven, (90 lbs_hr).xls	2,476.7	2,470.6	2,470.9	2,470.6	2,476.7	2,470.5	2,470.9	2,470.6	2,476.6	2,470.5
31 -	Commercial Clothes Washers - Electric Dryer & Washer.xls	4,597.0	4,585.6	4,586.2	4,585.7	4,597.0	4,585.5	4,586.2	4,585.6	4,596.8	4,585.5
32 -	Commercial Clothes Washers - Washer Only.xls	1,935.6	1,930.8	1,931.0	1,930.8	1,935.6	1,930.7	1,931.0	1,930.8	1,935.5	1,930.7
33 -	Convection Oven.xls	988.3	985.8	986.0	985.9	988.3	985.8	986.0	985.8	988.2	985.8
34 -	Custom Rebate.xls	222,041.9	221,490.8	221,522.9	221,497.8	222,040.5	221,488.2	221,520.7	221,490.8	222,033.6	221,485.6
35 -	Engineered Nozzles - COMPRESS AIR.xls	13,818.1	13,783.8	13,785.8	13,784.2	13,818.0	13,783.6	13,785.7	13,783.8	13,817.6	13,783.5
36 -	ES Sleeve AC over 14,000 Btu hr.xls	90.4	90.2	90.2	90.2	90.4	90.2	90.2	90.2	90.4	90.2
37 -	ES Sleeve AC under 14,000 Btu hr.xls	40.7	40.6	40.6	40.6	40.7	40.6	40.6	40.6	40.7	40.6
38 -	ES Window AC over 14,000 Btu hr.xls	205.2	204.7	204.8	204.7	205.2	204.7	204.7	204.7	205.2	204.7
39 -	ES Window AC under 14,000 Btu hr.xls	94.1	93.9	93.9	93.9	94.1	93.9	93.9	93.9	94.1	93.9
40 -	Fryer.xls	495.0	493.7	493.8	493.7	494.9	493.7	493.8	493.7	494.9	493.7
41 -	Griddles.xls	825.0	823.0	823.1	823.0	825.0	822.9	823.1	823.0	825.0	822.9
42 -	Head Pressure Control.xls	14,972.7	14,935.5	14,937.7	14,936.0	14,972.6	14,935.3	14,937.5	14,935.5	14,972.1	14,935.2
43 -	High Bay 2L T5HO.xls	3,072.8	3,065.1	3,065.6	3,065.2	3,072.7	3,065.1	3,065.5	3,065.1	3,072.6	3,065.1
44 -	High Bay 4L T5HO.xls	44,334.3	44,224.3	44,230.7	44,225.7	44,334.0	44,223.8	44,230.3	44,224.3	44,332.7	44,223.2
45 -	High Bay 6L T5HO.xls	12,562.0	12,530.9	12,532.7	12,531.3	12,562.0	12,530.7	12,532.5	12,530.9	12,561.6	12,530.6
46 -	High Bay 8L T5HO.xls	131,705.8	131,378.9	131,397.9	131,383.0	131,704.9	131,377.3	131,396.6	131,378.9	131,700.9	131,375.8
47 -	High Bay Fluorescent 4LF32T8.xls	2,065.5	2,060.4	2,060.7	2,060.4	2,065.5	2,060.3	2,060.6	2,060.4	2,065.4	2,060.3
48 -	High Bay Fluorescent 6LF32T8.xls	12,900.3	12,868.3	12,870.1	12,868.7	12,900.2	12,868.1	12,870.0	12,868.3	12,899.8	12,868.0
49 -	High Bay Fluorescent 8LF32T8.xls	8,713.0	8,691.3	8,692.6	8,691.6	8,712.9	8,691.2	8,692.5	8,691.3	8,712.6	8,691.1
50 -	High Efficiency Pumps HP 5.xls	18.4	18.4	18.4	18.4	18.4	18.4	18.4	18.4	18.4	18.4
51 -	Holding Cabinet Full Size Insulated.xls	886.5	884.3	884.4	884.3	886.5	884.3	884.4	884.3	886.4	884.2
52 -	Holding Cabinet Half Size Insulated.xls	300.3	299.5	299.6	299.5	300.3	299.5	299.6	299.5	300.3	299.5
53 -	Holding Cabinet Three Quarter Size Insulated.xls	475.6	474.4	474.5	474.5	475.6	474.4	474.5	474.4	475.6	474.4
54 -	HP 65,000 - 135,000.xls	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5
55 -	HP 135,000 - 240,000.xls	30.9	30.8	30.8	30.8	30.9	30.8	30.8	30.8	30.9	30.8
56 -	HP greater than 240,000.xls	71.6	71.4	71.5	71.4	71.6	71.4	71.4	71.4	71.6	71.4
57 -	HP less than 65,000 1 Ph.xls	236.9	236.3	236.3	236.3	236.9	236.3	236.3	236.3	236.9	236.3
58 -	HP less than 65,000 3 Ph.xls	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
59 -	HP Water Heater 500 gal_day.xls	7,851.8	7,832.3	7,833.4	7,832.5	7,851.7	7,832.2	7,833.3	7,832.3	7,851.5	7,832.1
60 -	HP Water Heater 1000 gal_day.xls	5,278.9	5,265.8	5,266.6	5,266.0	5,278.9	5,265.7	5,266.5	5,265.8	5,278.7	5,265.7
61 -	HP Water Heater 1500 gal_day.xls	7,940.6	7,920.9	7,922.0	7,921.1	7,940.5	7,920.8	7,921.9	7,920.9	7,940.3	7,920.7
62 -	Icemaker, (100 to 500 lbs_day).xls	277.5	276.9	276.9	276.9	277.5	276.8	276.9	276.9	277.5	276.8
63 -	Icemaker, (500 to 1000 lbs_day).xls	452.7	451.6	451.6	451.6	452.7	451.6	451.6	451.6	452.7	451.6
64 -	Icemaker, (Greater Than 1000 lbs_day).xls	1,015.8	1,013.3	1,013.5	1,013.3	1,015.8	1,013.3	1,013.4	1,013.3	1,015.8	1,013.3
65 -	LED Auto Traffic Signals.xls	5,895.3	5,880.7	5,881.6	5,880.9	5,895.3	5,880.6	5,881.5	5,880.7	5,895.1	5,880.6
66 -	LED Exit Signs Electronic Fixtures (Retrofit Only).xls	7,967.8	7,948.0	7,949.2	7,948.3	7,967.8	7,947.9	7,949.1	7,948.0	7,967.5	7,947.8
67 -	LED Pedestrian Signals.xls	1,610.8	1,606.8	1,607.0	1,606.8	1,610.8	1,606.8	1,607.0	1,606.8	1,610.7	1,606.8
68 -	Light Tube.xls	155.0	154.6	154.6	154.6	155.0	154.6	154.6	154.6	155.0	154.6
69 -	Motors 1-5 HP - Incentives per participant.xls	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8
70 -	Motors 25-100 HP - Incentives per participant.xls	41.3	41.2	41.2	41.2	41.3	41.2	41.2	41.2	41.3	41.2
71 -	Night covers for displays.xls	37.6	37.5	37.5	37.5	37.6	37.5	37.5	37.5	37.6	37.5

	MWH										
	Year	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
72 -	Occupancy Sensors over 500 Watts.xls	721.6	719.8	719.9	719.9	721.6	719.8	719.9	719.8	721.6	719.8
73 -	Occupancy Sensors under 500 Watts .xls	3,352.6	3,344.3	3,344.8	3,344.4	3,352.6	3,344.3	3,344.8	3,344.3	3,352.5	3,344.2
74 -	Packaged Terminal AC.xls	117.6	117.3	117.3	117.3	117.6	117.3	117.3	117.3	117.6	117.3
75 -	Pellet Dryer Tanks & Ducts 3in dia.xls	3.9	3.8	3.8	3.8	3.9	3.8	3.8	3.8	3.9	3.8
76 -	Pellet Dryer Tanks & Ducts 5in dia.xls	6.9	6.8	6.8	6.8	6.9	6.8	6.8	6.8	6.9	6.8
77 -	Pellet Dryer Tanks & Ducts 8in dia.xls	11.9	11.9	11.9	11.9	11.9	11.9	11.9	11.9	11.9	11.9
78 -	Plug Load Occupancy Sensors Document Stations.xls	1,163.0	1,160.1	1,160.3	1,160.1	1,163.0	1,160.1	1,160.3	1,160.1	1,162.9	1,160.1
79 -	Pulse Start Metal Halide (retrofit only).xls	1,440.0	1,436.4	1,436.7	1,436.5	1,440.0	1,436.4	1,436.6	1,436.4	1,440.0	1,436.4
80 -	Pumps HP 7l5.xls	27.6	27.6	27.6	27.6	27.6	27.6	27.6	27.6	27.6	27.6
81 -	Pumps HP 10.xls	18.4	18.4	18.4	18.4	18.4	18.4	18.4	18.4	18.4	18.4
82 -	Pumps HP 15.xls	27.6	27.6	27.6	27.6	27.6	27.6	27.6	27.6	27.6	27.6
83 -	Pumps HP 20.xls	36.9	36.8	36.8	36.8	36.9	36.8	36.8	36.8	36.9	36.8
84 -	Setback_Programmable Thermostat.xls	10,099.9	10,074.8	10,076.2	10,075.1	10,099.8	10,074.7	10,076.1	10,074.8	10,099.5	10,074.5
85 -	Solid Door Reach-In Freezer, (19 to 60 cu ft).xls	85.3	85.0	85.1	85.0	85.3	85.0	85.1	85.0	85.3	85.0
86 -	Solid Door Reach-In Freezer, (Greater Than 60cu ft).xls	81.2	81.0	81.0	81.0	81.2	81.0	81.0	81.0	81.2	81.0
87 -	Solid Door Reach-In Freezer, (Less Than19 cu ft).xls	87.3	87.1	87.1	87.1	87.3	87.1	87.1	87.1	87.3	87.1
88 -	Solid Door Reach-In Refrig, (19 to 60 cu ft).xls	179.6	179.1	179.2	179.1	179.6	179.1	179.2	179.1	179.6	179.1
89 -	*Solid Door Reach-In Refrig, (Greater Than 60cu ft).xls*	*228.6*	*228.0*	*228.0*	*228.0*	*228.6*	*228.0*	*228.0*	*228.0*	*228.6*	*228.0*
90 -	Solid Door Reach-In Refrig, (Less Than 19 cu ft).xls	152.0	151.6	151.6	151.6	152.0	151.6	151.6	151.6	152.0	151.6
91 -	Steamer.xls	5,677.2	5,663.1	5,664.0	5,663.3	5,677.2	5,663.1	5,663.9	5,663.1	5,677.0	5,663.0
92 -	T-8 2ft 1 lamp.xls	50.3	50.2	50.2	50.2	50.3	50.2	50.2	50.2	50.3	50.2
93 -	T-8 2ft 2 lamp.xls	249.6	249.0	249.0	249.0	249.6	248.9	249.0	249.0	249.6	248.9
94 -	T-8 2ft 3 lamp.xls	245.5	244.9	244.9	244.9	245.5	244.9	244.9	244.9	245.5	244.9
95 -	T-8 2ft 4 lamp.xls	8,088.2	8,068.1	8,069.3	8,068.4	8,088.1	8,068.0	8,069.2	8,068.1	8,087.9	8,067.9
96 -	T-8 3ft 1 lamp.xls	68.4	68.3	68.3	68.3	68.4	68.3	68.3	68.3	68.4	68.3
97 -	T-8 3ft 2 lamp.xls	124.8	124.5	124.5	124.5	124.8	124.5	124.5	124.5	124.8	124.5
98 -	T-8 3ft 3 lamp.xls	74.5	74.3	74.3	74.3	74.5	74.3	74.3	74.3	74.5	74.3
99 -	T-8 3ft 4 lamp.xls	4,909.4	4,897.2	4,897.9	4,897.4	4,909.4	4,897.2	4,897.9	4,897.2	4,909.2	4,897.1
100 -	T-8 4ft 1 lamp.xls	692.2	690.5	690.6	690.5	692.2	690.5	690.6	690.5	692.2	690.5
101 -	T-8 4ft 2 lamp.xls	2,092.6	2,087.4	2,087.8	2,087.5	2,092.6	2,087.4	2,087.7	2,087.4	2,092.6	2,087.4
102 -	T-8 4ft 3 lamp.xls	788.8	786.8	786.9	786.9	788.8	786.8	786.9	786.8	788.8	786.8
103 -	T-8 4ft 4 lamp.xls	47,090.2	46,973.4	46,980.2	46,974.8	47,089.9	46,972.8	46,979.7	46,973.4	47,088.5	46,972.2
104 -	T-8 8ft 1 lamp.xls	136.9	136.5	136.5	136.5	136.9	136.5	136.5	136.5	136.8	136.5
105 -	T-8 8ft 2 lamp.xls	736.4	734.6	734.7	734.6	736.4	734.6	734.7	734.6	736.4	734.6
106 -	T-8 HO 8 ft 1 Lamp.xls	62.0	61.8	61.8	61.8	62.0	61.8	61.8	61.8	62.0	61.8
107 -	T-8 HO 8 ft 2 Lamp.xls	615.7	614.2	614.3	614.2	615.7	614.2	614.3	614.2	615.7	614.2
108 -	Thermal Storage Irg C&I.xls	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
109 -	Variable Frequency Drive Pumps HP 5.xls	445.3	444.2	444.2	444.2	445.3	444.1	444.2	444.2	445.2	444.1
110 -	Vending Equipment Controller.xls	2,268.3	2,262.7	2,263.0	2,262.7	2,268.3	2,262.6	2,263.0	2,262.7	2,268.2	2,262.6
111 -	VFD HP 1l5.xls	133.6	133.2	133.3	133.3	133.6	133.2	133.3	133.2	133.6	133.2
112 -	VFD HP 2.xls	178.1	177.7	177.7	177.7	178.1	177.7	177.7	177.7	178.1	177.7
113 -	VFD HP 3.xls	267.2	266.5	266.5	266.5	267.2	266.5	266.5	266.5	267.1	266.5
114 -	VFD HP 7l5.xls	667.9	666.2	666.3	666.3	667.9	666.2	666.3	666.2	667.9	666.2
115 -	VFD HP 10.xls	1,113.1	1,110.4	1,110.5	1,110.4	1,113.1	1,110.4	1,110.5	1,110.4	1,113.1	1,110.4
116 -	VFD HP 15.xls	1,669.7	1,665.6	1,665.8	1,665.6	1,669.7	1,665.6	1,665.8	1,665.6	1,669.7	1,665.5
117 -	VFD HP 20.xls	2,226.3	2,220.8	2,221.1	2,220.8	2,226.3	2,220.7	2,221.1	2,220.8	2,226.2	2,220.7

	MWH										
	Year	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
118 -	VFD HP 25.xls	814.1	812.1	812.2	812.1	814.1	812.1	812.2	812.1	814.1	812.1
119 -	VFD HP 30.xls	976.9	974.5	974.7	974.6	976.9	974.5	974.7	974.5	976.9	974.5
120 -	VFD HP 40.xls	1,302.6	1,299.4	1,299.5	1,299.4	1,302.6	1,299.3	1,299.5	1,299.4	1,302.5	1,299.3
121 -	VFD HP 50.xls	1,628.2	1,624.2	1,624.4	1,624.3	1,628.2	1,624.2	1,624.4	1,624.2	1,628.2	1,624.2
122 -	Window Film.xls	577.3	575.8	575.9	575.8	577.3	575.8	575.9	575.8	577.2	575.8
123 -	Zone Shutoff Valves -COMPRESSED AIR.xls	1,377.8	1,374.4	1,374.6	1,374.5	1,377.8	1,374.4	1,374.6	1,374.4	1,377.8	1,374.4
	Total	809,197.2	807,188.6	807,305.6	807,214.1	809,191.9	807,179.1	807,297.6	807,188.6	809,166.9	807,169.6

	MWH	BASE CASE														
	Year	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
	Residential	59,710	251,430	470,897	805,626	1,042,262	1,249,931	1,523,586	1,884,568	2,064,230	2,266,115	2,542,551	2,908,695	3,009,326	3,009,414	3,009,438
	Non-residential	13,972	58,487	113,657	209,104	275,088	322,141	395,542	500,912	548,881	593,843	668,247	775,567	807,214	807,170	807,186
	Total	73,682	309,917	584,555	1,014,730	1,317,350	1,572,072	1,919,128	2,385,480	2,613,110	2,859,958	3,210,799	3,684,262	3,816,540	3,816,584	3,816,624
	Residential															
1 -	Agency Kit and CFLs.xls	9,618	40,499	75,850	129,766	167,882	201,333	245,412	303,557	332,496	365,015	409,542	468,518	484,728	484,742	484,746
2 -	Home Energy House Call - KIT.xls	2,238	9,424	17,651	30,198	39,068	46,852	57,109	70,640	77,374	84,942	95,304	109,028	112,800	112,803	112,804
3 -	K-12 Education Program- CFL Distribution.xls	14,636	61,629	115,424	197,471	255,473	306,376	373,453	461,935	505,972	555,457	623,216	712,963	737,629	737,651	737,657
4 -	K-12 Education Program- Curriculum.xls	11,414	48,061	90,013	153,997	199,231	238,927	291,237	360,240	394,582	433,173	486,015	556,004	575,240	575,257	575,261
5 -	Low Income Weatherization- Refrigerator Replacement.xls	195	822	1,540	2,634	3,408	4,087	4,982	6,163	6,750	7,410	8,314	9,512	9,841	9,841	9,841
6 -	Low Income Weatherization- Tier 1.xls	88	372	696	1,190	1,540	1,847	2,251	2,785	3,050	3,349	3,757	4,298	4,447	4,447	4,447
7 -	Low Income Weatherization- Tier 2.xls	706	2,972	5,567	9,524	12,321	14,777	18,012	22,279	24,403	26,790	30,058	34,386	35,576	35,577	35,577
8 -	Multi-Family Assessments- KIT ONLY.xls	67	283	530	908	1,174	1,408	1,716	2,123	2,325	2,553	2,864	3,277	3,390	3,390	3,390
9 -	Online Audit w_EE kit.xls	974	4,101	7,681	13,142	17,002	20,389	24,853	30,742	33,672	36,966	41,475	47,448	49,089	49,091	49,091
10 -	Personalized Energy Report.xls	8,117	34,178	64,012	109,514	141,681	169,911	207,111	256,181	280,604	308,047	345,625	395,397	409,077	409,089	409,092
11 -	Smart Saver - CAC.xls	1,361	5,732	10,734	18,365	23,759	28,493	34,731	42,960	47,056	51,658	57,959	66,306	68,600	68,602	68,602
12 -	Smart Saver - Heat Pump.xls	604	2,543	4,763	8,148	10,541	12,642	15,409	19,060	20,878	22,919	25,715	29,418	30,436	30,437	30,437
13 -	Smart Saver - Res CFL Promo.xls	9,692	40,812	76,436	130,769	169,180	202,889	247,309	305,903	335,066	367,836	412,707	472,140	488,474	488,489	488,493
	Total	59,710	251,430	470,897	805,626	1,042,262	1,249,931	1,523,586	1,884,568	2,064,230	2,266,115	2,542,551	2,908,695	3,009,326	3,009,414	3,009,438
	Non Residential															
1 -	1 Lamp T-5 HO with Elec Ballast replacing T-12.xls	0.6	2.7	5.2	9.6	12.6	14.7	18.1	22.9	25.1	27.2	30.6	35.5	36.9	36.9	36.9
2 -	1 Lamp T-5 with Elec Ballast replacing T-12.xls	0.3	1.1	2.1	3.8	5.1	5.9	7.3	9.2	10.1	10.9	12.3	14.3	14.9	14.9	14.9
3 -	2 Lamp T-5 replacing T-12.xls	0.3	1.1	2.1	3.8	5.1	5.9	7.3	9.2	10.1	10.9	12.3	14.3	14.9	14.9	14.9
4 -	2 Lamp T-5HO replacing T-12.xls	2.4	10.1	19.7	36.2	47.6	55.8	68.5	86.7	95.0	102.8	115.6	134.2	139.7	139.7	139.7
5 -	3 Lamp T-5 replacing T-12.xls	0.6	2.4	4.7	8.6	11.4	13.3	16.3	20.7	22.7	24.5	27.6	32.0	33.3	33.3	33.3
6 -	3 Lamp T-5HO replacing T-12.xls	1.1	4.5	8.7	16.0	21.1	24.7	30.3	38.4	42.0	45.5	51.2	59.4	61.8	61.8	61.8
7 -	4 Lamp T-5 replacing T-12.xls	5.1	21.2	41.3	75.9	99.9	116.9	143.6	181.8	199.2	215.6	242.6	281.5	293.0	293.0	293.0
8 -	4 Lamp T-5HO replacing T-12.xls	12.5	52.4	101.8	187.3	246.4	288.5	354.2	448.6	491.6	531.8	598.5	694.6	722.9	722.9	722.9
9 -	42W 8 Lamp HI Bay CFL.xls	1.1	4.5	8.7	16.0	21.0	24.6	30.2	38.3	41.9	45.4	51.1	59.3	61.7	61.7	61.7
10 -	80Plus NC_Desktop Unit.xls	337.4	1,412.2	2,744.3	5,049.0	6,642.2	7,778.4	9,550.7	12,095.0	13,253.2	14,338.8	16,135.4	18,726.7	19,490.9	19,489.8	19,490.2
11 -	80Plus NC_Server Unit.xls	23.9	100.0	194.4	357.6	470.4	550.9	676.4	856.6	938.6	1,015.5	1,142.7	1,326.2	1,380.4	1,380.3	1,380.3
12 -	AC 65,000 - 135,000.xls	21.9	91.5	177.8	327.2	430.4	504.0	618.9	783.7	858.8	929.1	1,045.5	1,213.4	1,262.9	1,262.9	1,262.9
13 -	AC 135,000 - 240,000.xls	104.8	438.9	852.9	1,569.1	2,064.2	2,417.3	2,968.1	3,758.8	4,118.7	4,456.1	5,014.4	5,819.7	6,057.2	6,056.8	6,057.0
14 -	AC 240,000 - 760,000.xls	14.9	62.5	121.5	223.6	294.1	344.4	422.9	535.6	586.9	635.0	714.5	829.3	863.1	863.1	863.1
15 -	AC greater than 760,000.xls	2.2	9.1	17.7	32.6	42.9	50.2	61.7	78.1	85.6	92.6	104.2	120.9	125.8	125.8	125.8
16 -	AC less than 65,000 1 Ph Rooftop & Unitary.xls	8.4	35.3	68.6	126.2	166.0	194.4	238.7	302.3	331.2	358.3	403.2	468.0	487.1	487.0	487.1
17 -	AC less than 65,000 3 Ph.xls	6.1	25.4	49.4	91.0	119.7	140.1	172.1	217.9	238.8	258.3	290.7	337.4	351.2	351.1	351.2
18 -	Barrel Wraps (Inj Mold & Extruders).xls	38.9	162.8	316.4	582.2	765.9	896.9	1,101.3	1,394.7	1,528.2	1,653.4	1,860.6	2,159.4	2,247.5	2,247.4	2,247.4
19 -	CFL Fixture.xls	127.7	534.5	1,038.7	1,910.9	2,513.9	2,943.9	3,614.7	4,577.6	5,015.9	5,426.8	6,106.8	7,087.5	7,376.7	7,376.3	7,376.5
20 -	CFL Screw in.xls	1,282.1	5,367.1	10,429.7	19,188.4	25,243.4	29,561.2	36,296.9	45,966.2	50,368.0	54,493.9	61,321.6	71,169.8	74,073.9	74,069.8	74,071.3
21 -	Chilled Air EE Cooled Chillers.xls	200.9	841.1	1,634.5	3,007.1	3,956.0	4,632.7	5,688.2	7,203.5	7,893.4	8,540.0	9,610.0	11,153.3	11,608.4	11,607.8	11,608.0
22 -	Chilled Water EE Cooled Chillers 150 - 300 ton.xls	322.6	1,350.3	2,624.0	4,827.6	6,350.9	7,437.2	9,131.8	11,564.5	12,671.9	13,710.0	15,427.7	17,905.4	18,636.0	18,635.0	18,635.4
23 -	Chilled Water EE Cooled Chillers greater than 300 ton.xls	650.8	2,724.4	5,294.4	9,740.5	12,814.2	15,006.0	18,425.2	23,333.5	25,568.0	27,662.4	31,128.3	36,127.5	37,601.7	37,599.6	37,600.4
24 -	Chilled Water EE Cooled Chillers less than150 ton.xls	18.6	77.8	151.1	278.0	365.7	428.3	525.9	666.0	729.8	789.5	888.5	1,031.2	1,073.2	1,073.2	1,073.2
25 -	Chilled Water Reset Air Cooled 300-400 tons.xls	1.3	5.3	10.2	18.8	24.8	29.0	35.6	45.1	49.4	53.5	60.2	69.9	72.7	72.7	72.7

	MWH	BASE CASE														
	Year	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
26 -	Chilled Water Reset Air Cooled 400-500 tons.xls	1.6	6.8	13.2	24.2	31.9	37.3	45.8	58.0	63.6	68.8	77.4	89.8	93.5	93.5	93.5
27 -	Chilled Water Reset Water Cooled 0-1000 tons.xls	8.3	34.7	67.5	124.2	163.4	191.4	235.0	297.6	326.0	352.8	396.9	460.7	479.5	479.5	479.5
28 -	Chilled Water Reset Water Cooled 1000-2000 tons.xls	2.5	10.4	20.3	37.3	49.0	57.4	70.5	89.3	97.8	105.8	119.1	138.2	143.8	143.8	143.8
29 -	Chilled Water Reset Water Cooled 2000-3000 tons.xls	4.1	17.4	33.8	62.1	81.7	95.7	117.5	148.8	163.0	176.4	198.5	230.3	239.7	239.7	239.7
30 -	Combi Oven, (90 lbs_hr).xls	42.8	179.0	347.9	640.0	842.0	986.0	1,210.6	1,533.1	1,680.0	1,817.6	2,045.3	2,373.8	2,470.6	2,470.5	2,470.6
31 -	Commercial Clothes Washers - Electric Dryer & Washer.xls	79.4	332.3	645.7	1,187.9	1,562.8	1,830.1	2,247.0	2,845.6	3,118.1	3,373.6	3,796.3	4,405.9	4,585.7	4,585.5	4,585.6
32 -	Commercial Clothes Washers - Washer Only.xls	33.4	139.9	271.9	500.2	658.0	770.5	946.1	1,198.2	1,312.9	1,420.5	1,598.4	1,855.1	1,930.8	1,930.7	1,930.8
33 -	Convection Oven.xls	17.1	71.4	138.8	255.4	336.0	393.4	483.1	611.8	670.4	725.3	816.1	947.2	985.9	985.8	985.8
34 -	Custom Rebate.xls	3,833.8	16,048.7	31,187.3	57,377.7	75,483.6	88,394.7	108,535.9	137,449.3	150,611.6	162,949.2	183,365.5	212,813.9	221,497.8	221,485.6	221,490.0
35 -	Engineered Nozzles - COMPRESS AIR.xls	238.6	998.7	1,940.8	3,570.7	4,697.5	5,501.0	6,754.4	8,553.7	9,372.9	10,140.6	11,411.2	13,243.8	13,784.2	13,783.5	13,783.8
36 -	ES Sleeve AC over 14,000 Btu hr.xls	1.6	6.5	12.7	23.4	30.7	36.0	44.2	56.0	61.3	66.4	74.7	86.7	90.2	90.2	90.2
37 -	ES Sleeve AC under 14,000 Btu hr.xls	0.7	2.9	5.7	10.5	13.8	16.2	19.9	25.2	27.6	29.9	33.6	39.0	40.6	40.6	40.6
38 -	ES Window AC over 14,000 Btu hr.xls	3.5	14.8	28.8	53.0	69.8	81.7	100.3	127.0	139.2	150.6	169.5	196.7	204.7	204.7	204.7
39 -	ES Window AC under 14,000 Btu hr.xls	1.6	6.8	13.2	24.3	32.0	37.5	46.0	58.3	63.8	69.1	77.7	90.2	93.9	93.9	93.9
40 -	Fryer.xls	8.5	35.8	69.5	127.9	168.3	197.0	241.9	306.4	335.7	363.2	408.7	474.4	493.7	493.7	493.7
41 -	Griddles.xls	14.2	59.6	115.9	213.2	280.5	328.4	403.3	510.7	559.6	605.4	681.3	790.7	823.0	822.9	822.9
42 -	Head Pressure Control.xls	258.5	1,082.2	2,103.0	3,869.1	5,090.0	5,960.6	7,318.8	9,268.4	10,156.0	10,987.9	12,364.7	14,350.4	14,936.0	14,935.2	14,935.5
43 -	High Bay 2L T5HO.xls	53.1	222.1	431.6	794.0	1,044.6	1,223.3	1,502.0	1,902.1	2,084.3	2,255.0	2,537.5	2,945.1	3,065.2	3,065.1	3,065.1
44 -	High Bay 4L T5HO.xls	765.5	3,204.4	6,227.1	11,456.4	15,071.5	17,649.5	21,671.0	27,444.0	30,072.1	32,535.5	36,612.0	42,491.8	44,225.7	44,223.2	44,224.1
45 -	High Bay 6L T5HO.xls	216.9	908.0	1,764.4	3,246.1	4,270.5	5,000.9	6,140.4	7,776.2	8,520.9	9,218.9	10,373.9	12,040.0	12,531.3	12,530.6	12,530.8
46 -	High Bay 8L T5HO.xls	2,274.0	9,519.4	18,499.0	34,034.0	44,773.6	52,432.0	64,378.9	81,529.0	89,336.4	96,654.5	108,764.6	126,232.1	131,383.0	131,375.8	131,378.4
47 -	High Bay Fluorescent 4LF32T8.xls	35.7	149.3	290.1	533.7	702.2	822.3	1,009.6	1,278.6	1,401.0	1,515.8	1,705.7	1,979.6	2,060.4	2,060.3	2,060.4
48 -	High Bay Fluorescent 6LF32T8.xls	222.7	932.4	1,811.9	3,333.6	4,385.5	5,135.6	6,305.8	7,985.6	8,750.3	9,467.1	10,653.3	12,364.2	12,868.7	12,868.0	12,868.2
49 -	High Bay Fluorescent 8LF32T8.xls	150.4	629.8	1,223.8	2,251.5	2,962.0	3,468.6	4,259.0	5,393.5	5,910.0	6,394.1	7,195.3	8,350.8	8,691.6	8,691.1	8,691.3
50 -	High Efficiency Pumps HP 5.xls	0.3	1.3	2.6	4.8	6.3	7.3	9.0	11.4	12.5	13.5	15.2	17.7	18.4	18.4	18.4
51 -	Holding Cabinet Full Size Insulated.xls	15.3	64.1	124.5	229.1	301.4	352.9	433.3	548.7	601.3	650.5	732.1	849.6	884.3	884.2	884.3
52 -	Holding Cabinet Half Size Insulated.xls	5.2	21.7	42.2	77.6	102.1	119.5	146.8	185.9	203.7	220.4	248.0	287.8	299.5	299.5	299.5
53 -	Holding Cabinet Three Quarter Size Insulated.xls	8.2	34.4	66.8	122.9	161.7	189.3	232.5	294.4	322.6	349.0	392.8	455.9	474.5	474.4	474.4
54 -	HP 65,000 - 135,000.xls	0.3	1.1	2.0	3.8	4.9	5.8	7.1	9.0	9.9	10.7	12.0	13.9	14.5	14.5	14.5
55 -	HP 135,000 - 240,000.xls	0.5	2.2	4.3	8.0	10.5	12.3	15.1	19.1	21.0	22.7	25.5	29.6	30.8	30.8	30.8
56 -	HP greater than 240,000.xls	1.2	5.2	10.1	18.5	24.3	28.5	35.0	44.3	48.6	52.6	59.1	68.6	71.4	71.4	71.4
57 -	HP less than 65,000 1 Ph.xls	4.1	17.1	33.3	61.2	80.5	94.3	115.8	146.6	160.7	173.8	195.6	227.0	236.3	236.3	236.3
58 -	HP less than 65,000 3 Ph.xls	0.1	0.3	0.6	1.0	1.4	1.6	2.0	2.5	2.7	3.0	3.3	3.9	4.0	4.0	4.0
59 -	HP Water Heater 500 gal_day.xls	135.6	567.5	1,102.8	2,029.0	2,669.2	3,125.8	3,838.0	4,860.4	5,325.9	5,762.2	6,484.1	7,525.4	7,832.5	7,832.1	7,832.2
60 -	HP Water Heater 1000 gal_day.xls	91.1	381.5	741.5	1,364.1	1,794.6	2,101.5	2,580.4	3,267.8	3,580.7	3,874.0	4,359.4	5,059.5	5,266.0	5,265.7	5,265.8
61 -	HP Water Heater 1500 gal_day.xls	137.1	573.9	1,115.3	2,051.9	2,699.4	3,161.1	3,881.4	4,915.4	5,386.1	5,827.3	6,557.4	7,610.6	7,921.1	7,920.7	7,920.8
62 -	Icemaker, (100 to 500 lbs_day).xls	4.8	20.1	39.0	71.7	94.3	110.5	135.7	171.8	188.3	203.7	229.2	266.0	276.9	276.8	276.8
63 -	Icemaker, (500 to 1000 lbs_day).xls	7.8	32.7	63.6	117.0	153.9	180.2	221.3	280.2	307.1	332.2	373.8	433.9	451.6	451.6	451.6
64 -	Icemaker, (Greater Than 1000 lbs_day).xls	17.5	73.4	142.7	262.5	345.3	404.4	496.5	628.8	689.0	745.5	838.9	973.6	1,013.3	1,013.3	1,013.3
65 -	LED Auto Traffic Signals.xls	101.8	426.1	828.0	1,523.4	2,004.1	2,346.9	2,881.7	3,649.4	3,998.8	4,326.4	4,868.5	5,650.3	5,880.9	5,880.6	5,880.7
66 -	LED Exit Signs Electronic Fixtures (Retrofit Only).xls	137.6	575.9	1,119.1	2,059.0	2,708.7	3,172.0	3,894.7	4,932.3	5,404.6	5,847.3	6,579.9	7,636.7	7,948.3	7,947.8	7,948.0
67 -	LED Pedestrian Signals.xls	27.8	116.4	226.2	416.2	547.6	641.3	787.4	997.1	1,092.6	1,182.1	1,330.2	1,543.8	1,606.8	1,606.8	1,606.8
68 -	Light Tube.xls	2.7	11.2	21.8	40.1	52.7	61.7	75.8	95.9	105.1	113.8	128.0	148.6	154.6	154.6	154.6
69 -	Motors 1-5 HP - Incentives per participant.xls	0.2	0.6	1.2	2.3	3.0	3.5	4.3	5.5	6.0	6.5	7.3	8.5	8.8	8.8	8.8
70 -	Motors 25-100 HP - Incentives per participant.xls	0.7	3.0	5.8	10.7	14.0	16.4	20.2	25.6	28.0	30.3	34.1	39.6	41.2	41.2	41.2
71 -	Night covers for displays.xls	0.6	2.7	5.3	9.7	12.8	15.0	18.4	23.3	25.5	27.6	31.1	36.1	37.5	37.5	37.5

	MWH	BASE CASE														
	Year	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
72 -	Occupancy Sensors over 500 Watts.xls	12.5	52.2	101.4	186.5	245.3	287.3	352.7	446.7	489.5	529.6	595.9	691.6	719.9	719.8	719.8
73 -	Occupancy Sensors under 500 Watts .xls	57.9	242.3	470.9	866.3	1,139.7	1,334.7	1,638.8	2,075.4	2,274.1	2,460.4	2,768.6	3,213.3	3,344.4	3,344.2	3,344.3
74 -	Packaged Terminal AC.xls	2.0	8.5	16.5	30.4	40.0	46.8	57.5	72.8	79.8	86.3	97.1	112.7	117.3	117.3	117.3
75 -	Pellet Dryer Tanks & Ducts 3in dia.xls	0.1	0.3	0.5	1.0	1.3	1.5	1.9	2.4	2.6	2.8	3.2	3.7	3.8	3.8	3.8
76 -	Pellet Dryer Tanks & Ducts 5in dia.xls	0.1	0.5	1.0	1.8	2.3	2.7	3.4	4.2	4.6	5.0	5.7	6.6	6.8	6.8	6.8
77 -	Pellet Dryer Tanks & Ducts 8in dia.xls	0.2	0.9	1.7	3.1	4.0	4.7	5.8	7.4	8.1	8.7	9.8	11.4	11.9	11.9	11.9
78 -	*Plug Load Occupancy Sensors Document Stations.xls*	20.1	84.1	163.3	300.5	395.4	463.0	568.5	719.9	788.9	853.5	960.4	1,114.6	1,160.1	1,160.1	1,160.1
79 -	Pulse Start Metal Halide (retrofit only).xls	24.9	104.1	202.3	372.1	489.5	573.3	703.9	891.4	976.8	1,056.8	1,189.2	1,380.2	1,436.5	1,436.4	1,436.4
80 -	Pumps HP 7l5.xls	0.5	2.0	3.9	7.1	9.4	11.0	13.5	17.1	18.8	20.3	22.8	26.5	27.6	27.6	27.6
81 -	Pumps HP 10.xls	0.3	1.3	2.6	4.8	6.3	7.3	9.0	11.4	12.5	13.5	15.2	17.7	18.4	18.4	18.4
82 -	Pumps HP 15.xls	0.5	2.0	3.9	7.1	9.4	11.0	13.5	17.1	18.8	20.3	22.8	26.5	27.6	27.6	27.6
83 -	Pumps HP 20.xls	0.6	2.7	5.2	9.5	12.5	14.7	18.0	22.8	25.0	27.0	30.4	35.3	36.8	36.8	36.8
84 -	Setback_Programmable Thermostat.xls	174.4	730.0	1,418.6	2,609.9	3,433.5	4,020.7	4,936.9	6,252.1	6,850.8	7,411.9	8,340.6	9,680.1	10,075.1	10,074.5	10,074.8
85 -	Solid Door Reach-In Freezer, (19 to 60 cu ft).xls	1.5	6.2	12.0	22.0	29.0	33.9	41.7	52.8	57.8	62.6	70.4	81.7	85.0	85.0	85.0
86 -	Solid Door Reach-In Freezer, (Greater Than 60cu ft).xls	1.4	5.9	11.4	21.0	27.6	32.3	39.7	50.3	55.1	59.6	67.1	77.9	81.0	81.0	81.0
87 -	Solid Door Reach-In Freezer, (Less Than19 cu ft).xls	1.5	6.3	12.3	22.6	29.7	34.7	42.7	54.0	59.2	64.0	72.1	83.6	87.1	87.1	87.1
88 -	Solid Door Reach-In Refrig, (19 to 60 cu ft).xls	3.1	13.0	25.2	46.4	61.1	71.5	87.8	111.2	121.8	131.8	148.3	172.1	179.1	179.1	179.1
89 -	Solid Door Reach-In Refrig, (Greater Than 60cu ft).xls	3.9	16.5	32.1	59.1	77.7	91.0	111.7	141.5	155.0	167.7	188.8	219.1	228.0	228.0	228.0
90 -	Solid Door Reach-In Refrig, (Less Than 19 cu ft).xls	2.6	11.0	21.3	39.3	51.7	60.5	74.3	94.1	103.1	111.5	125.5	145.7	151.6	151.6	151.6
91 -	Steamer.xls	98.0	410.3	797.4	1,467.0	1,930.0	2,260.1	2,775.1	3,514.3	3,850.9	4,166.3	4,688.3	5,441.3	5,663.3	5,663.0	5,663.1
92 -	T-8 2ft 1 lamp.xls	0.9	3.6	7.1	13.0	17.1	20.0	24.6	31.2	34.1	36.9	41.6	48.2	50.2	50.2	50.2
93 -	T-8 2ft 2 lamp.xls	4.3	18.0	35.1	64.5	84.8	99.4	122.0	154.5	169.3	183.2	206.1	239.2	249.0	248.9	248.9
94 -	T-8 2ft 3 lamp.xls	4.2	17.7	34.5	63.4	83.4	97.7	120.0	152.0	166.5	180.1	202.7	235.3	244.9	244.9	244.9
95 -	T-8 2ft 4 lamp.xls	139.7	584.6	1,136.0	2,090.1	2,749.6	3,219.9	3,953.6	5,006.8	5,486.2	5,935.7	6,679.4	7,752.1	8,068.4	8,067.9	8,068.1
96 -	T-8 3ft 1 lamp.xls	1.2	4.9	9.6	17.7	23.3	27.2	33.4	42.4	46.4	50.2	56.5	65.6	68.3	68.3	68.3
97 -	T-8 3ft 2 lamp.xls	2.2	9.0	17.5	32.2	42.4	49.7	61.0	77.2	84.6	91.6	103.0	119.6	124.5	124.5	124.5
98 -	T-8 3ft 3 lamp.xls	1.3	5.4	10.5	19.2	25.3	29.6	36.4	46.1	50.5	54.6	61.5	71.4	74.3	74.3	74.3
99 -	T-8 3ft 4 lamp.xls	84.8	354.8	689.6	1,268.6	1,669.0	1,954.4	2,399.8	3,039.0	3,330.1	3,602.8	4,054.3	4,705.4	4,897.4	4,897.1	4,897.2
100 -	T-8 4ft 1 lamp.xls	12.0	50.0	97.2	178.9	235.3	275.6	338.4	428.5	469.5	508.0	571.7	663.5	690.5	690.5	690.5
101 -	T-8 4ft 2 lamp.xls	36.1	151.3	293.9	540.8	711.4	833.1	1,022.9	1,295.4	1,419.4	1,535.7	1,728.1	2,005.7	2,087.5	2,087.4	2,087.4
102 -	T-8 4ft 3 lamp.xls	13.6	57.0	110.8	203.8	268.1	314.0	385.6	488.3	535.0	578.9	651.4	756.0	786.9	786.8	786.8
103 -	T-8 4ft 4 lamp.xls	813.1	3,403.6	6,614.1	12,168.6	16,008.4	18,746.6	23,018.1	29,150.0	31,941.4	34,558.0	38,887.8	45,133.2	46,974.8	46,972.2	46,973.2
104 -	T-8 8ft 1 lamp.xls	2.4	9.9	19.2	35.4	46.5	54.5	66.9	84.7	92.8	100.4	113.0	131.2	136.5	136.5	136.5
105 -	T-8 8ft 2 lamp.xls	12.7	53.2	103.4	190.3	250.3	293.2	360.0	455.9	499.5	540.4	608.1	705.8	734.6	734.6	734.6
106 -	T-8 HO 8 ft 1 Lamp.xls	1.1	4.5	8.7	16.0	21.1	24.7	30.3	38.4	42.0	45.5	51.2	59.4	61.8	61.8	61.8
107 -	T-8 HO 8 ft 2 Lamp.xls	10.6	44.5	86.5	159.1	209.3	245.1	301.0	381.1	417.6	451.9	508.5	590.1	614.2	614.2	614.2
108 -	Thermal Storage lrg C&I.xls	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
109 -	Variable Frequency Drive Pumps HP 5.xls	7.7	32.2	62.5	115.1	151.4	177.3	217.6	275.6	302.0	326.8	367.7	426.8	444.2	444.1	444.2
110 -	Vending Equipment Controller.xls	39.2	163.9	318.6	586.1	771.1	903.0	1,108.8	1,404.1	1,538.6	1,664.6	1,873.2	2,174.0	2,262.7	2,262.6	2,262.7
111 -	VFD HP 1l5.xls	2.3	9.7	18.8	34.5	45.4	53.2	65.3	82.7	90.6	98.0	110.3	128.0	133.3	133.2	133.2
112 -	VFD HP 2.xls	3.1	12.9	25.0	46.0	60.5	70.9	87.1	110.3	120.8	130.7	147.1	170.7	177.7	177.7	177.7
113 -	VFD HP 3.xls	4.6	19.3	37.5	69.0	90.8	106.4	130.6	165.4	181.2	196.1	220.6	256.1	266.5	266.5	266.5
114 -	VFD HP 7l5.xls	11.5	48.3	93.8	172.6	227.1	265.9	326.5	413.4	453.0	490.1	551.6	640.1	666.3	666.2	666.2
115 -	VFD HP 10.xls	19.2	80.5	156.3	287.6	378.4	443.1	544.1	689.1	755.1	816.9	919.3	1,066.9	1,110.4	1,110.4	1,110.4
116 -	VFD HP 15.xls	28.8	120.7	234.5	431.5	567.6	664.7	816.2	1,033.6	1,132.6	1,225.4	1,378.9	1,600.3	1,665.6	1,665.5	1,665.6
117 -	VFD HP 20.xls	38.4	160.9	312.7	575.3	756.8	886.3	1,088.2	1,378.1	1,510.1	1,633.8	1,838.5	2,133.8	2,220.8	2,220.7	2,220.8

	MWH	BASE CASE														
	Year	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
118 -	VFD HP 25.xls	14.1	58.8	114.3	210.4	276.8	324.1	397.9	504.0	552.2	597.5	672.3	780.3	812.1	812.1	812.1
119 -	VFD HP 30.xls	16.9	70.6	137.2	252.5	332.1	388.9	477.5	604.8	662.7	716.9	806.8	936.3	974.6	974.5	974.5
120 -	VFD HP 40.xls	22.5	94.1	183.0	336.6	442.8	518.6	636.7	806.3	883.6	955.9	1,075.7	1,248.5	1,299.4	1,299.3	1,299.4
121 -	VFD HP 50.xls	28.1	117.7	228.7	420.8	553.5	648.2	795.9	1,007.9	1,104.4	1,194.9	1,344.6	1,560.6	1,624.3	1,624.2	1,624.2
122 -	Window Film.xls	10.0	41.7	81.1	149.2	196.2	229.8	282.2	357.3	391.6	423.6	476.7	553.3	575.8	575.8	575.8
123 -	Zone Shutoff Valves -COMPRESSED AIR.xls	23.8	99.6	193.5	356.0	468.4	548.5	673.5	852.9	934.6	1,011.2	1,137.8	1,320.6	1,374.5	1,374.4	1,374.4
	Total	13,971.6	58,487.0	113,657.2	209,104.0	275,088.1	322,140.8	395,542.1	500,912.4	548,880.6	593,843.0	668,247.1	775,566.9	807,214.1	807,169.6	807,185.8

	MWH										
	Year	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
	Residential	3,017,662	3,009,337	3,009,263	3,009,326	3,017,663	3,009,254	3,009,257	3,009,337	3,017,641	3,009,414
	Non-residential	809,197	807,189	807,306	807,214	809,192	807,179	807,298	807,189	809,167	807,170
	Total	3,826,859	3,816,525	3,816,569	3,816,540	3,826,855	3,816,433	3,816,554	3,816,525	3,826,808	3,816,584
	Residential										
1 -	Agency Kit and CFLs.xls	486,070	484,729	484,717	484,728	486,070	484,716	484,716	484,729	486,067	484,742
2 -	Home Energy House Call - KIT.xls	113,112	112,800	112,798	112,800	113,112	112,797	112,797	112,800	113,112	112,803
3 -	K-12 Education Program- CFL Distribution.xls	739,672	737,632	737,614	737,629	739,672	737,611	737,612	737,632	739,667	737,651
4 -	K-12 Education Program- Curriculum.xls	576,833	575,242	575,228	575,240	576,833	575,226	575,226	575,242	576,829	575,257
5 -	Low Income Weatherization- Refrigerator Replacement.xls	9,868	9,841	9,841	9,841	9,868	9,841	9,841	9,841	9,868	9,841
6 -	Low Income Weatherization- Tier 1.xls	4,459	4,447	4,447	4,447	4,459	4,447	4,447	4,447	4,459	4,447
7 -	Low Income Weatherization- Tier 2.xls	35,674	35,576	35,575	35,576	35,674	35,575	35,575	35,576	35,674	35,577
8 -	Multi-Family Assessments- KIT ONLY.xls	3,399	3,390	3,390	3,390	3,399	3,390	3,390	3,390	3,399	3,390
9 -	Online Audit w_EE kit.xls	49,225	49,089	49,088	49,089	49,225	49,088	49,088	49,089	49,225	49,091
10 -	Personalized Energy Report.xls	410,210	409,078	409,068	409,077	410,210	409,067	409,067	409,078	410,207	409,089
11 -	Smart Saver - CAC.xls	68,790	68,600	68,598	68,600	68,790	68,598	68,598	68,600	68,789	68,602
12 -	Smart Saver - Heat Pump.xls	30,521	30,436	30,436	30,436	30,521	30,435	30,436	30,436	30,520	30,437
13 -	Smart Saver - Res CFL Promo.xls	489,827	488,476	488,464	488,474	489,828	488,463	488,463	488,476	489,824	488,489
	Total	**3,017,662**	**3,009,337**	**3,009,263**	**3,009,326**	**3,017,663**	**3,009,254**	**3,009,257**	**3,009,337**	**3,017,641**	**3,009,414**
	Non Residential										
1 -	1 Lamp T-5 HO with Elec Ballast replacing T-12.xls	37.0	36.9	36.9	36.9	37.0	36.9	36.9	36.9	37.0	36.9
2 -	1 Lamp T-5 with Elec Ballast replacing T-12.xls	14.9	14.9	14.9	14.9	14.9	14.9	14.9	14.9	14.9	14.9
3 -	2 Lamp T-5 replacing T-12.xls	14.9	14.9	14.9	14.9	14.9	14.9	14.9	14.9	14.9	14.9
4 -	2 Lamp T-5HO replacing T-12.xls	140.0	139.7	139.7	139.7	140.0	139.7	139.7	139.7	140.0	139.7
5 -	3 Lamp T-5 replacing T-12.xls	33.4	33.3	33.3	33.3	33.4	33.3	33.3	33.3	33.4	33.3
6 -	3 Lamp T-5HO replacing T-12.xls	62.0	61.8	61.8	61.8	62.0	61.8	61.8	61.8	62.0	61.8
7 -	4 Lamp T-5 replacing T-12.xls	293.7	293.0	293.1	293.0	293.7	293.0	293.1	293.0	293.7	293.0
8 -	4 Lamp T-5HO replacing T-12.xls	724.7	722.9	723.0	722.9	724.7	722.9	723.0	722.9	724.7	722.9
9 -	42W 8 Lamp HI Bay CFL.xls	61.8	61.7	61.7	61.7	61.8	61.7	61.7	61.7	61.8	61.7
10 -	80Plus NC_Desktop Unit.xls	19,538.8	19,490.3	19,493.1	19,490.9	19,538.6	19,490.0	19,492.9	19,490.3	19,538.0	19,489.8
11 -	80Plus NC_Server Unit.xls	1,383.7	1,380.3	1,380.5	1,380.4	1,383.7	1,380.3	1,380.5	1,380.3	1,383.7	1,380.3
12 -	AC 65,000 - 135,000.xls	1,266.0	1,262.9	1,263.1	1,262.9	1,266.0	1,262.9	1,263.1	1,262.9	1,266.0	1,262.9
13 -	AC 135,000 - 240,000.xls	6,072.1	6,057.0	6,057.9	6,057.2	6,072.0	6,056.9	6,057.8	6,057.0	6,071.8	6,056.8
14 -	AC 240,000 - 760,000.xls	865.2	863.1	863.2	863.1	865.2	863.1	863.2	863.1	865.2	863.1
15 -	AC greater than 760,000.xls	126.1	125.8	125.8	125.8	126.1	125.8	125.8	125.8	126.1	125.8
16 -	AC less than 65,000 1 Ph Rooftop & Unitary.xls	488.3	487.1	487.1	487.1	488.3	487.1	487.1	487.1	488.3	487.0
17 -	AC less than 65,000 3 Ph.xls	352.0	351.2	351.2	351.2	352.0	351.2	351.2	351.2	352.0	351.1
18 -	Barrel Wraps (Inj Mold & Extruders).xls	2,253.0	2,247.4	2,247.7	2,247.5	2,253.0	2,247.4	2,247.7	2,247.4	2,252.9	2,247.4
19 -	CFL Fixture.xls	7,394.8	7,376.5	7,377.6	7,376.7	7,394.8	7,376.4	7,377.5	7,376.5	7,394.6	7,376.3
20 -	CFL Screw In.xls	74,255.9	74,071.6	74,082.3	74,073.9	74,255.4	74,070.7	74,081.6	74,071.6	74,253.1	74,069.8
21 -	Chilled Air EE Cooled Chillers.xls	11,636.9	11,608.1	11,609.7	11,608.4	11,636.9	11,607.9	11,609.6	11,608.1	11,636.5	11,607.8
22 -	Chilled Water EE Cooled Chillers 150 - 300 ton.xls	18,681.8	18,635.4	18,638.1	18,636.0	18,681.7	18,635.2	18,638.0	18,635.4	18,681.1	18,635.0
23 -	Chilled Water EE Cooled Chillers greater than 300 ton.xls	37,694.1	37,600.5	37,606.0	37,601.7	37,693.8	37,600.1	37,605.6	37,600.5	37,692.7	37,599.6
24 -	Chilled Water EE Cooled Chillers less than150 ton.xls	1,075.9	1,073.2	1,073.4	1,073.2	1,075.9	1,073.2	1,073.3	1,073.2	1,075.8	1,073.2
25 -	Chilled Water Reset Air Cooled 300-400 tons.xls	72.9	72.7	72.7	72.7	72.9	72.7	72.7	72.7	72.9	72.7

	MWH										
	Year	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
26 -	Chilled Water Reset Air Cooled 400-500 tons.xls	93.7	93.5	93.5	93.5	93.7	93.5	93.5	93.5	93.7	93.5
27 -	Chilled Water Reset Water Cooled 0-1000 tons.xls	480.7	479.5	479.6	479.5	480.7	479.5	479.5	479.5	480.7	479.5
28 -	Chilled Water Reset Water Cooled 1000-2000 tons.xls	144.2	143.8	143.9	143.8	144.2	143.8	143.9	143.8	144.2	143.8
29 -	Chilled Water Reset Water Cooled 2000-3000 tons.xls	240.3	239.7	239.8	239.7	240.3	239.7	239.8	239.7	240.3	239.7
30 -	Combi Oven, (90 lbs_hr).xls	2,476.7	2,470.6	2,470.9	2,470.6	2,476.7	2,470.5	2,470.9	2,470.6	2,476.6	2,470.5
31 -	Commercial Clothes Washers - Electric Dryer & Washer.xls	4,597.0	4,585.6	4,586.2	4,585.7	4,597.0	4,585.5	4,586.2	4,585.6	4,596.8	4,585.5
32 -	Commercial Clothes Washers - Washer Only.xls	1,935.6	1,930.8	1,931.0	1,930.8	1,935.6	1,930.7	1,931.0	1,930.8	1,935.5	1,930.7
33 -	Convection Oven.xls	988.3	985.8	986.0	985.9	988.3	985.8	986.0	985.8	988.2	985.8
34 -	Custom Rebate.xls	222,041.9	221,490.8	221,522.9	221,497.8	222,040.5	221,488.2	221,520.7	221,490.8	222,033.6	221,485.6
35 -	Engineered Nozzles - COMPRESS AIR.xls	13,818.1	13,783.8	13,785.8	13,784.2	13,818.0	13,783.6	13,785.7	13,783.8	13,817.6	13,783.5
36 -	ES Sleeve AC over 14,000 Btu hr.xls	90.4	90.2	90.2	90.2	90.4	90.2	90.2	90.2	90.4	90.2
37 -	ES Sleeve AC under 14,000 Btu hr.xls	40.7	40.6	40.6	40.6	40.7	40.6	40.6	40.6	40.7	40.6
38 -	ES Window AC over 14,000 Btu hr.xls	205.2	204.7	204.8	204.7	205.2	204.7	204.7	204.7	205.2	204.7
39 -	ES Window AC under 14,000 Btu hr.xls	94.1	93.9	93.9	93.9	94.1	93.9	93.9	93.9	94.1	93.9
40 -	Fryer.xls	495.0	493.7	493.8	493.7	494.9	493.7	493.8	493.7	494.9	493.7
41 -	Griddles.xls	825.0	823.0	823.1	823.0	825.0	822.9	823.1	823.0	825.0	822.9
42 -	Head Pressure Control.xls	14,972.7	14,935.5	14,937.7	14,936.0	14,972.6	14,935.3	14,937.5	14,935.5	14,972.1	14,935.2
43 -	High Bay 2L T5HO.xls	3,072.8	3,065.1	3,065.6	3,065.2	3,072.7	3,065.1	3,065.5	3,065.1	3,072.6	3,065.1
44 -	High Bay 4L T5HO.xls	44,334.3	44,224.3	44,230.7	44,225.7	44,334.0	44,223.8	44,230.3	44,224.3	44,332.7	44,223.2
45 -	High Bay 6L T5HO.xls	12,562.0	12,530.9	12,532.7	12,531.3	12,562.0	12,530.7	12,532.5	12,530.9	12,561.6	12,530.6
46 -	High Bay 8L T5HO.xls	131,705.8	131,378.9	131,397.9	131,383.0	131,704.9	131,377.3	131,396.6	131,378.9	131,700.9	131,375.8
47 -	High Bay Fluorescent 4LF32T8.xls	2,065.5	2,060.4	2,060.7	2,060.4	2,065.5	2,060.3	2,060.6	2,060.4	2,065.4	2,060.3
48 -	High Bay Fluorescent 6LF32T8.xls	12,900.3	12,868.3	12,870.1	12,868.7	12,900.2	12,868.1	12,870.0	12,868.3	12,899.8	12,868.0
49 -	High Bay Fluorescent 8LF32T8.xls	8,713.0	8,691.3	8,692.6	8,691.6	8,712.9	8,691.2	8,692.5	8,691.3	8,712.6	8,691.1
50 -	High Efficiency Pumps HP 5.xls	18.4	18.4	18.4	18.4	18.4	18.4	18.4	18.4	18.4	18.4
51 -	Holding Cabinet Full Size Insulated.xls	886.5	884.3	884.4	884.3	886.5	884.3	884.4	884.3	886.4	884.2
52 -	Holding Cabinet Half Size Insulated.xls	300.3	299.5	299.6	299.5	300.3	299.5	299.6	299.5	300.3	299.5
53 -	Holding Cabinet Three Quarter Size Insulated.xls	475.6	474.4	474.5	474.5	475.6	474.4	474.5	474.4	475.6	474.4
54 -	HP 65,000 - 135,000.xls	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5
55 -	HP 135,000 - 240,000.xls	30.9	30.8	30.8	30.8	30.9	30.8	30.8	30.8	30.9	30.8
56 -	HP greater than 240,000.xls	71.6	71.4	71.5	71.4	71.6	71.4	71.4	71.4	71.6	71.4
57 -	HP less than 65,000 1 Ph.xls	236.9	236.3	236.3	236.3	236.9	236.3	236.3	236.3	236.9	236.3
58 -	HP less than 65,000 3 Ph.xls	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
59 -	HP Water Heater 500 gal_day.xls	7,851.8	7,832.3	7,833.4	7,832.5	7,851.7	7,832.2	7,833.3	7,832.3	7,851.5	7,832.1
60 -	HP Water Heater 1000 gal_day.xls	5,278.9	5,265.8	5,266.6	5,266.0	5,278.9	5,265.7	5,266.5	5,265.8	5,278.7	5,265.7
61 -	HP Water Heater 1500 gal_day.xls	7,940.6	7,920.9	7,922.0	7,921.1	7,940.5	7,920.8	7,921.9	7,920.9	7,940.3	7,920.7
62 -	Icemaker, (100 to 500 lbs_day).xls	277.5	276.9	276.9	276.9	277.5	276.8	276.9	276.9	277.5	276.8
63 -	Icemaker, (500 to 1000 lbs_day).xls	452.7	451.6	451.6	451.6	452.7	451.6	451.6	451.6	452.7	451.6
64 -	Icemaker, (Greater Than 1000 lbs_day).xls	1,015.8	1,013.3	1,013.5	1,013.3	1,015.8	1,013.3	1,013.4	1,013.3	1,015.8	1,013.3
65 -	LED Auto Traffic Signals.xls	5,895.3	5,880.7	5,881.6	5,880.9	5,895.3	5,880.6	5,881.5	5,880.7	5,895.1	5,880.6
66 -	LED Exit Signs Electronic Fixtures (Retrofit Only).xls	7,967.8	7,948.0	7,949.2	7,948.3	7,967.8	7,947.9	7,949.1	7,948.0	7,967.5	7,947.8
67 -	LED Pedestrian Signals.xls	1,610.8	1,606.8	1,607.0	1,606.8	1,610.8	1,606.8	1,607.0	1,606.8	1,610.7	1,606.8
68 -	Light Tube.xls	155.0	154.6	154.6	154.6	155.0	154.6	154.6	154.6	155.0	154.6
69 -	Motors 1-5 HP - Incentives per participant.xls	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8
70 -	Motors 25-100 HP - Incentives per participant.xls	41.3	41.2	41.2	41.2	41.3	41.2	41.2	41.2	41.3	41.2
71 -	Night covers for displays.xls	37.6	37.5	37.5	37.5	37.6	37.5	37.5	37.5	37.6	37.5

	MWH										
	Year	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
72 -	Occupancy Sensors over 500 Watts.xls	721.6	719.8	719.9	719.9	721.6	719.8	719.9	719.8	721.6	719.8
73 -	Occupancy Sensors under 500 Watts .xls	3,352.6	3,344.3	3,344.8	3,344.4	3,352.6	3,344.3	3,344.8	3,344.3	3,352.5	3,344.2
74 -	Packaged Terminal AC.xls	117.6	117.3	117.3	117.3	117.6	117.3	117.3	117.3	117.6	117.3
75 -	Pellet Dryer Tanks & Ducts 3in dia.xls	3.9	3.8	3.8	3.8	3.9	3.8	3.8	3.8	3.9	3.8
76 -	Pellet Dryer Tanks & Ducts 5in dia.xls	6.9	6.8	6.8	6.8	6.9	6.8	6.8	6.8	6.9	6.8
77 -	Pellet Dryer Tanks & Ducts 8in dia.xls	11.9	11.9	11.9	11.9	11.9	11.9	11.9	11.9	11.9	11.9
78 -	Plug Load Occupancy Sensors Document Stations.xls	1,163.0	1,160.1	1,160.3	1,160.1	1,163.0	1,160.1	1,160.3	1,160.1	1,162.9	1,160.1
79 -	Pulse Start Metal Halide (retrofit only).xls	1,440.0	1,436.4	1,436.7	1,436.5	1,440.0	1,436.4	1,436.6	1,436.4	1,440.0	1,436.4
80 -	Pumps HP 7l5.xls	27.6	27.6	27.6	27.6	27.6	27.6	27.6	27.6	27.6	27.6
81 -	Pumps HP 10.xls	18.4	18.4	18.4	18.4	18.4	18.4	18.4	18.4	18.4	18.4
82 -	Pumps HP 15.xls	27.6	27.6	27.6	27.6	27.6	27.6	27.6	27.6	27.6	27.6
83 -	Pumps HP 20.xls	36.9	36.8	36.8	36.8	36.9	36.8	36.8	36.8	36.9	36.8
84 -	Setback_Programmable Thermostat.xls	10,099.9	10,074.8	10,076.2	10,075.1	10,099.8	10,074.7	10,076.1	10,074.8	10,099.5	10,074.5
85 -	Solid Door Reach-in Freezer, (19 to 60 cu ft).xls	85.3	85.0	85.1	85.0	85.3	85.0	85.1	85.0	85.3	85.0
86 -	Solid Door Reach-in Freezer, (Greater Than 60cu ft).xls	81.2	81.0	81.0	81.0	81.2	81.0	81.0	81.0	81.2	81.0
87 -	Solid Door Reach-in Freezer, (Less Than19 cu ft).xls	87.3	87.1	87.1	87.1	87.3	87.1	87.1	87.1	87.3	87.1
88 -	Solid Door Reach-in Refrig, (19 to 60 cu ft).xls	179.6	179.1	179.2	179.1	179.6	179.1	179.2	179.1	179.6	179.1
89 -	Solid Door Reach-in Refrig, (Greater Than 60cu ft).xls	228.6	228.0	228.0	228.0	228.6	228.0	228.0	228.0	228.6	228.0
90 -	Solid Door Reach-in Refrig, (Less Than 19 cu ft).xls	152.0	151.6	151.6	151.6	152.0	151.6	151.6	151.6	152.0	151.6
91 -	Steamer.xls	5,677.2	5,663.1	5,664.0	5,663.3	5,677.2	5,663.1	5,663.9	5,663.1	5,677.0	5,663.0
92 -	T-8 2ft 1 lamp.xls	50.3	50.2	50.2	50.2	50.3	50.2	50.2	50.2	50.3	50.2
93 -	T-8 2ft 2 lamp.xls	249.6	249.0	249.0	249.0	249.6	248.9	249.0	249.0	249.6	248.9
94 -	T-8 2ft 3 lamp.xls	245.5	244.9	244.9	244.9	245.5	244.9	244.9	244.9	245.5	244.9
95 -	T-8 2ft 4 lamp.xls	8,088.2	8,068.1	8,069.3	8,068.4	8,088.1	8,068.0	8,069.2	8,068.1	8,087.9	8,067.9
96 -	T-8 3ft 1 lamp.xls	68.4	68.3	68.3	68.3	68.4	68.3	68.3	68.3	68.4	68.3
97 -	T-8 3ft 2 lamp.xls	124.8	124.5	124.5	124.5	124.8	124.5	124.5	124.5	124.8	124.5
98 -	T-8 3ft 3 lamp.xls	74.5	74.3	74.3	74.3	74.5	74.3	74.3	74.3	74.5	74.3
99 -	T-8 3ft 4 lamp.xls	4,909.4	4,897.2	4,897.9	4,897.4	4,909.4	4,897.2	4,897.9	4,897.2	4,909.2	4,897.1
100 -	T-8 4ft 1 lamp.xls	692.2	690.5	690.6	690.5	692.2	690.5	690.6	690.5	692.2	690.5
101 -	T-8 4ft 2 lamp.xls	2,092.6	2,087.4	2,087.8	2,087.5	2,092.6	2,087.4	2,087.7	2,087.4	2,092.6	2,087.4
102 -	T-8 4ft 3 lamp.xls	788.8	786.8	786.9	786.9	788.8	786.8	786.9	786.8	788.8	786.8
103 -	T-8 4ft 4 lamp.xls	47,090.2	46,973.4	46,980.2	46,974.8	47,089.9	46,972.8	46,979.7	46,973.4	47,088.5	46,972.2
104 -	T-8 8ft 1 lamp.xls	136.9	136.5	136.5	136.5	136.9	136.5	136.5	136.5	136.8	136.5
105 -	T-8 8ft 2 lamp.xls	736.4	734.6	734.7	734.6	736.4	734.6	734.7	734.6	736.4	734.6
106 -	T-8 HO 8 ft 1 Lamp.xls	62.0	61.8	61.8	61.8	62.0	61.8	61.8	61.8	62.0	61.8
107 -	T-8 HO 8 ft 2 Lamp.xls	615.7	614.2	614.3	614.2	615.7	614.2	614.3	614.2	615.7	614.2
108 -	Thermal Storage lrg C&I.xls	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
109 -	Variable Frequency Drive Pumps HP 5.xls	445.3	444.2	444.2	444.2	445.3	444.1	444.2	444.2	445.2	444.1
110 -	Vending Equipment Controller.xls	2,268.3	2,262.7	2,263.0	2,262.7	2,268.3	2,262.6	2,263.0	2,262.7	2,268.2	2,262.6
111 -	VFD HP 1l5.xls	133.6	133.2	133.3	133.3	133.6	133.2	133.3	133.2	133.6	133.2
112 -	VFD HP 2.xls	178.1	177.7	177.7	177.7	178.1	177.7	177.7	177.7	178.1	177.7
113 -	VFD HP 3.xls	267.2	266.5	266.5	266.5	267.2	266.5	266.5	266.5	267.1	266.5
114 -	VFD HP 7l5.xls	667.9	666.2	666.3	666.3	667.9	666.2	666.3	666.2	667.9	666.2
115 -	VFD HP 10.xls	1,113.1	1,110.4	1,110.5	1,110.4	1,113.1	1,110.4	1,110.5	1,110.4	1,113.1	1,110.4
116 -	VFD HP 15.xls	1,669.7	1,665.6	1,665.8	1,665.6	1,669.7	1,665.6	1,665.8	1,665.6	1,669.7	1,665.5
117 -	VFD HP 20.xls	2,226.3	2,220.8	2,221.1	2,220.8	2,226.3	2,220.7	2,221.1	2,220.8	2,226.2	2,220.7

	MWH										
	Year	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
118 -	VFD HP 25.xls	814.1	812.1	812.2	812.1	814.1	812.1	812.2	812.1	814.1	812.1
119 -	VFD HP 30.xls	976.9	974.5	974.7	974.6	976.9	974.5	974.7	974.5	976.9	974.5
120 -	VFD HP 40.xls	1,302.6	1,299.4	1,299.5	1,299.4	1,302.6	1,299.3	1,299.5	1,299.4	1,302.5	1,299.3
121 -	VFD HP 50.xls	1,628.2	1,624.2	1,624.4	1,624.3	1,628.2	1,624.2	1,624.4	1,624.2	1,628.2	1,624.2
122 -	Window Film.xls	577.3	575.8	575.9	575.8	577.3	575.8	575.9	575.8	577.2	575.8
123 -	Zone Shutoff Valves -COMPRESSED AIR.xls	1,377.8	1,374.4	1,374.6	1,374.5	1,377.8	1,374.4	1,374.6	1,374.4	1,377.8	1,374.4
	Total	809,197.2	807,188.6	807,305.6	807,214.1	809,191.9	807,179.1	807,297.6	807,188.6	809,166.9	807,169.6

	MW	BASE CASE															
	Year	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
	Impact hour	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17
	Total MW	9.5	38.8	72.3	125.2	163.5	193.6	235.9	292.9	336.4	365.9	394.3	451.7	483.2	483.2	483.2	483.2
	Residential	5.31	21.68	40.41	69.97	91.38	108.20	131.84	163.69	188.00	204.49	220.36	252.44	270.05	270.05	270.05	270.05
	Non-Residential	4.19	17.12	31.89	55.23	72.12	85.40	104.06	129.21	148.40	161.41	173.94	199.26	213.15	213.15	213.15	213.15
	Residential																
1 -	Agency Kit and CFLs.xls	0.97	3.97	7.39	12.79	16.71	19.79	24.11	29.93	34.38	37.39	40.30	46.16	49.38	49.38	49.38	49.38
2 -	Home Energy House Call - KIT.xls	0.46	1.88	3.51	6.08	7.94	9.40	11.45	14.22	16.33	17.76	19.14	21.92	23.45	23.45	23.45	23.45
3 -	K-12 Education Program- CFL Distribution.xls	1.48	6.03	11.24	19.47	25.43	30.11	36.69	45.55	52.32	56.90	61.32	70.25	75.14	75.14	75.14	75.14
4 -	K-12 Education Program- Curriculum.xls	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5 -	Low Income Weatherization- Refrigerator Replacement.xls	0.02	0.07	0.13	0.23	0.30	0.35	0.43	0.53	0.61	0.66	0.71	0.82	0.87	0.87	0.87	0.87
6 -	Low Income Weatherization- Tier 1.xls	0.01	0.05	0.08	0.15	0.19	0.23	0.28	0.34	0.39	0.43	0.46	0.53	0.57	0.57	0.57	0.57
7 -	Low Income Weatherization- Tier 2.xls	0.09	0.36	0.68	1.17	1.53	1.81	2.21	2.75	3.15	3.43	3.70	4.23	4.53	4.53	4.53	4.53
8 -	Multi-Family Assessments- KIT ONLY.xls	0.01	0.04	0.08	0.14	0.19	0.22	0.27	0.34	0.39	0.42	0.45	0.52	0.56	0.56	0.56	0.56
9 -	Online Audit w_EE kit.xls	0.10	0.40	0.75	1.30	1.69	2.00	2.44	3.03	3.48	3.79	4.08	4.67	5.00	5.00	5.00	5.00
10 -	Personalized Energy Report.xls	0.82	3.35	6.24	10.80	14.10	16.70	20.35	25.26	29.01	31.56	34.01	38.96	41.67	41.67	41.67	41.67
11 -	Smart Saver - CAC.xls	0.26	1.06	1.98	3.43	4.48	5.30	6.46	8.02	9.21	10.02	10.80	12.37	13.23	13.23	13.23	13.23
12 -	Smart Saver - Heat Pump.xls	0.12	0.47	0.88	1.52	1.99	2.35	2.87	3.56	4.09	4.45	4.79	5.49	5.87	5.87	5.87	5.87
13 -	Smart Saver - Res CFL Promo.xls	0.98	4.00	7.45	12.89	16.84	19.94	24.29	30.16	34.64	37.68	40.61	46.52	49.76	49.76	49.76	49.76
	Total	**5.3**	**21.7**	**40.4**	**70.0**	**91.4**	**108.2**	**131.8**	**163.7**	**188.0**	**204.5**	**220.4**	**252.4**	**270.0**	**270.0**	**270.0**	**270.0**
	Non Residential																
1 -	1 Lamp T-5 HO with Elec Ballast replacing T-12.xls	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2 -	1 Lamp T-5 with Elec Ballast replacing T-12.xls	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3 -	2 Lamp T-5 replacing T-12.xls	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4 -	2 Lamp T-5HO replacing T-12.xls	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5 -	3 Lamp T-5 replacing T-12.xls	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6 -	3 Lamp T-5HO replacing T-12.xls	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7 -	4 Lamp T-5 replacing T-12.xls	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8 -	4 Lamp T-5HO replacing T-12.xls	0.01	0.02	0.04	0.08	0.10	0.12	0.14	0.18	0.21	0.22	0.24	0.28	0.30	0.30	0.30	0.30
9 -	42W 8 Lamp Hi Bay CFL.xls	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.02
10 -	80Plus NC_Desktop Unit.xls	0.07	0.28	0.52	0.91	1.19	1.41	1.71	2.13	2.44	2.66	2.86	3.28	3.51	3.51	3.51	3.51
11 -	80Plus NC_Server Unit.xls	0.00	0.01	0.02	0.04	0.05	0.06	0.08	0.09	0.11	0.12	0.13	0.15	0.16	0.16	0.16	0.16
12 -	AC 65,000 - 135,000.xls	0.01	0.05	0.10	0.17	0.22	0.26	0.32	0.39	0.45	0.49	0.53	0.61	0.65	0.65	0.65	0.65
13 -	AC 135,000 - 240,000.xls	0.06	0.25	0.47	0.81	1.05	1.25	1.52	1.89	2.17	2.36	2.54	2.91	3.12	3.12	3.12	3.12
14 -	AC 240,000 - 760,000.xls	0.01	0.04	0.07	0.12	0.15	0.18	0.22	0.27	0.31	0.34	0.36	0.42	0.44	0.44	0.44	0.44
15 -	AC greater than 760,000.xls	0.00	0.00	0.01	0.01	0.02	0.02	0.02	0.03	0.03	0.03	0.04	0.04	0.05	0.05	0.05	0.05
16 -	AC less than 65,000 1 Ph Rooftop & Unitary.xls	0.00	0.02	0.04	0.06	0.08	0.10	0.12	0.15	0.17	0.19	0.20	0.23	0.25	0.25	0.25	0.25
17 -	AC less than 65,000 3 Ph.xls	0.00	0.01	0.03	0.05	0.06	0.07	0.09	0.11	0.13	0.14	0.15	0.17	0.18	0.18	0.18	0.18
18 -	Barrel Wraps (Inj Mold & Extruders).xls	0.01	0.04	0.08	0.14	0.18	0.22	0.26	0.33	0.38	0.41	0.44	0.51	0.54	0.54	0.54	0.54
19 -	CFL Fixture.xls	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20 -	CFL Screw In.xls	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21 -	Chilled Air EE Cooled Chillers.xls	0.12	0.48	0.89	1.55	2.02	2.39	2.92	3.62	4.16	4.52	4.88	5.59	5.97	5.97	5.97	5.97

	MW	BASE CASE															
	Year	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
22 -	Chilled Water EE Cooled Chillers 150 - 300 ton.xls	0.19	0.77	1.44	2.49	3.25	3.84	4.68	5.81	6.68	7.26	7.83	8.97	9.59	9.59	9.59	9.59
23 -	Chilled Water EE Cooled Chillers greater than 300 ton.xls	0.38	1.55	2.90	5.01	6.55	7.75	9.45	11.73	13.47	14.66	15.79	18.09	19.35	19.35	19.35	19.35
24 -	Chilled Water EE Cooled Chillers less than150 ton.xls	0.01	0.04	0.08	0.14	0.19	0.22	0.27	0.33	0.38	0.42	0.45	0.52	0.55	0.55	0.55	0.55
25 -	Chilled Water Reset Air Cooled 300-400 tons.xls	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26 -	Chilled Water Reset Air Cooled 400-500 tons.xls	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27 -	Chilled Water Reset Water Cooled 0-1000 tons.xls	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28 -	Chilled Water Reset Water Cooled 1000-2000 tons.xls	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29 -	Chilled Water Reset Water Cooled 2000-3000 tons.xls	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30 -	Combi Oven, (90 lbs_hr).xls	0.01	0.06	0.10	0.18	0.24	0.28	0.34	0.42	0.48	0.53	0.57	0.65	0.70	0.70	0.70	0.70
31 -	Commercial Clothes Washers - Electric Dryer & Washer.xls	0.03	0.10	0.19	0.33	0.43	0.51	0.62	0.77	0.89	0.97	1.04	1.19	1.28	1.28	1.28	1.28
32 -	Commercial Clothes Washers - Washer Only.xls	0.01	0.04	0.08	0.14	0.18	0.22	0.26	0.33	0.37	0.41	0.44	0.50	0.54	0.54	0.54	0.54
33 -	Convection Oven.xls	0.01	0.02	0.04	0.07	0.09	0.11	0.14	0.17	0.19	0.21	0.23	0.26	0.28	0.28	0.28	0.28
34 -	Custom Rebate.xls	0.98	3.99	7.44	12.88	16.81	19.91	24.26	30.12	34.60	37.63	40.55	46.45	49.69	49.69	49.69	49.69
35 -	Engineered Nozzles - COMPRESS AIR.xls	0.06	0.26	0.49	0.85	1.11	1.32	1.61	1.99	2.29	2.49	2.68	3.07	3.29	3.29	3.29	3.29
36 -	ES Sleeve AC over 14,000 Btu hr.xls	0.00	0.00	0.01	0.01	0.01	0.01	0.02	0.02	0.03	0.03	0.03	0.03	0.04	0.04	0.04	0.04
37 -	ES Sleeve AC under 14,000 Btu hr.xls	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.02
38 -	ES Window AC over 14,000 Btu hr.xls	0.00	0.01	0.01	0.02	0.03	0.03	0.04	0.05	0.06	0.06	0.07	0.08	0.08	0.08	0.08	0.08
39 -	ES Window AC under 14,000 Btu hr.xls	0.00	0.00	0.01	0.01	0.01	0.02	0.02	0.02	0.03	0.03	0.03	0.04	0.04	0.04	0.04	0.04
40 -	Fryer.xls	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09	0.10	0.11	0.12	0.12	0.12	0.12
41 -	Griddles.xls	0.00	0.02	0.04	0.07	0.09	0.10	0.12	0.15	0.18	0.19	0.21	0.24	0.25	0.25	0.25	0.25
42 -	Head Pressure Control.xls	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
43 -	High Bay 2L T5HO.xls	0.02	0.09	0.16	0.27	0.36	0.42	0.52	0.64	0.74	0.80	0.86	0.99	1.06	1.06	1.06	1.06
44 -	High Bay 4L T5HO.xls	0.33	1.33	2.48	4.29	5.60	6.63	8.08	10.03	11.52	12.53	13.51	15.47	16.55	16.55	16.55	16.55
45 -	High Bay 6L T5HO.xls	0.10	0.41	0.77	1.33	1.74	2.06	2.51	3.12	3.58	3.90	4.20	4.81	5.15	5.15	5.15	5.15
46 -	High Bay 8L T5HO.xls	0.83	3.39	6.31	10.93	14.28	16.91	20.60	25.58	29.38	31.95	34.43	39.44	42.19	42.19	42.19	42.19
47 -	High Bay Fluorescent 4LF32T8.xls	0.02	0.07	0.13	0.22	0.29	0.34	0.41	0.51	0.59	0.64	0.69	0.79	0.85	0.85	0.85	0.85
48 -	High Bay Fluorescent 6LF32T8.xls	0.10	0.42	0.79	1.37	1.79	2.12	2.58	3.20	3.68	4.00	4.31	4.94	5.29	5.29	5.29	5.29
49 -	High Bay Fluorescent 8LF32T8.xls	0.07	0.29	0.53	0.93	1.21	1.43	1.74	2.16	2.49	2.70	2.91	3.34	3.57	3.57	3.57	3.57
50 -	High Efficiency Pumps HP 5.xls	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
51 -	Holding Cabinet Full Size Insulated.xls	0.00	0.02	0.03	0.05	0.07	0.08	0.10	0.12	0.14	0.15	0.16	0.19	0.20	0.20	0.20	0.20
52 -	Holding Cabinet Half Size Insulated.xls	0.00	0.01	0.01	0.02	0.02	0.03	0.03	0.04	0.05	0.05	0.06	0.06	0.07	0.07	0.07	0.07
53 -	Holding Cabinet Three Quarter Size Insulated.xls	0.00	0.01	0.02	0.03	0.04	0.04	0.05	0.06	0.07	0.08	0.09	0.10	0.11	0.11	0.11	0.11
54 -	HP 65,000 - 135,000.xls	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
55 -	HP 135,000 - 240,000.xls	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
56 -	HP greater than 240,000.xls	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.02
57 -	HP less than 65,000 1 Ph.xls	0.00	0.01	0.01	0.02	0.02	0.03	0.04	0.04	0.05	0.05	0.06	0.07	0.07	0.07	0.07	0.07
58 -	HP less than 65,000 3 Ph.xls	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
59 -	HP Water Heater 500 gal_day.xls	0.03	0.12	0.22	0.38	0.49	0.58	0.71	0.88	1.01	1.10	1.19	1.36	1.45	1.45	1.45	1.45
60 -	HP Water Heater 1000 gal_day.xls	0.02	0.08	0.15	0.25	0.33	0.39	0.48	0.59	0.68	0.74	0.80	0.91	0.98	0.98	0.98	0.98
61 -	HP Water Heater 1500 gal_day.xls	0.03	0.12	0.22	0.38	0.50	0.59	0.72	0.89	1.02	1.11	1.20	1.37	1.47	1.47	1.47	1.47
62 -	Icemaker, (100 to 500 lbs_day).xls	0.00	0.00	0.01	0.01	0.01	0.02	0.02	0.02	0.03	0.03	0.03	0.04	0.04	0.04	0.04	0.04
63 -	Icemaker, (500 to 1000 lbs_day).xls	0.00	0.01	0.01	0.02	0.02	0.03	0.03	0.04	0.04	0.05	0.05	0.06	0.06	0.06	0.06	0.06
64 -	Icemaker, (Greater Than 1000 lbs_day).xls	0.00	0.01	0.02	0.04	0.05	0.06	0.07	0.09	0.10	0.11	0.12	0.13	0.14	0.14	0.14	0.14

	MW	BASE CASE															
	Year	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
65 -	LED Auto Traffic Signals.xls	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
66 -	LED Exit Signs Electronic Fixtures (Retrofit Only).xls	0.03	0.12	0.22	0.39	0.51	0.60	0.73	0.90	1.04	1.13	1.22	1.40	1.49	1.49	1.49	1.49
67 -	LED Pedestrian Signals.xls	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
68 -	Light Tube.xls	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
69 -	Motors 1-5 HP - Incentives per participant.xls	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
70 -	Motors 25-100 HP - Incentives per participant.xls	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
71 -	Night covers for displays.xls	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01
72 -	Occupancy Sensors over 500 Watts.xls	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
73 -	Occupancy Sensors under 500 Watts .xls	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
74 -	Packaged Terminal AC.xls	0.00	0.00	0.01	0.02	0.02	0.02	0.03	0.04	0.04	0.05	0.05	0.06	0.06	0.06	0.06	0.06
75 -	Pellet Dryer Tanks & Ducts 3in dia.xls	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
76 -	Pellet Dryer Tanks & Ducts 5in dia.xls	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
77 -	Pellet Dryer Tanks & Ducts 8in dia.xls	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
78 -	Plug Load Occupancy Sensors Document Stations.xls	0.00	0.01	0.02	0.04	0.05	0.06	0.07	0.09	0.10	0.11	0.12	0.14	0.15	0.15	0.15	0.15
79 -	Pulse Start Metal Halide (retrofit only).xls	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
80 -	Pumps HP 7.5.xls	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
81 -	Pumps HP 10.xls	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
82 -	Pumps HP 15.xls	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
83 -	Pumps HP 20.xls	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
84 -	Setback_Programmable Thermostat.xls	0.06	0.23	0.42	0.73	0.95	1.12	1.37	1.70	1.95	2.12	2.29	2.62	2.80	2.80	2.80	2.80
85 -	Solid Door Reach-in Freezer, (19 to 60 cu ft).xls	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
86 -	Solid Door Reach-in Freezer, (Greater Than 60cu ft).xls	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
87 -	Solid Door Reach-in Freezer, (Less Than19 cu ft).xls	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
88 -	Solid Door Reach-in Refrig, (19 to 60 cu ft).xls	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.03	0.03	0.03	0.03
89 -	Solid Door Reach-in Refrig, (Greater Than 60cu ft).xls	0.00	0.00	0.00	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.03	0.03	0.03	0.03	0.03	0.03
90 -	Solid Door Reach-in Refrig, (Less Than 19 cu ft).xls	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.02
91 -	Steamer.xls	0.03	0.11	0.20	0.35	0.46	0.55	0.67	0.83	0.95	1.04	1.12	1.28	1.37	1.37	1.37	1.37
92 -	T-8 2ft 1 lamp.xls	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
93 -	T-8 2ft 2 lamp.xls	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
94 -	T-8 2ft 3 lamp.xls	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
95 -	T-8 2ft 4 lamp.xls	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
96 -	T-8 3ft 1 lamp.xls	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
97 -	T-8 3ft 2 lamp.xls	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
98 -	T-8 3ft 3 lamp.xls	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
99 -	T-8 3ft 4 lamp.xls	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
100 -	T-8 4ft 1 lamp.xls	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
101 -	T-8 4ft 2 lamp.xls	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
102 -	T-8 4ft 3 lamp.xls	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
103 -	T-8 4ft 4 lamp.xls	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
104 -	T-8 8ft 1 lamp.xls	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
105 -	T-8 8ft 2 lamp.xls	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
106 -	T-8 HO 8 ft 1 Lamp.xls	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
107 -	T-8 HO 8 ft 2 Lamp.xls	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

	MW	BASE CASE															
	Year	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
108 -	Thermal Storage lrg C&I.xls	0.47	1.93	3.60	6.23	8.14	9.63	11.74	14.58	16.74	18.21	19.62	22.48	24.04	24.04	24.04	24.04
109 -	Variable Frequency Drive Pumps HP 5.xls	0.00	0.01	0.02	0.03	0.04	0.04	0.05	0.06	0.07	0.08	0.09	0.10	0.11	0.11	0.11	0.11
110 -	Vending Equipment Controller.xls	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
111 -	VFD HP 1!5.xls	0.00	0.00	0.00	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.03	0.03	0.03	0.03	0.03	0.03
112 -	VFD HP 2.xls	0.00	0.00	0.01	0.01	0.01	0.02	0.02	0.03	0.03	0.03	0.03	0.04	0.04	0.04	0.04	0.04
113 -	VFD HP 3.xls	0.00	0.01	0.01	0.02	0.02	0.03	0.03	0.04	0.04	0.05	0.05	0.06	0.06	0.06	0.06	0.06
114 -	VFD HP 7!5.xls	0.00	0.01	0.02	0.04	0.05	0.06	0.08	0.10	0.11	0.12	0.13	0.15	0.16	0.16	0.16	0.16
115 -	VFD HP 10.xls	0.01	0.02	0.04	0.07	0.09	0.11	0.13	0.16	0.18	0.20	0.22	0.25	0.26	0.26	0.26	0.26
116 -	VFD HP 15.xls	0.01	0.03	0.06	0.10	0.13	0.16	0.19	0.24	0.28	0.30	0.32	0.37	0.40	0.40	0.40	0.40
117 -	VFD HP 20.xls	0.01	0.04	0.08	0.14	0.18	0.21	0.26	0.32	0.37	0.40	0.43	0.50	0.53	0.53	0.53	0.53
118 -	VFD HP 25.xls	0.00	0.02	0.03	0.05	0.07	0.08	0.09	0.12	0.13	0.15	0.16	0.18	0.19	0.19	0.19	0.19
119 -	VFD HP 30.xls	0.00	0.02	0.03	0.06	0.08	0.09	0.11	0.14	0.16	0.18	0.19	0.22	0.23	0.23	0.23	0.23
120 -	VFD HP 40.xls	0.01	0.02	0.05	0.08	0.10	0.12	0.15	0.19	0.22	0.23	0.25	0.29	0.31	0.31	0.31	0.31
121 -	VFD HP 50.xls	0.01	0.03	0.06	0.10	0.13	0.16	0.19	0.23	0.27	0.29	0.32	0.36	0.39	0.39	0.39	0.39
122 -	Window Film.xls	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09	0.10	0.11	0.12	0.12	0.12	0.12
123 -	Zone Shutoff Valves -COMPRESSED AIR.xls	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Total	4.19	17.12	31.89	55.23	72.12	85.40	104.06	129.21	148.40	161.41	173.94	199.26	213.15	213.15	213.15	213.15

	MW									
	Year	2025	2026	2027	2028	2029	2030	2031	2032	2033
	Impact hour	17	17	17	17	17	17	17	17	17
	Total MW	483.2	483.2	483.2	483.2	483.2	483.2	483.2	483.2	483.2
	Residential	270.05	270.05	270.05	270.05	270.05	270.05	270.05	270.05	270.05
	Non-Residential	213.15	213.15	213.15	213.15	213.15	213.15	213.15	213.15	213.15
	Residential									
1 -	Agency Kit and CFLs.xls	49.38	49.38	49.38	49.38	49.38	49.38	49.38	49.38	49.38
2 -	Home Energy House Call - KIT.xls	23.45	23.45	23.45	23.45	23.45	23.45	23.45	23.45	23.45
3 -	K-12 Education Program- CFL Distribution.xls	75.14	75.14	75.14	75.14	75.14	75.14	75.14	75.14	75.14
4 -	K-12 Education Program- Curriculum.xls	-	-	-	-	-	-	-	-	-
5 -	Low Income Weatherization- Refrigerator Replacement.xls	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
6 -	Low Income Weatherization- Tier 1.xls	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57
7 -	Low Income Weatherization- Tier 2.xls	4.53	4.53	4.53	4.53	4.53	4.53	4.53	4.53	4.53
8 -	Multi-Family Assessments- KIT ONLY.xls	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56
9 -	Online Audit w_EE kit.xls	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
10 -	Personalized Energy Report.xls	41.67	41.67	41.67	41.67	41.67	41.67	41.67	41.67	41.67
11 -	Smart Saver - CAC.xls	13.23	13.23	13.23	13.23	13.23	13.23	13.23	13.23	13.23
12 -	Smart Saver - Heat Pump.xls	5.87	5.87	5.87	5.87	5.87	5.87	5.87	5.87	5.87
13 -	Smart Saver - Res CFL Promo.xls	49.76	49.76	49.76	49.76	49.76	49.76	49.76	49.76	49.76
	Total	**270.0**	**270.0**	**270.0**	**270.0**	**270.0**	**270.0**	**270.0**	**270.0**	**270.0**
	Non Residential									
1 -	1 Lamp T-5 HO with Elec Ballast replacing T-12.xls	-	-	-	-	-	-	-	-	-
2 -	1 Lamp T-5 with Elec Ballast replacing T-12.xls	-	-	-	-	-	-	-	-	-
3 -	2 Lamp T-5 replacing T-12.xls	-	-	-	-	-	-	-	-	-
4 -	2 Lamp T-5HO replacing T-12.xls	-	-	-	-	-	-	-	-	-
5 -	3 Lamp T-5 replacing T-12.xls	-	-	-	-	-	-	-	-	-
6 -	3 Lamp T-5HO replacing T-12.xls	-	-	-	-	-	-	-	-	-
7 -	4 Lamp T-5 replacing T-12.xls	-	-	-	-	-	-	-	-	-
8 -	4 Lamp T-5HO replacing T-12.xls	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30
9 -	42W 8 Lamp Hi Bay CFL.xls	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
10 -	80Plus NC_Desktop Unit.xls	3.51	3.51	3.51	3.51	3.51	3.51	3.51	3.51	3.51
11 -	80Plus NC_Server Unit.xls	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16
12 -	AC 65,000 - 135,000.xls	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65
13 -	AC 135,000 - 240,000.xls	3.12	3.12	3.12	3.12	3.12	3.12	3.12	3.12	3.12
14 -	AC 240,000 - 760,000.xls	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44
15 -	AC greater than 760,000.xls	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
16 -	AC less than 65,000 1 Ph Rooftop & Unitary.xls	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
17 -	AC less than 65,000 3 Ph.xls	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18
18 -	Barrel Wraps (Inj Mold & Extruders).xls	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54
19 -	CFL Fixture.xls	-	-	-	-	-	-	-	-	-
20 -	CFL Screw In.xls	-	-	-	-	-	-	-	-	-
21 -	Chilled Air EE Cooled Chillers.xls	5.97	5.97	5.97	5.97	5.97	5.97	5.97	5.97	5.97

	MW Year	2025	2026	2027	2028	2029	2030	2031	2032	2033
22 -	Chilled Water EE Cooled Chillers 150 - 300 ton.xls	9.59	9.59	9.59	9.59	9.59	9.59	9.59	9.59	9.59
23 -	Chilled Water EE Cooled Chillers greater than 300 ton.xls	19.35	19.35	19.35	19.35	19.35	19.35	19.35	19.35	19.35
24 -	Chilled Water EE Cooled Chillers less than150 ton.xls	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55
25 -	Chilled Water Reset Air Cooled 300-400 tons.xls	-	-	-	-	-	-	-	-	-
26 -	Chilled Water Reset Air Cooled 400-500 tons.xls	-	-	-	-	-	-	-	-	-
27 -	Chilled Water Reset Water Cooled 0-1000 tons.xls	-	-	-	-	-	-	-	-	-
28 -	Chilled Water Reset Water Cooled 1000-2000 tons.xls	-	-	-	-	-	-	-	-	-
29 -	Chilled Water Reset Water Cooled 2000-3000 tons.xls	-	-	-	-	-	-	-	-	-
30 -	Combi Oven, (90 lbs_hr).xls	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70
31 -	Commercial Clothes Washers - Electric Dryer & Washer.xls	1.28	1.28	1.28	1.28	1.28	1.28	1.28	1.28	1.28
32 -	Commercial Clothes Washers - Washer Only.xls	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54
33 -	Convection Oven.xls	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28
34 -	Custom Rebate.xls	49.69	49.69	49.69	49.69	49.69	49.69	49.69	49.69	49.69
35 -	Engineered Nozzles - COMPRESS AIR.xls	3.29	3.29	3.29	3.29	3.29	3.29	3.29	3.29	3.29
36 -	ES Sleeve AC over 14,000 Btu hr.xls	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
37 -	ES Sleeve AC under 14,000 Btu hr.xls	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
38 -	ES Window AC over 14,000 Btu hr.xls	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08
39 -	ES Window AC under 14,000 Btu hr.xls	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
40 -	Fryer.xls	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12
41 -	Griddles.xls	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
42 -	Head Pressure Control.xls	-	-	-	-	-	-	-	-	-
43 -	High Bay 2L T5HO.xls	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06
44 -	High Bay 4L T5HO.xls	16.55	16.55	16.55	16.55	16.55	16.55	16.55	16.55	16.55
45 -	High Bay 6L T5HO.xls	5.15	5.15	5.15	5.15	5.15	5.15	5.15	5.15	5.15
46 -	High Bay 8L T5HO.xls	42.19	42.19	42.19	42.19	42.19	42.19	42.19	42.19	42.19
47 -	High Bay Fluorescent 4LF32T8.xls	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
48 -	High Bay Fluorescent 6LF32T8.xls	5.29	5.29	5.29	5.29	5.29	5.29	5.29	5.29	5.29
49 -	High Bay Fluorescent 8LF32T8.xls	3.57	3.57	3.57	3.57	3.57	3.57	3.57	3.57	3.57
50 -	High Efficiency Pumps HP 5.xls	-	-	-	-	-	-	-	-	-
51 -	Holding Cabinet Full Size Insulated.xls	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
52 -	Holding Cabinet Half Size Insulated.xls	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07
53 -	Holding Cabinet Three Quarter Size Insulated.xls	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
54 -	HP 65,000 - 135,000.xls	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
55 -	HP 135,000 - 240,000.xls	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
56 -	HP greater than 240,000.xls	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
57 -	HP less than 65,000 1 Ph.xls	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07
58 -	HP less than 65,000 3 Ph.xls	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
59 -	HP Water Heater 500 gal_day.xls	1.45	1.45	1.45	1.45	1.45	1.45	1.45	1.45	1.45
60 -	HP Water Heater 1000 gal_day.xls	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
61 -	HP Water Heater 1500 gal_day.xls	1.47	1.47	1.47	1.47	1.47	1.47	1.47	1.47	1.47
62 -	Icemaker, (100 to 500 lbs_day).xls	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
63 -	Icemaker, (500 to 1000 lbs_day).xls	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06
64 -	Icemaker, (Greater Than 1000 lbs_day).xls	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14

	MW									
	Year	2025	2026	2027	2028	2029	2030	2031	2032	2033
65 -	LED Auto Traffic Signals.xls	-	-	-	-	-	-	-	-	-
66 -	LED Exit Signs Electronic Fixtures (Retrofit Only).xls	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49
67 -	LED Pedestrian Signals.xls	-	-	-	-	-	-	-	-	-
68 -	Light Tube.xls	-	-	-	-	-	-	-	-	-
69 -	Motors 1-5 HP - Incentives per participant.xls	-	-	-	-	-	-	-	-	-
70 -	Motors 25-100 HP - Incentives per participant.xls	-	-	-	-	-	-	-	-	-
71 -	Night covers for displays.xls	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
72 -	Occupancy Sensors over 500 Watts.xls	-	-	-	-	-	-	-	-	-
73 -	Occupancy Sensors under 500 Watts .xls	-	-	-	-	-	-	-	-	-
74 -	Packaged Terminal AC.xls	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06
75 -	Pellet Dryer Tanks & Ducts 3in dia.xls	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
76 -	Pellet Dryer Tanks & Ducts 5in dia.xls	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
77 -	Pellet Dryer Tanks & Ducts 8in dia.xls	-	-	-	-	-	-	-	-	-
78 -	Plug Load Occupancy Sensors Document Stations.xls	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
79 -	Pulse Start Metal Halide (retrofit only).xls	-	-	-	-	-	-	-	-	-
80 -	Pumps HP 7IS.xls	-	-	-	-	-	-	-	-	-
81 -	Pumps HP 10.xls	-	-	-	-	-	-	-	-	-
82 -	Pumps HP 15.xls	-	-	-	-	-	-	-	-	-
83 -	Pumps HP 20.xls	-	-	-	-	-	-	-	-	-
84 -	Setback_Programmable Thermostat.xls	2.80	2.80	2.80	2.80	2.80	2.80	2.80	2.80	2.80
85 -	Solid Door Reach-in Freezer, (19 to 60 cu ft).xls	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
86 -	Solid Door Reach-in Freezer, (Greater Than 60cu ft).xls	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
87 -	Solid Door Reach-in Freezer, (Less Than19 cu ft).xls	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
88 -	Solid Door Reach-in Refrig, (19 to 60 cu ft).xls	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
89 -	Solid Door Reach-in Refrig, (Greater Than 60cu ft).xls	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
90 -	Solid Door Reach-in Refrig, (Less Than 19 cu ft).xls	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
91 -	Steamer.xls	1.37	1.37	1.37	1.37	1.37	1.37	1.37	1.37	1.37
92 -	T-8 2ft 1 lamp.xls	-	-	-	-	-	-	-	-	-
93 -	T-8 2ft 2 lamp.xls	-	-	-	-	-	-	-	-	-
94 -	T-8 2ft 3 lamp.xls	-	-	-	-	-	-	-	-	-
95 -	T-8 2ft 4 lamp.xls	-	-	-	-	-	-	-	-	-
96 -	T-8 3ft 1 lamp.xls	-	-	-	-	-	-	-	-	-
97 -	T-8 3ft 2 lamp.xls	-	-	-	-	-	-	-	-	-
98 -	T-8 3ft 3 lamp.xls	-	-	-	-	-	-	-	-	-
99 -	T-8 3ft 4 lamp.xls	-	-	-	-	-	-	-	-	-
100 -	T-8 4ft 1 lamp.xls	-	-	-	-	-	-	-	-	-
101 -	T-8 4ft 2 lamp.xls	-	-	-	-	-	-	-	-	-
102 -	T-8 4ft 3 lamp.xls	-	-	-	-	-	-	-	-	-
103 -	T-8 4ft 4 lamp.xls	-	-	-	-	-	-	-	-	-
104 -	T-8 8ft 1 lamp.xls	-	-	-	-	-	-	-	-	-
105 -	T-8 8ft 2 lamp.xls	-	-	-	-	-	-	-	-	-
106 -	T-8 HO 8 ft 1 Lamp.xls	-	-	-	-	-	-	-	-	-
107 -	T-8 HO 8 ft 2 Lamp.xls	-	-	-	-	-	-	-	-	-

	MW									
	Year	2025	2026	2027	2028	2029	2030	2031	2032	2033
108 -	Thermal Storage lrg C&I.xls	24.04	24.04	24.04	24.04	24.04	24.04	24.04	24.04	24.04
109 -	Variable Frequency Drive Pumps HP 5.xls	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
110 -	Vending Equipment Controller.xls	-	-	-	-	-	-	-	-	-
111 -	VFD HP 1|5.xls	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
112 -	VFD HP 2.xls	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
113 -	VFD HP 3.xls	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06
114 -	VFD HP 7|5.xls	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16
115 -	VFD HP 10.xls	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26
116 -	VFD HP 15.xls	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40
117 -	VFD HP 20.xls	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53
118 -	VFD HP 25.xls	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19
119 -	VFD HP 30.xls	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23
120 -	VFD HP 40.xls	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31
121 -	VFD HP 50.xls	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39
122 -	Window Film.xls	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12
123 -	Zone Shutoff Valves -COMPRESSED AIR.xls	-	-	-	-	-	-	-	-	-
	Total	213.15	213.15	213.15	213.15	213.15	213.15	213.15	213.15	213.15

	MWH	HIGH CASE															
	Year	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
	Residential	59,710	251,430	553,997	947,796	1,042,262	1,249,931	1,665,930	2,131,757	2,606,557	3,108,075	3,673,343	4,232,100	4,993,526	5,626,168	6,282,821	6,983,198
	Non-residential	13,972	58,487	133,714	246,005	275,088	322,141	432,496	566,614	693,086	814,481	965,448	1,128,436	1,339,451	1,509,022	1,685,166	1,872,570
	Total	73,682	309,917	687,711	1,193,800	1,317,350	1,572,072	2,098,426	2,698,371	3,299,643	3,922,556	4,638,791	5,360,536	6,332,978	7,135,189	7,967,988	8,855,769
	Residential																
1 -	Agency Kit and CFLs.xls	9,618	40,499	89,235	152,666	167,882	201,333	268,340	343,373	419,852	500,634	591,684	681,686	804,333	906,236	1,012,006	1,124,820
2 -	Home Energy House Call - KIT.xls	2,238	9,424	20,766	35,527	39,068	46,852	62,445	79,906	97,703	116,501	137,690	158,634	187,175	210,888	235,502	261,755
3 -	K-12 Education Program- CFL Distribution.xls	14,636	61,629	135,793	232,318	255,473	306,376	408,343	522,524	638,905	761,834	900,389	1,037,348	1,223,985	1,379,054	1,540,010	1,711,682
4 -	K-12 Education Program- Curriculum.xls	11,414	48,061	105,898	181,173	199,231	238,927	318,446	407,490	498,249	594,116	702,168	808,976	954,524	1,075,455	1,200,976	1,334,854
5 -	Low Income Weatherization- Refrigerator Ruplacement.xls	195	822	1,812	3,099	3,408	4,087	5,448	6,971	8,524	10,164	12,012	13,839	16,329	18,398	20,546	22,836
6 -	Low Income Weatherization- Tier 1.xls	88	372	819	1,401	1,540	1,847	2,462	3,150	3,852	4,593	5,428	6,254	7,379	8,314	9,284	10,319
7 -	Low Income Weatherization- Tier 2.xls	706	2,972	6,549	11,205	12,321	14,777	19,694	25,201	30,814	36,743	43,426	50,031	59,033	66,512	74,275	82,554
8 -	Multi-Family Assessments- KIT ONLY.xls	67	283	624	1,068	1,174	1,408	1,877	2,401	2,936	3,501	4,138	4,767	5,625	6,338	7,077	7,866
9 -	Online Audit w_EE kit.xls	974	4,101	9,037	15,461	17,002	20,389	27,175	34,774	42,519	50,700	59,921	69,036	81,456	91,776	102,488	113,912
10 -	Personalized Energy Report.xls	8,117	34,178	75,308	128,840	141,681	169,911	226,460	289,783	354,326	422,500	499,341	575,296	678,802	764,801	854,064	949,270
11 -	Smart Saver - CAC.xls	1,361	5,732	12,629	21,606	23,759	28,493	37,976	48,595	59,418	70,851	83,736	96,474	113,831	128,252	143,221	159,187
12 -	Smart Saver - Heat Pump.xls	604	2,543	5,603	9,586	10,541	12,642	16,849	21,561	26,363	31,435	37,152	42,803	50,504	56,903	63,544	70,628
13 -	Smart Saver - Res CFL Promo.xls	9,692	40,812	89,925	153,846	169,180	202,889	270,414	346,027	423,097	504,503	596,258	686,955	810,550	913,241	1,019,829	1,133,514
	Total	59,710	251,430	553,997	947,796	1,042,262	1,249,931	1,665,930	2,131,757	2,606,557	3,108,075	3,673,343	4,232,100	4,993,526	5,626,168	6,282,821	6,983,198
	Non Residential																
1 -	1 Lamp T-5 HO with Elec Ballast replacing T-12.xls	0.6	2.7	6.1	11.3	12.6	14.7	19.8	25.9	31.7	37.3	44.2	51.6	61.3	69.0	77.1	85.7
2 -	1 Lamp T-5 with Elec Ballast replacing T-12.xls	0.3	1.1	2.5	4.5	5.1	5.9	8.0	10.4	12.8	15.0	17.8	20.8	24.7	27.8	31.0	34.5
3 -	2 Lamp T-5 replacing T-12.xls	0.3	1.1	2.5	4.5	5.1	5.9	8.0	10.4	12.8	15.0	17.8	20.8	24.7	27.8	31.0	34.5
4 -	2 Lamp T-5HO replacing T-12.xls	2.4	10.1	23.1	42.6	47.6	55.8	74.8	98.1	119.9	141.0	167.1	195.3	231.8	261.2	291.6	324.1
5 -	3 Lamp T-5 replacing T-12.xls	0.6	2.4	5.5	10.2	11.4	13.3	17.9	23.4	28.6	33.6	39.9	46.6	55.3	62.3	69.6	77.3
6 -	3 Lamp T-5HO replacing T-12.xls	1.1	4.5	10.2	18.8	21.1	24.7	33.1	43.4	53.1	62.4	74.0	86.4	102.6	115.6	129.1	143.4
7 -	4 Lamp T-5 replacing T-12.xls	5.1	21.2	48.5	89.3	99.9	116.9	157.0	205.7	251.6	295.7	350.5	409.6	486.2	547.8	611.7	679.8
8 -	4 Lamp T-5HO replacing T-12.xls	12.5	52.4	119.8	220.3	246.4	288.5	387.3	507.5	620.7	729.4	864.7	1,010.6	1,199.6	1,351.5	1,509.2	1,677.1
9 -	42W 8 Lamp Hi Bay CFL.xls	1.1	4.5	10.2	18.8	21.0	24.6	33.1	43.3	53.0	62.2	73.8	86.2	102.4	115.3	128.8	143.1
10 -	80Plus NC_Desktop Unit.xls	337.4	1,412.2	3,228.6	5,940.0	6,642.2	7,778.4	10,443.0	13,681.4	16,735.2	19,666.3	23,311.6	27,247.1	32,342.2	36,436.6	40,689.8	45,214.8
11 -	80Plus NC_Server Unit.xls	23.9	100.0	228.7	420.7	470.4	550.9	739.6	968.9	1,185.2	1,392.8	1,650.9	1,929.7	2,290.5	2,580.5	2,881.7	3,202.1
12 -	AC 65,000 - 135,000.xls	21.9	91.5	209.2	384.9	430.4	504.0	676.7	886.5	1,084.4	1,274.3	1,510.5	1,765.5	2,095.7	2,361.0	2,636.6	2,929.8
13 -	AC 135,000 - 240,000.xls	104.8	438.9	1,003.4	1,846.0	2,064.2	2,417.3	3,245.4	4,251.8	5,200.8	6,111.7	7,244.5	8,467.6	10,051.0	11,323.4	12,645.2	14,051.4
14 -	AC 240,000 - 760,000.xls	14.9	62.5	143.0	263.0	294.1	344.4	462.4	605.9	741.1	870.9	1,032.3	1,206.6	1,432.2	1,613.5	1,801.9	2,002.2
15 -	AC greater than 760,000.xls	2.2	9.1	20.8	38.3	42.9	50.2	67.4	88.3	108.0	127.0	150.5	175.9	208.8	235.2	262.7	291.9
16 -	AC less than 65,000 1 Ph Rooftop & Unitary.xls	8.4	35.3	80.7	148.4	166.0	194.4	261.0	341.9	418.2	491.5	582.6	680.9	808.2	910.5	1,016.8	1,129.9
17 -	AC less than 65,000 3 Ph.xls	6.1	25.4	58.2	107.0	119.7	140.1	188.2	246.5	301.5	354.3	420.0	490.9	582.7	656.5	733.1	814.6
18 -	Barrel Wraps (Inj Mold & Extruders).xls	38.9	162.8	372.3	684.9	765.9	896.9	1,204.2	1,577.6	1,929.7	2,267.7	2,688.0	3,141.8	3,729.4	4,201.5	4,691.9	5,213.7
19 -	CFL Fixture.xls	127.7	534.5	1,221.9	2,248.1	2,513.9	2,943.9	3,952.4	5,178.0	6,333.8	7,443.1	8,822.7	10,312.2	12,240.6	13,790.2	15,399.9	17,112.5
20 -	CFL Screw In.xls	1,282.1	5,367.1	12,270.3	22,574.6	25,243.4	29,561.2	39,688.0	51,995.3	63,601.0	74,740.8	88,594.2	103,550.9	122,914.6	138,475.2	154,639.2	171,836.3
21 -	Chilled Air EE Cooled Chillers.xls	200.9	841.1	1,922.9	3,537.8	3,956.0	4,632.7	6,219.7	8,148.4	9,967.2	11,712.9	13,884.0	16,227.9	19,262.4	21,701.0	24,234.1	26,929.1
22 -	Chilled Water EE Cooled Chillers 150 - 300 ton.xls	322.6	1,350.3	3,087.0	5,679.5	6,350.9	7,437.2	9,985.0	13,081.3	16,001.2	18,803.8	22,289.2	26,052.0	30,923.7	34,838.6	38,905.2	43,231.8
23 -	Chilled Water EE Cooled Chillers greater than 300 ton.xls	650.8	2,724.4	6,228.7	11,459.4	12,814.2	15,006.0	20,146.6	26,394.1	32,285.4	37,940.2	44,972.6	52,564.9	62,394.4	70,293.3	78,498.5	87,228.2
24 -	Chilled Water EE Cooled Chillers less than150 ton.xls	18.6	77.8	177.8	327.1	365.7	428.3	575.0	753.3	921.5	1,082.9	1,283.6	1,500.3	1,780.9	2,006.3	2,240.5	2,489.7
25 -	Chilled Water Reset Air Cooled 300-400 tons.xls	1.3	5.3	12.0	22.2	24.8	29.0	39.0	51.0	62.4	73.4	87.0	101.7	120.7	135.9	151.8	168.7
26 -	Chilled Water Reset Air Cooled 400-500 tons.xls	1.6	6.8	15.5	28.5	31.9	37.3	50.1	65.6	80.3	94.3	111.8	130.7	155.1	174.8	195.2	216.9
27 -	Chilled Water Reset Water Cooled 0-1000 tons.xls	8.3	34.7	79.4	146.1	163.4	191.4	256.9	336.6	411.7	483.8	573.5	670.3	795.7	896.4	1,001.0	1,112.3
28 -	Chilled Water Reset Water Cooled 1000-2000 tons.xls	2.5	10.4	23.8	43.8	49.0	57.4	77.1	101.0	123.5	145.1	172.0	201.1	238.7	268.9	300.3	333.7

	MWH	HIGH CASE															
	Year	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
29 -	Chilled Water Reset Water Cooled 2000-3000 tons.xls	4.1	17.4	39.7	73.1	81.7	95.7	128.5	168.3	205.9	241.9	286.7	335.2	397.8	448.2	500.5	556.2
30 -	Combi Oven, (90 lbs_hr).xls	42.8	179.0	409.3	752.9	842.0	986.0	1,323.7	1,734.2	2,121.3	2,492.9	2,954.9	3,453.8	4,099.7	4,618.7	5,157.8	5,731.4
31 -	Commercial Clothes Washers - Electric Dryer & Washer.xls	79.4	332.3	759.6	1,397.5	1,562.8	1,830.1	2,457.0	3,218.9	3,937.4	4,627.0	5,484.6	6,410.6	7,609.3	8,572.6	9,573.3	10,637.9
32 -	Commercial Clothes Washers - Washer Only.xls	33.4	139.9	319.8	588.4	658.0	770.5	1,034.5	1,355.3	1,657.8	1,948.2	2,309.3	2,699.2	3,203.9	3,609.5	4,030.9	4,479.1
33 -	Convection Oven.xls	17.1	71.4	163.3	300.4	336.0	393.4	528.2	692.0	846.5	994.7	1,179.1	1,378.2	1,635.9	1,843.0	2,058.1	2,287.0
34 -	Custom Rebate.xls	3,833.8	16,048.7	36,690.9	67,503.2	75,483.6	88,394.7	118,676.1	155,477.8	190,181.3	223,491.9	264,916.8	309,640.5	367,542.5	414,072.2	462,406.0	513,829.2
35 -	Engineered Nozzles - COMPRESS AIR.xls	238.6	998.7	2,283.3	4,200.9	4,697.5	5,501.0	7,385.4	9,675.7	11,835.3	13,908.3	16,486.3	19,269.5	22,872.9	25,768.5	28,776.4	31,976.6
36 -	ES Sleeve AC over 14,000 Btu hr.xls	1.6	6.5	14.9	27.5	30.7	36.0	48.3	63.3	77.4	91.0	107.9	126.1	149.7	168.6	188.3	209.2
37 -	ES Sleeve AC under 14,000 Btu hr.xls	0.7	2.9	6.7	12.4	13.8	16.2	21.7	28.5	34.8	40.9	48.5	56.7	67.3	75.9	84.7	94.1
38 -	ES Window AC over 14,000 Btu hr.xls	3.5	14.8	33.9	62.4	69.8	81.7	109.7	143.7	175.8	206.6	244.9	286.2	339.7	382.7	427.4	474.9
39 -	ES Window AC under 14,000 Btu hr.xls	1.6	6.8	15.6	28.6	32.0	37.5	50.3	65.9	80.6	94.7	112.3	131.2	155.8	175.5	196.0	217.8
40 -	Fryer.xls	8.5	35.8	81.8	150.5	168.3	197.0	264.5	346.6	423.9	498.2	590.5	690.2	819.3	923.0	1,030.7	1,145.4
41 -	Griddles.xls	14.2	59.6	136.3	250.8	280.5	328.4	440.9	577.7	706.6	830.4	984.3	1,150.5	1,365.6	1,538.5	1,718.1	1,909.1
42 -	Head Pressure Control.xls	258.5	1,082.2	2,474.1	4,551.9	5,090.0	5,960.6	8,002.5	10,484.1	12,824.3	15,070.4	17,863.8	20,879.6	24,784.0	27,921.6	31,180.8	34,648.4
43 -	High Bay 2L T5HO.xls	53.1	222.1	507.8	934.2	1,044.6	1,223.3	1,642.3	2,151.6	2,631.8	3,092.8	3,666.1	4,285.0	5,086.3	5,730.2	6,399.1	7,110.7
44 -	High Bay 4L T5HO.xls	765.5	3,204.4	7,325.9	13,478.1	15,071.5	17,649.5	23,695.6	31,043.7	37,972.8	44,623.8	52,895.0	61,824.8	73,385.9	82,676.3	92,327.0	102,594.5
45 -	High Bay 6L T5HO.xls	216.9	908.0	2,075.8	3,819.0	4,270.5	5,000.9	6,714.1	8,796.2	10,759.5	12,644.1	14,987.7	17,517.9	20,793.7	23,426.2	26,160.6	29,069.9
46 -	High Bay 8L T5HO.xls	2,274.0	9,519.4	21,763.5	40,040.0	44,773.6	52,432.0	70,393.6	92,222.8	112,807.4	132,565.9	157,137.4	183,665.5	218,010.5	245,610.0	274,279.5	304,781.6
47 -	High Bay Fluorescent 4LF32T8.xls	35.7	149.3	341.3	627.9	702.2	822.3	1,104.0	1,446.3	1,769.1	2,079.0	2,464.3	2,880.3	3,419.0	3,851.8	4,301.4	4,779.8
48 -	High Bay Fluorescent 6LF32T8.xls	222.7	932.4	2,131.7	3,921.8	4,385.5	5,135.6	6,894.9	9,033.0	11,049.2	12,984.5	15,391.3	17,989.6	21,353.7	24,057.0	26,865.1	29,852.7
49 -	High Bay Fluorescent 8LF32T8.xls	150.4	629.8	1,439.8	2,648.8	2,962.0	3,468.6	4,656.9	6,101.0	7,462.7	8,769.8	10,395.4	12,150.3	14,422.4	16,248.2	18,144.9	20,162.7
50 -	High Efficiency Pumps HP 5.xls	0.3	1.3	3.0	5.6	6.3	7.3	9.8	12.9	15.8	18.5	22.0	25.7	30.5	34.4	38.4	42.6
51 -	Holding Cabinet Full Size Insulated.xls	15.3	64.1	146.5	269.5	301.4	352.9	473.8	620.7	759.3	892.3	1,057.6	1,236.2	1,467.3	1,653.1	1,846.1	2,051.4
52 -	Holding Cabinet Half Size Insulated.xls	5.2	21.7	49.6	91.3	102.1	119.5	160.5	210.3	257.2	302.2	358.3	418.7	497.0	560.0	625.3	694.9
53 -	Holding Cabinet Three Quarter Size Insulated.xls	8.2	34.4	78.6	144.6	161.7	189.3	254.2	333.0	407.4	478.7	567.5	663.3	787.3	887.0	990.5	1,100.7
54 -	HP 65,000 - 135,000.xls	0.3	1.1	2.4	4.4	4.9	5.8	7.8	10.2	12.4	14.6	17.3	20.3	24.1	27.1	30.3	33.6
55 -	HP 135,000 - 240,000.xls	0.5	2.2	5.1	9.4	10.5	12.3	16.5	21.6	26.5	31.1	36.9	43.1	51.1	57.6	64.3	71.5
56 -	HP greater than 240,000.xls	1.2	5.2	11.8	21.8	24.3	28.5	38.3	50.1	61.3	72.1	85.4	99.9	118.5	133.6	149.1	165.7
57 -	HP less than 65,000 1 Ph.xls	4.1	17.1	39.1	72.0	80.5	94.3	126.6	165.9	202.9	238.4	282.6	330.4	392.1	441.8	493.3	548.2
58 -	HP less than 65,000 3 Ph.xls	0.1	0.3	0.7	1.2	1.4	1.6	2.2	2.8	3.4	4.1	4.8	5.6	6.7	7.5	8.4	9.3
59 -	HP Water Heater 500 gal_day.xls	135.6	567.5	1,297.5	2,387.0	2,669.2	3,125.8	4,196.6	5,497.9	6,725.1	7,903.0	9,367.9	10,949.4	12,996.9	14,642.3	16,351.4	18,169.8
60 -	HP Water Heater 1000 gal_day.xls	91.1	381.5	872.3	1,604.8	1,794.6	2,101.5	2,821.4	3,696.4	4,521.4	5,313.4	6,298.2	7,361.5	8,738.1	9,844.3	10,993.4	12,216.0
61 -	HP Water Heater 1500 gal_day.xls	137.1	573.9	1,312.1	2,414.0	2,699.4	3,161.1	4,244.0	5,560.1	6,801.2	7,992.4	9,473.8	11,073.2	13,143.9	14,807.9	16,536.3	18,375.3
62 -	Icemaker, (100 to 500 lbs_day).xls	4.8	20.1	45.9	84.4	94.3	110.5	148.3	194.3	237.7	279.4	331.1	387.0	459.4	517.6	578.0	642.3
63 -	Icemaker, (500 to 1000 lbs_day).xls	7.8	32.7	74.8	137.6	153.9	180.2	242.0	317.0	387.7	455.6	540.1	631.3	749.3	844.2	942.7	1,047.6
64 -	Icemaker, (Greater Than 1000 lbs_day).xls	17.5	73.4	167.9	308.8	345.3	404.4	542.9	711.3	870.1	1,022.5	1,212.0	1,416.6	1,681.5	1,894.4	2,115.5	2,350.7
65 -	LED Auto Traffic Signals.xls	101.8	426.1	974.2	1,792.3	2,004.1	2,346.9	3,150.9	4,128.0	5,049.4	5,933.8	7,033.7	8,221.1	9,758.5	10,993.9	12,277.2	13,642.5
66 -	LED Exit Signs Electronic Fixtures (Retrofit Only).xls	137.6	575.9	1,316.6	2,422.3	2,708.7	3,172.0	4,258.6	5,579.2	6,824.5	8,019.8	9,506.3	11,111.2	13,189.0	14,858.7	16,593.1	18,438.4
67 -	LED Pedestrian Signals.xls	27.8	116.4	266.2	489.7	547.6	641.3	860.9	1,127.9	1,379.7	1,621.3	1,921.8	2,246.3	2,666.3	3,003.9	3,354.5	3,727.5
68 -	Light Tube.xls	2.7	11.2	25.6	47.1	52.7	61.7	82.8	108.5	132.8	156.0	184.9	216.2	256.6	289.1	322.8	358.7
69 -	Motors 1-5 HP - Incentives per participant.xls	0.2	0.6	1.5	2.7	3.0	3.5	4.7	6.2	7.6	8.9	10.5	12.3	14.6	16.5	18.4	20.4
70 -	Motors 25-100 HP - Incentives per participant.xls	0.7	3.0	6.8	12.6	14.0	16.4	22.1	28.9	35.4	41.6	49.3	57.6	68.4	77.1	86.0	95.6
71 -	Night covers for displays.xls	0.6	2.7	6.2	11.4	12.8	15.0	20.1	26.4	32.2	37.9	44.9	52.5	62.3	70.2	78.4	87.1
72 -	Occupancy Sensors over 500 Watts.xls	12.5	52.2	119.2	219.4	245.3	287.3	385.7	505.3	618.1	726.3	861.0	1,006.3	1,194.5	1,345.7	1,502.8	1,669.9
73 -	Occupancy Sensors under 500 Watts .xls	57.9	242.3	554.0	1,019.2	1,139.7	1,334.7	1,791.9	2,347.6	2,871.6	3,374.5	4,000.0	4,675.3	5,549.5	6,252.1	6,981.9	7,758.3
74 -	Packaged Terminal AC.xls	2.0	8.5	19.4	35.8	40.0	46.8	62.9	82.3	100.7	118.4	140.3	164.0	194.7	219.3	244.9	272.1
75 -	Pellet Dryer Tanks & Ducts 3in dia.xls	0.1	0.3	0.6	1.2	1.3	1.5	2.1	2.7	3.3	3.9	4.6	5.4	6.4	7.2	8.0	8.9
76 -	Pellet Dryer Tanks & Ducts 5in dia.xls	0.1	0.5	1.1	2.1	2.3	2.7	3.7	4.8	5.9	6.9	8.2	9.6	11.3	12.8	14.3	15.9
77 -	Pellet Dryer Tanks & Ducts 8in dia.xls	0.2	0.9	2.0	3.6	4.0	4.7	6.4	8.3	10.2	12.0	14.2	16.6	19.7	22.2	24.8	27.5

	MWH	HIGH CASE															
	Year	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
78 -	Plug Load Occupancy Sensors Document Stations.xls	20.1	84.1	192.2	353.6	395.4	463.0	621.6	814.3	996.1	1,170.6	1,387.5	1,621.8	1,925.1	2,168.8	2,421.9	2,691.3
79 -	Pulse Start Metal Halide (retrofit only).xls	24.9	104.1	238.0	437.8	489.5	573.3	769.7	1,008.3	1,233.4	1,449.4	1,718.1	2,008.1	2,383.6	2,685.4	2,998.9	3,332.4
80 -	Pumps HP 7l5.xls	0.5	2.0	4.6	8.4	9.4	11.0	14.8	19.4	23.7	27.8	33.0	38.6	45.8	51.6	57.6	64.0
81 -	Pumps HP 10.xls	0.3	1.3	3.0	5.6	6.3	7.3	9.9	12.9	15.8	18.6	22.0	25.7	30.5	34.4	38.4	42.7
82 -	Pumps HP 15.xls	0.5	2.0	4.6	8.4	9.4	11.0	14.8	19.4	23.7	27.8	33.0	38.6	45.8	51.6	57.6	64.0
83 -	Pumps HP 20.xls	0.6	2.7	6.1	11.2	12.5	14.7	19.7	25.8	31.6	37.1	44.0	51.4	61.0	68.7	76.8	85.3
84 -	Setback_Programmable Thermostat.xls	174.4	730.0	1,668.9	3,070.5	3,433.5	4,020.7	5,398.1	7,072.1	8,650.6	10,165.8	12,050.1	14,084.4	16,718.1	18,834.6	21,033.1	23,372.2
85 -	Solid Door Reach-In Freezer, (19 to 60 cu ft).xls	1.5	6.2	14.1	25.9	29.0	33.9	45.6	59.7	73.0	85.8	101.7	118.9	141.1	159.0	177.5	197.3
86 -	Solid Door Reach-In Freezer, (Greater Than 60cu ft).xls	1.4	5.9	13.4	24.7	27.6	32.3	43.4	56.9	69.6	81.8	96.9	113.3	134.5	151.5	169.2	188.0
87 -	Solid Door Reach-in Freezer, (Less Than19 cu ft).xls	1.5	6.3	14.4	26.5	29.7	34.7	46.6	61.1	74.8	87.8	104.1	121.7	144.5	162.8	181.8	202.0
88 -	Solid Door Reach-in Refrig, (19 to 60 cu ft).xls	3.1	13.0	29.7	54.6	61.1	71.5	96.0	125.7	153.8	180.8	214.3	250.4	297.3	334.9	374.0	415.6
89 -	Solid Door Reach-in Refrig, (Greater Than 60cu ft).xls	3.9	16.5	37.8	69.5	77.7	91.0	122.2	160.0	195.8	230.1	272.7	318.7	378.3	426.2	476 0	528.9
90 -	Solid Door Reach-in Refrig, (Less Than 19 cu ft).xls	2.6	11.0	25.1	46.2	51.7	60.5	81.2	106.4	130.2	153.0	181.3	211.9	251.6	283.4	316.5	351.7
91 -	Steamer.xls	98.0	410.3	938.1	1,725.9	1,930.0	2,260.1	3,034.3	3,975.3	4,862.6	5,714.3	6,773.5	7,917.0	9,397.4	10,587.1	11,822.9	13,137.7
92 -	T-8 2ft 1 lamp.xls	0.9	3.6	8.3	15.3	17.1	20.0	26.9	35.2	43.1	50.7	60.0	70.2	83.3	93.8	104.8	116.5
93 -	T-8 2ft 2 lamp.xls	4.3	18.0	41.2	75.9	84.8	99.4	133.4	174.8	213.8	251.2	297.8	348.0	413.1	465.4	519.7	577.5
94 -	T-8 2ft 3 lamp.xls	4.2	17.7	40.6	74.6	83.4	97.7	131.2	171.9	210.2	247.1	292.9	342.3	406.3	457.8	511.2	568.0
95 -	T-8 2ft 4 lamp.xls	139.7	584.6	1,336.5	2,458.9	2,749.6	3,219.9	4,322.9	5,663.5	6,927.6	8,141.0	9,650.0	11,279.1	13,388.3	15,083.2	16,843.8	18,717.0
96 -	T-8 3ft 1 lamp.xls	1.2	4.9	11.3	20.8	23.3	27.2	36.6	47.9	58.6	68.9	81.6	95.4	113.3	127.6	142.5	158.3
97 -	T-8 3ft 2 lamp.xls	2.2	9.0	20.6	37.9	42.4	49.7	66.7	87.4	106.9	125.6	148.9	174.0	206.6	232.7	259.9	288.8
98 -	T-8 3ft 3 lamp.xls	1.3	5.4	12.3	22.6	25.3	29.6	39.8	52.1	63.8	74.9	88.8	103.8	123.3	138.9	155.1	172.3
99 -	T-8 3ft 4 lamp.xls	84.8	354.8	811.2	1,492.5	1,669.0	1,954.4	2,624.0	3,437.6	4,204.9	4,941.5	5,857.4	6,846.2	8,126.4	9,155.2	10,223.9	11,360.9
100 -	T-8 4ft 1 lamp.xls	12.0	50.0	114.4	210.4	235.3	275.6	370.0	484.7	592.9	696.8	825.9	965.3	1,145.8	1,290.9	1,441.6	1,601.9
101 -	T-8 4ft 2 lamp.xls	36.1	151.3	345.8	636.2	711.4	833.1	1,118.5	1,465.3	1,792.4	2,106.3	2,496.7	2,918.2	3,463.9	3,902.4	4,358.0	4,842.6
102 -	T-8 4ft 3 lamp.xls	13.6	57.0	130.3	239.8	268.1	314.0	421.6	552.3	675.6	793.9	941.1	1,100.0	1,305.7	1,471.0	1,642.7	1,825.3
103 -	T-8 4ft 4 lamp.xls	813.1	3,403.6	7,781.3	14,315.9	16,008.4	18,746.6	25,168.6	32,973.4	40,333.3	47,397.7	56,183.1	65,668.0	77,947.7	87,815.7	98,066.2	108,971.9
104 -	T-8 8ft 1 lamp.xls	2.4	9.9	22.6	41.6	46.5	54.5	73.1	95.8	117.2	137.7	163.3	190.8	226.5	255.2	285.0	316.7
105 -	T-8 8ft 2 lamp.xls	12.7	53.2	121.7	223.9	250.3	293.2	393.6	515.6	630.7	741.2	878.6	1,026.9	1,219.0	1,373.3	1,533.6	1,704.1
106 -	T-8 HO 8 ft 1 Lamp.xls	1.1	4.5	10.2	18.8	21.1	24.7	33.1	43.4	53.1	62.4	74.0	86.4	102.6	115.6	129.1	143.4
107 -	T-8 HO 8 ft 2 Lamp.xls	10.6	44.5	101.7	187.2	209.3	245.1	329.1	431.1	527.4	619.7	734.6	858.6	1,019.2	1,148.2	1,282.3	1,424.9
108 -	Thermal Storage Irg C&I.xls	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
109 -	Variable Frequency Drive Pumps HP 5.xls	7.7	32.2	73.6	135.4	151.4	177.3	238.0	311.8	381.4	448.2	531.2	620.9	737.0	830.3	927.3	1,030.4
110 -	Vending Equipment Controller.xls	39.2	163.9	374.8	689.6	771.1	903.0	1,212.3	1,588.3	1,942.8	2,283.1	2,706.3	3,163.2	3,754.7	4,230.0	4,723.7	5,249.1
111 -	VFD HP 1l5.xls	2.3	9.7	22.1	40.6	45.4	53.2	71.4	93.5	114.4	134.5	159.4	186.3	221.1	249.1	278.2	309.1
112 -	VFD HP 2.xls	3.1	12.9	29.4	54.1	60.5	70.9	95.2	124.7	152.5	179.3	212.5	248.4	294.8	332.1	370.9	412.2
113 -	VFD HP 3.xls	4.6	19.3	44.1	81.2	90.8	106.4	142.8	187.1	228.8	268.9	318.7	372.6	442.2	498.2	556.4	618.2
114 -	VFD HP 7l5.xls	11.5	48.3	110.4	203.0	227.1	265.9	357.0	467.7	572.1	672.3	796.9	931.4	1,105.5	1,245.5	1,390.9	1,545.6
115 -	VFD HP 10.xls	19.2	80.5	183.9	338.4	378.4	443.1	595.0	779.4	953.4	1,120.4	1,328.1	1,552.3	1,842.6	2,075.8	2,318.2	2,575.9
116 -	VFD HP 15.xls	28.8	120.7	275.9	507.6	567.6	664.7	892.4	1,169.2	1,430.1	1,680.6	1,992.1	2,328.5	2,763.9	3,113.8	3,477.2	3,863.9
117 -	VFD HP 20.xls	38.4	160.9	367.9	676.8	756.8	886.3	1,189.9	1,558.9	1,906.8	2,240.8	2,656.2	3,104.6	3,685.2	4,151.7	4,636.3	5,151.9
118 -	VFD HP 25.xls	14.1	58.8	134.5	247.5	276.8	324.1	435.1	570.1	697.3	819.4	971.3	1,135.3	1,347.6	1,518.2	1,695.4	1,884.0
119 -	VFD HP 30.xls	16.9	70.6	161.4	297.0	332.1	388.9	522.2	684.1	836.8	983.3	1,165.6	1,362.4	1,617.1	1,821.8	2,034.5	2,260.8
120 -	VFD HP 40.xls	22.5	94.1	215.2	396.0	442.8	518.6	696.2	912.1	1,115.7	1,311.1	1,554.1	1,816.5	2,156.2	2,429.1	2,712.7	3,014.3
121 -	VFD HP 50.xls	28.1	117.7	269.1	495.0	553.5	648.2	870.3	1,140.1	1,394.6	1,638.9	1,942.6	2,270.6	2,695.2	3,036.4	3,390.8	3,767.9
122 -	Window Film.xls	10.0	41.7	95.4	175.5	196.2	229.8	308.5	404.2	494.4	581.0	688.7	805.0	955.5	1,076.5	1,202.1	1,335.8
123 -	Zone Shutoff Valves -COMPRESSED AIR.xls	23.8	99.6	227.7	418.9	468.4	548.5	736.4	964.8	1,180.1	1,386.8	1,643.9	1,921.4	2,280.7	2,569.4	2,869.4	3,188.5
	Total	13,971.6	58,487.0	133,714.3	246,004.8	275,088.1	322,140.8	432,496.4	566,614.4	693,086.1	814,481.2	965,447.9	1,128,436.3	1,339,451.2	1,509,021.5	1,685,166.4	1,872,570.2

	MWH									
	Year	2025	2026	2027	2028	2029	2030	2031	2032	2033
	Residential	7,659,793	8,374,170	9,105,731	9,881,746	10,616,011	10,616,018	10,616,302	10,645,596	10,616,576
	Non-residential	2,054,571	2,246,568	2,442,499	2,649,808	2,847,556	2,847,975	2,847,590	2,854,569	2,847,523
	Total	9,714,364	10,620,738	11,548,230	12,531,554	13,463,567	13,463,993	13,463,892	13,500,166	13,464,098
	Residential									
1 -	Agency Kit and CFLs.xls	1,233,802	1,348,871	1,466,707	1,591,704	1,709,976	1,709,977	1,710,022	1,714,741	1,710,067
2 -	Home Energy House Call - KIT.xls	287,116	313,893	341,314	370,402	397,925	397,925	397,936	399,034	397,946
3 -	K-12 Education Program- CFL Distribution.xls	1,877,525	2,052,629	2,231,946	2,422,158	2,602,137	2,602,139	2,602,208	2,609,389	2,602,275
4 -	K-12 Education Program- Curriculum.xls	1,464,187	1,600,742	1,740,582	1,888,918	2,029,275	2,029,276	2,029,331	2,034,930	2,029,383
5 -	Low Income Weatherization- Refrigerator Replacement.xls	25,048	27,385	29,777	32,315	34,716	34,716	34,717	34,812	34,718
6 -	Low Income Weatherization- Tier 1.xls	11,319	12,375	13,456	14,603	15,688	15,688	15,688	15,731	15,688
7 -	Low Income Weatherization- Tier 2.xls	90,553	98,998	107,647	116,821	125,501	125,501	125,504	125,851	125,508
8 -	Multi-Family Assessments- KIT ONLY.xls	8,629	9,433	10,257	11,132	11,959	11,959	11,959	11,992	11,959
9 -	Online Audit w_EE kit.xls	124,949	136,602	148,536	161,195	173,172	173,172	173,177	173,655	173,181
10 -	Personalized Energy Report.xls	1,041,244	1,138,354	1,237,800	1,343,288	1,443,102	1,443,103	1,443,141	1,447,123	1,443,178
11 -	Smart Saver - CAC.xls	174,610	190,895	207,571	225,261	241,999	241,999	242,006	242,674	242,012
12 -	Smart Saver - Heat Pump.xls	77,471	84,696	92,095	99,944	107,370	107,370	107,373	107,669	107,376
13 -	Smart Saver - Res CFL Promo.xls	1,243,339	1,359,297	1,478,044	1,604,007	1,723,193	1,723,194	1,723,240	1,727,995	1,723,284
	Total	**7,659,793**	**8,374,170**	**9,105,731**	**9,881,746**	**10,616,011**	**10,616,018**	**10,616,302**	**10,645,596**	**10,616,576**
	Non Residential									
1 -	1 Lamp T-5 HO with Elec Ballast replacing T-12.xls	94.0	102.8	111.8	121.2	130.3	130.3	130.3	130.6	130.3
2 -	1 Lamp T-5 with Elec Ballast replacing T-12.xls	37.8	41.3	45.0	48.8	52.4	52.4	52.4	52.5	52.4
3 -	2 Lamp T-5 replacing T-12.xls	37.8	41.3	45.0	48.8	52.4	52.4	52.4	52.5	52.4
4 -	2 Lamp T-5HO replacing T-12.xls	355.6	388.8	422.7	458.6	492.8	492.9	492.8	494.0	492.8
5 -	3 Lamp T-5 replacing T-12.xls	84.8	92.7	100.8	109.4	117.6	117.6	117.6	117.8	117.6
6 -	3 Lamp T-5HO replacing T-12.xls	157.4	172.1	187.1	203.0	218.1	218.1	218.1	218.7	218.1
7 -	4 Lamp T-5 replacing T-12.xls	745.8	815.5	886.6	961.9	1,033.7	1,033.8	1,033.7	1,036.2	1,033.7
8 -	4 Lamp T-5HO replacing T-12.xls	1,840.1	2,012.0	2,187.5	2,373.2	2,550.3	2,550.6	2,550.3	2,556.5	2,550.2
9 -	42W 8 Lamp Hi Bay CFL.xls	157.0	171.7	186.7	202.5	217.6	217.7	217.6	218.2	217.6
10 -	80Plus NC_Desktop Unit.xls	49,609.4	54,245.3	58,976.2	63,981.9	68,756.7	68,766.8	68,757.5	68,926.0	68,755.9
11 -	80Plus NC_Server Unit.xls	3,513.4	3,841.7	4,176.7	4,531.2	4,869.4	4,870.1	4,869.5	4,881.4	4,869.3
12 -	AC 65,000 - 135,000.xls	3,214.5	3,514.9	3,821.5	4,145.8	4,455.2	4,455.8	4,455.2	4,466.2	4,455.1
13 -	AC 135,000 - 240,000.xls	15,417.1	16,857.8	18,328.1	19,883.7	21,367.5	21,370.7	21,367.8	21,420.1	21,367.3
14 -	AC 240,000 - 760,000.xls	2,196.8	2,402.1	2,611.6	2,833.3	3,044.7	3,045.2	3,044.8	3,052.2	3,044.7
15 -	AC greater than 760,000.xls	320.3	350.2	380.7	413.0	443.9	443.9	443.9	445.0	443.9
16 -	AC less than 65,000 1 Ph Rooftop & Unitary.xls	1,239.7	1,355.6	1,473.8	1,598.9	1,718.2	1,718.5	1,718.2	1,722.5	1,718.2
17 -	AC less than 65,000 3 Ph.xls	893.8	977.3	1,062.6	1,152.8	1,238.8	1,239.0	1,238.8	1,241.8	1,238.8
18 -	Barrel Wraps (Inj Mold & Extruders).xls	5,720.4	6,255.0	6,800.5	7,377.7	7,928.3	7,929.5	7,928.4	7,947.8	7,928.2
19 -	CFL Fixture.xls	18,775.7	20,530.2	22,320.8	24,215.3	26,022.4	26,026.2	26,022.7	26,086.5	26,022.1
20 -	CFL Screw In.xls	188,537.6	206,156.2	224,135.7	243,159.4	261,305.8	261,344.2	261,308.9	261,949.3	261,302.7
21 -	Chilled Air EE Cooled Chillers.xls	29,546.5	32,307.5	35,125.2	38,106.5	40,950.3	40,956.3	40,950.7	41,051.1	40,949.8
22 -	Chilled Water EE Cooled Chillers 150 - 300 ton.xls	47,433.6	51,866.2	56,389.6	61,175.7	65,741.1	65,750.8	65,741.9	65,903.0	65,740.3
23 -	Chilled Water EE Cooled Chillers greater than 300 ton.xls	95,706.2	104,649.8	113,776.7	123,433.6	132,645.1	132,664.6	132,646.6	132,971.7	132,643.5
24 -	Chilled Water EE Cooled Chillers less than150 ton.xls	2,731.7	2,986.9	3,247.4	3,523.1	3,786.0	3,786.5	3,786.0	3,795.3	3,785.9
25 -	Chilled Water Reset Air Cooled 300-400 tons.xls	185.1	202.4	220.0	238.7	256.5	256.6	256.5	257.2	256.5
26 -	Chilled Water Reset Air Cooled 400-500 tons.xls	238.0	260.2	282.9	306.9	329.8	329.9	329.8	330.6	329.8
27 -	Chilled Water Reset Water Cooled 0-1000 tons.xls	1,220.4	1,334.5	1,450.9	1,574.0	1,691.5	1,691.7	1,691.5	1,695.7	1,691.5
28 -	Chilled Water Reset Water Cooled 1000-2000 tons.xls	366.1	400.3	435.3	472.2	507.4	507.5	507.5	508.7	507.4

	MWH									
	Year	2025	2026	2027	2028	2029	2030	2031	2032	2033
29 -	Chilled Water Reset Water Cooled 2000-3000 tons.xls	610.2	667.2	725.4	787.0	845.7	845.9	845.8	847.8	845.7
30 -	Combi Oven, (90 lbs_hr).xls	6,288.4	6,876.1	7,475.7	8,110.3	8,715.5	8,716.8	8,715.6	8,737.0	8,715.4
31 -	Commercial Clothes Washers - Electric Dryer & Washer.xls	11,671.8	12,762.6	13,875.6	15,053.3	16,176.7	16,179.1	16,176.9	16,216.6	16,176.5
32 -	Commercial Clothes Washers - Washer Only.xls	4,914.5	5,373.7	5,842.4	6,338.2	6,811.3	6,812.3	6,811.3	6,828.0	6,811.2
33 -	Convection Oven.xls	2,509.3	2,743.7	2,983.0	3,236.2	3,477.7	3,478.2	3,477.8	3,486.3	3,477.7
34 -	Custom Rebate.xls	563,769.9	616,453.4	670,216.4	727,101.6	781,363.3	781,478.1	781,372.5	783,287.6	781,354.1
35 -	Engineered Nozzles - COMPRESS AIR.xls	35,084.5	38,363.1	41,708.9	45,248.9	48,625.7	48,632.9	48,626.3	48,745.5	48,625.2
36 -	ES Sleeve AC over 14,000 Btu hr.xls	229.6	251.0	272.9	296.1	318.2	318.2	318.2	319.0	318.2
37 -	ES Sleeve AC under 14,000 Btu hr.xls	103.3	112.9	122.8	133.2	143.1	143.2	143.1	143.5	143.1
38 -	ES Window AC over 14,000 Btu hr.xls	521.1	569.8	619.5	672.1	722.2	722.3	722.2	724.0	722.2
39 -	ES Window AC under 14,000 Btu hr.xls	239.0	261.3	284.1	308.2	331.2	331.2	331.2	332.0	331.2
40 -	Fryer.xls	1,256.7	1,374.1	1,494.0	1,620.8	1,741.7	1,742.0	1,741.7	1,746.0	1,741.7
41 -	Griddles.xls	2,094.7	2,290.4	2,490.2	2,701.6	2,903.2	2,903.6	2,903.2	2,910.3	2,903.1
42 -	Head Pressure Control.xls	38,016.0	41,568.5	45,193.9	49,029.7	52,688.7	52,696.4	52,689.3	52,818.4	52,688.1
43 -	High Bay 2L T5HO.xls	7,801.8	8,530.9	9,274.9	10,062.1	10,813.0	10,814.6	10,813.1	10,839.6	10,812.9
44 -	High Bay 4L T5HO.xls	112,566.0	123,085.1	133,819.8	145,177.8	156,012.1	156,035.0	156,013.9	156,396.3	156,010.2
45 -	High Bay 6L T5HO.xls	31,895.3	34,875.9	37,917.5	41,135.8	44,205.7	44,212.2	44,206.2	44,314.5	44,205.2
46 -	High Bay 8L T5HO.xls	334,404.3	365,653.9	397,543.8	431,285.7	463,471.4	463,539.5	463,476.8	464,612.8	463,465.9
47 -	High Bay Fluorescent 4LF32T8.xls	5,244.3	5,734.4	6,234.5	6,763.7	7,268.4	7,269.5	7,268.5	7,286.3	7,268.3
48 -	High Bay Fluorescent 6LF32T8.xls	32,754.2	35,815.0	38,938.6	42,243.5	45,396.0	45,402.7	45,396.6	45,507.8	45,395.5
49 -	High Bay Fluorescent 8LF32T8.xls	22,122.4	24,189.7	26,299.4	28,531.6	30,660.8	30,665.3	30,661.2	30,736.3	30,660.4
50 -	High Efficiency Pumps HP 5.xls	46.8	51.2	55.6	60.3	64.8	64.8	64.8	65.0	64.8
51 -	Holding Cabinet Full Size Insulated.xls	2,250.8	2,461.1	2,675.7	2,902.8	3,119.5	3,119.9	3,119.5	3,127.1	3,119.4
52 -	Holding Cabinet Half Size Insulated.xls	762.4	833.6	906.3	983.3	1,056.7	1,056.8	1,056.7	1,059.3	1,056.6
53 -	Holding Cabinet Three Quarter Size Insulated.xls	1,207.6	1,320.5	1,435.6	1,557.5	1,673.7	1,674.0	1,673.8	1,677.9	1,673.7
54 -	HP 65,000 - 135,000.xls	36.9	40.3	43.9	47.6	51.1	51.1	51.1	51.3	51.1
55 -	HP 135,000 - 240,000.xls	78.4	85.8	93.3	101.2	108.7	108.7	108.7	109.0	108.7
56 -	HP greater than 240,000.xls	181.8	198.8	216.2	234.5	252.0	252.1	252.0	252.6	252.0
57 -	HP less than 65,000 1 Ph.xls	601.5	657.7	715.0	775.7	833.6	833.7	833.6	835.7	833.6
58 -	HP less than 65,000 3 Ph.xls	10.2	11.2	12.2	13.2	14.2	14.2	14.2	14.2	14.2
59 -	HP Water Heater 500 gal_day.xls	19,935.8	21,798.8	23,699.9	25,711.5	27,630.3	27,634.3	27,630.6	27,698.3	27,630.0
60 -	HP Water Heater 1000 gal_day.xls	13,403.3	14,655.8	15,934.0	17,286.4	18,576.4	18,579.2	18,576.6	18,622.2	18,576.2
61 -	HP Water Heater 1500 gal_day.xls	20,161.3	22,045.3	23,968.0	26,002.3	27,942.7	27,946.9	27,943.1	28,011.6	27,942.4
62 -	Icemaker, (100 to 500 lbs_day).xls	704.7	770.5	837.7	908.8	976.7	976.8	976.7	979.1	976.6
63 -	Icemaker, (500 to 1000 lbs_day).xls	1,149.4	1,256.8	1,366.4	1,482.4	1,593.0	1,593.2	1,593.0	1,596.9	1,593.0
64 -	Icemaker, (Greater Than 1000 lbs_day).xls	2,579.2	2,820.2	3,066.2	3,326.4	3,574.7	3,575.2	3,574.7	3,583.5	3,574.6
65 -	LED Auto Traffic Signals.xls	14,968.4	16,367.2	17,794.7	19,305.0	20,745.7	20,748.7	20,745.9	20,796.8	20,745.4
66 -	LED Exit Signs Electronic Fixtures (Retrofit Only).xls	20,230.5	22,121.0	24,050.2	26,091.5	28,038.6	28,042.8	28,039.0	28,107.7	28,038.3
67 -	LED Pedestrian Signals.xls	4,089.8	4,472.0	4,862.0	5,274.7	5,668.4	5,669.2	5,668.4	5,682.3	5,668.3
68 -	Light Tube.xls	393.6	430.3	467.9	507.6	545.4	545.5	545.5	546.8	545.4
69 -	Motors 1-5 HP - Incentives per participant.xls	22.4	24.5	26.6	28.9	31.1	31.1	31.1	31.1	31.1
70 -	Motors 25-100 HP - Incentives per participant.xls	104.9	114.7	124.7	135.3	145.4	145.4	145.4	145.8	145.4
71 -	Night covers for displays.xls	95.6	104.5	113.6	123.2	132.4	132.5	132.4	132.8	132.4
72 -	Occupancy Sensors over 500 Watts.xls	1,832.3	2,003.5	2,178.2	2,363.1	2,539.4	2,539.8	2,539.5	2,545.7	2,539.4
73 -	Occupancy Sensors under 500 Watts .xls	8,512.4	9,307.9	10,119.6	10,978.5	11,797.8	11,799.6	11,798.0	11,826.9	11,797.7
74 -	Packaged Terminal AC.xls	298.6	326.5	355.0	385.1	413.8	413.9	413.9	414.9	413.8
75 -	Pellet Dryer Tanks & Ducts 3in dia.xls	9.8	10.7	11.6	12.6	13.6	13.6	13.6	13.6	13.6
76 -	Pellet Dryer Tanks & Ducts 5in dia.xls	17.4	19.0	20.7	22.4	24.1	24.1	24.1	24.2	24.1
77 -	Pellet Dryer Tanks & Ducts 8in dia.xls	30.2	33.0	35.9	38.9	41.8	41.8	41.8	41.9	41.8

	MWH									
	Year	2025	2026	2027	2028	2029	2030	2031	2032	2033
78 -	Plug Load Occupancy Sensors Document Stations.xls	2,952.8	3,228.8	3,510.4	3,808.3	4,092.5	4,093.1	4,092.6	4,102.6	4,092.5
79 -	Pulse Start Metal Halide (retrofit only).xls	3,656.2	3,997.9	4,346.6	4,715.5	5,067.4	5,068.2	5,067.5	5,079.9	5,067.3
80 -	Pumps HP 7l5.xls	70.2	76.8	83.4	90.5	97.3	97.3	97.3	97.5	97.3
81 -	Pumps HP 10.xls	46.8	51.2	55.6	60.4	64.9	64.9	64.9	65.0	64.9
82 -	Pumps HP 15.xls	70.2	76.8	83.4	90.5	97.3	97.3	97.3	97.5	97.3
83 -	Pumps HP 20.xls	93.6	102.3	111.3	120.7	129.7	129.7	129.7	130.0	129.7
84 -	Setback_Programmable Thermostat.xls	25,643.8	28,040.2	30,485.6	33,073.1	35,541.3	35,546.5	35,541.7	35,628.8	35,540.9
85 -	Solid Door Reach-in Freezer, (19 to 60 cu ft).xls	216.5	236.7	257.3	279.2	300.0	300.1	300.0	300.8	300.0
86 -	Solid Door Reach-in Freezer, (Greater Than 60cu ft).xls	206.2	225.5	245.2	266.0	285.8	285.9	285.8	286.5	285.8
87 -	Solid Door Reach-in Freezer, (Less Than19 cu ft).xls	221.6	242.3	263.4	285.8	307.1	307.2	307.1	307.9	307.1
88 -	Solid Door Reach-in Refrig. (19 to 60 cu ft).xls	456.0	498.6	542.1	588.1	632.0	632.0	632.0	633.5	631.9
89 -	Solid Door Reach-in Refrig. (Greater Than 60cu ft).xls	580.3	634.6	689.9	748.5	804.3	804.4	804.3	806.3	804.3
90 -	Solid Door Reach-in Refrig. (Less Than 19 cu ft).xls	385.9	421.9	458.7	497.7	534.8	534.9	534.8	536.1	534.8
91 -	Steamer.xls	14,414.6	15,761.7	17,136.3	18,590.7	19,978.1	19,981.0	19,978.3	20,027.3	19,977.9
92 -	T-8 2ft 1 lamp.xls	127.8	139.7	151.9	164.8	177.1	177.1	177.1	177.5	177.1
93 -	T-8 2ft 2 lamp.xls	633.7	692.9	753.3	817.2	878.2	878.4	878.2	880.4	878.2
94 -	T-8 2ft 3 lamp.xls	623.3	681.5	740.9	803.8	863.8	863.9	863.8	865.9	863.8
95 -	T-8 2ft 4 lamp.xls	20,536.1	22,455.2	24,413.6	26,485.7	28,462.3	28,466.5	28,462.6	28,532.4	28,462.0
96 -	T-8 3ft 1 lamp.xls	173.7	190.0	206.5	224.1	240.8	240.8	240.8	241.4	240.8
97 -	T-8 3ft 2 lamp.xls	316.8	346.4	376.7	408.6	439.1	439.2	439.1	440.2	439.1
98 -	T-8 3ft 3 lamp.xls	189.1	206.7	224.8	243.8	262.0	262.1	262.0	262.7	262.0
99 -	T-8 3ft 4 lamp.xls	12,465.1	13,629.9	14,818.6	16,076.4	17,276.1	17,278.6	17,276.3	17,318.7	17,275.9
100 -	T-8 4ft 1 lamp.xls	1,757.6	1,921.8	2,089.5	2,266.8	2,436.0	2,436.3	2,436.0	2,442.0	2,435.9
101 -	T-8 4ft 2 lamp.xls	5,313.3	5,809.8	6,316.5	6,852.6	7,364.0	7,365.1	7,364.1	7,382.1	7,363.9
102 -	T-8 4ft 3 lamp.xls	2,002.7	2,189.9	2,380.9	2,583.0	2,775.7	2,776.1	2,775.8	2,782.6	2,775.7
103 -	T-8 4ft 4 lamp.xls	119,563.3	130,736.3	142,138.3	154,202.4	165,710.1	165,734.4	165,712.0	166,118.2	165,708.1
104 -	T-8 8ft 1 lamp.xls	347.5	379.9	413.1	448.1	481.6	481.7	481.6	482.8	481.6
105 -	T-8 8ft 2 lamp.xls	1,869.8	2,044.5	2,222.8	2,411.5	2,591.4	2,591.8	2,591.4	2,597.8	2,591.4
106 -	T-8 HO 8 ft 1 Lamp.xls	157.4	172.1	187.1	203.0	218.1	218.1	218.1	218.7	218.1
107 -	T-8 HO 8 ft 2 Lamp.xls	1,563.3	1,709.4	1,858.5	2,016.3	2,166.7	2,167.0	2,166.8	2,172.1	2,166.7
108 -	Thermal Storage Irg C&I.xls	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
109 -	Variable Frequency Drive Pumps HP 5.xls	1,130.5	1,236.2	1,344.0	1,458.1	1,566.9	1,567.1	1,566.9	1,570.7	1,566.8
110 -	Vending Equipment Controller.xls	5,759.2	6,297.4	6,846.7	7,427.8	7,982.1	7,983.3	7,982.2	8,001.7	7,982.0
111 -	VFD HP 1l5.xls	339.2	370.9	403.2	437.4	470.1	470.1	470.1	471.2	470.1
112 -	VFD HP 2.xls	452.2	494.5	537.6	583.2	626.7	626.8	626.8	628.3	626.7
113 -	VFD HP 3.xls	678.3	741.7	806.4	874.8	940.1	940.3	940.1	942.4	940.1
114 -	VFD HP 7l5.xls	1,695.8	1,854.3	2,016.0	2,187.1	2,350.3	2,350.6	2,350.3	2,356.1	2,350.3
115 -	VFD HP 10.xls	2,826.3	3,090.4	3,360.0	3,645.1	3,917.2	3,917.7	3,917.2	3,926.8	3,917.1
116 -	VFD HP 15.xls	4,239.5	4,635.6	5,039.9	5,467.7	5,875.7	5,876.6	5,875.8	5,890.2	5,875.7
117 -	VFD HP 20.xls	5,652.6	6,180.9	6,719.9	7,290.3	7,834.3	7,835.5	7,834.4	7,853.6	7,834.2
118 -	VFD HP 25.xls	2,067.1	2,260.2	2,457.4	2,665.9	2,864.9	2,865.3	2,864.9	2,871.9	2,864.9
119 -	VFD HP 30.xls	2,480.5	2,712.3	2,948.8	3,199.1	3,437.9	3,438.4	3,437.9	3,446.3	3,437.8
120 -	VFD HP 40.xls	3,307.3	3,616.4	3,931.8	4,265.5	4,583.8	4,584.5	4,583.9	4,595.1	4,583.8
121 -	VFD HP 50.xls	4,134.1	4,520.5	4,914.7	5,331.9	5,729.8	5,730.6	5,729.8	5,743.9	5,729.7
122 -	Window Film.xls	1,465.7	1,602.6	1,742.4	1,890.3	2,031.4	2,031.7	2,031.4	2,036.4	2,031.3
123 -	Zone Shutoff Valves -COMPRESSED AIR.xls	3,498.4	3,825.3	4,158.9	4,511.9	4,848.6	4,849.3	4,848.7	4,860.5	4,848.5
	Total	2,054,571.3	2,246,568.3	2,442,499.0	2,649,808.4	2,847,556.4	2,847,974.7	2,847,589.9	2,854,569.2	2,847,522.9

	MW	HIGH CASE															
	Year	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
	Impact hour	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17
	Total MW	10.0	39.0	85.0	147.0	163.0	194.0	258.0	331.0	425.0	502.0	570.0	657.0	802.0	903.0	1,009.0	1,082.0
	Residential	5.59	21.80	47.50	82.15	91.10	108.42	144.19	184.99	237.52	280.55	318.56	367.18	448.22	504.66	563.90	604.70
	Non-Residential	4.41	17.20	37.50	64.85	71.90	85.58	113.81	146.01	187.48	221.45	251.44	289.82	353.78	398.34	445.10	477.30
	Residential																
1 -	Agency Kit and CFLs.xls	1.02	3.99	8.69	15.02	16.66	19.83	26.37	33.83	43.43	51.30	58.25	67.14	81.96	92.28	103.12	110.58
2 -	Home Energy House Call - KIT.xls	0.49	1.89	4.13	7.13	7.91	9.42	12.52	16.07	20.63	24.37	27.67	31.89	38.93	43.83	48.97	52.52
3 -	K-12 Education Program- CFL Distribution.xls	1.56	6.07	13.22	22.86	25.35	30.17	40.12	51.48	66.09	78.07	88.64	102.17	124.72	140.43	156.91	168.27
4 -	K-12 Education Program- Curriculum.xls	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5 -	Low Income Weatherization- Refrigerator Replacement.xls	0.02	0.07	0.15	0.27	0.30	0.35	0.47	0.60	0.77	0.91	1.03	1.19	1.45	1.63	1.83	1.96
6 -	Low Income Weatherization- Tier 1.xls	0.01	0.05	0.10	0.17	0.19	0.23	0.30	0.39	0.50	0.59	0.67	0.77	0.94	1.06	1.18	1.27
7 -	Low Income Weatherization- Tier 2.xls	0.09	0.37	0.80	1.38	1.53	1.82	2.42	3.10	3.98	4.70	5.34	6.16	7.52	8.46	9.46	10.14
8 -	Multi-Family Assessments- KIT ONLY.xls	0.01	0.04	0.10	0.17	0.19	0.22	0.30	0.38	0.49	0.58	0.66	0.76	0.92	1.04	1.16	1.25
9 -	Online Audit w_EE kit.xls	0.10	0.40	0.88	1.52	1.69	2.01	2.67	3.43	4.40	5.20	5.90	6.80	8.30	9.35	10.44	11.20
10 -	Personalized Energy Report.xls	0.86	3.36	7.33	12.68	14.06	16.73	22.25	28.55	36.65	43.30	49.16	56.66	69.17	77.88	87.02	93.32
11 -	Smart Saver - CAC.xls	0.27	1.07	2.33	4.03	4.46	5.31	7.07	9.07	11.64	13.75	15.61	17.99	21.97	24.73	27.63	29.63
12 -	Smart Saver - Heat Pump.xls	0.12	0.47	1.03	1.79	1.98	2.36	3.14	4.02	5.16	6.10	6.93	7.98	9.75	10.97	12.26	13.15
13 -	Smart Saver - Res CFL Promo.xls	1.03	4.02	8.75	15.14	16.79	19.98	26.57	34.09	43.77	51.70	58.70	67.66	82.59	93.00	103.91	111.43
	Total	**5.6**	**21.8**	**47.5**	**82.2**	**91.1**	**108.4**	**144.2**	**185.0**	**237.5**	**280.6**	**318.6**	**367.2**	**448.2**	**504.7**	**563.9**	**604.7**
	Non Residential																
1 -	1 Lamp T-5 HO with Elec Ballast replacing T-12.xls	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2 -	1 Lamp T-5 with Elec Ballast replacing T-12.xls	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3 -	2 Lamp T-5 replacing T-12.xls	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4 -	2 Lamp T-5HO replacing T-12.xls	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5 -	3 Lamp T-5 replacing T-12.xls	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6 -	3 Lamp T-5HO replacing T-12.xls	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7 -	4 Lamp T-5 replacing T-12.xls	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8 -	4 Lamp T-5HO replacing T-12.xls	0.01	0.02	0.05	0.09	0.10	0.12	0.16	0.20	0.26	0.31	0.35	0.40	0.49	0.55	0.62	0.66
9 -	42W 8 Lamp Hi Bay CFL.xls	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.03	0.03	0.04	0.04	0.04
10 -	80Plus NC_Desktop Unit.xls	0.07	0.28	0.62	1.07	1.18	1.41	1.87	2.40	3.08	3.64	4.14	4.77	5.82	6.55	7.32	7.85
11 -	80Plus NC_Server Unit.xls	0.00	0.01	0.03	0.05	0.05	0.06	0.08	0.11	0.14	0.16	0.18	0.21	0.26	0.29	0.32	0.35
12 -	AC 65,000 - 135,000.xls	0.01	0.05	0.11	0.20	0.22	0.26	0.35	0.45	0.57	0.68	0.77	0.88	1.08	1.21	1.36	1.46
13 -	AC 135,000 - 240,000.xls	0.06	0.25	0.55	0.95	1.05	1.25	1.66	2.14	2.74	3.24	3.68	4.24	5.17	5.83	6.51	6.98
14 -	AC 240,000 - 760,000.xls	0.01	0.04	0.08	0.14	0.15	0.18	0.24	0.30	0.39	0.46	0.52	0.60	0.74	0.83	0.93	0.99
15 -	AC greater than 760,000.xls	0.00	0.00	0.01	0.01	0.02	0.02	0.02	0.03	0.04	0.05	0.05	0.06	0.08	0.08	0.09	0.10
16 -	AC less than 65,000 1 Ph Rooftop & Unitary.xls	0.01	0.02	0.04	0.08	0.08	0.10	0.13	0.17	0.22	0.26	0.30	0.34	0.42	0.47	0.52	0.56
17 -	AC less than 65,000 3 Ph.xls	0.00	0.01	0.03	0.05	0.06	0.07	0.10	0.12	0.16	0.19	0.21	0.25	0.30	0.34	0.38	0.40
18 -	Barrel Wraps (Inj Mold & Extruders).xls	0.01	0.04	0.10	0.16	0.18	0.22	0.29	0.37	0.48	0.56	0.64	0.74	0.90	1.01	1.13	1.21
19 -	CFL Fixture.xls	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20 -	CFL Screw In.xls	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21 -	Chilled Air EE Cooled Chillers.xls	0.12	0.48	1.05	1.82	2.02	2.40	3.19	4.09	5.26	6.21	7.05	8.12	9.92	11.17	12.48	13.38

	MW	HIGH CASE															
	Year	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
22 -	Chilled Water EE Cooled Chillers 150 - 300 ton.xls	0.20	0.77	1.69	2.92	3.24	3.85	5.12	6.57	8.44	9.97	11.32	13.04	15.92	17.93	20.03	21.48
23 -	Chilled Water EE Cooled Chillers greater than 300 ton.xls	0.40	1.56	3.40	5.89	6.53	7.77	10.33	13.26	17.02	20.11	22.83	26.31	32.12	36.17	40.41	43.34
24 -	Chilled Water EE Cooled Chillers less than150 ton.xls	0.01	0.04	0.10	0.17	0.19	0.22	0.29	0.38	0.49	0.57	0.65	0.75	0.92	1.03	1.15	1.24
25 -	Chilled Water Reset Air Cooled 300-400 tons.xls	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26 -	Chilled Water Reset Air Cooled 400-500 tons.xls	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27 -	Chilled Water Reset Water Cooled 0-1000 tons.xls	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28 -	Chilled Water Reset Water Cooled 1000-2000 tons.xls	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29 -	Chilled Water Reset Water Cooled 2000-3000 tons.xls	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30 -	Combi Oven, (90 lbs_hr).xls	0.01	0.06	0.12	0.21	0.23	0.28	0.37	0.48	0.61	0.72	0.82	0.95	1.15	1.30	1.45	1.56
31 -	Commercial Clothes Washers - Electric Dryer & Washer.xls	0.03	0.10	0.22	0.39	0.43	0.51	0.68	0.87	1.12	1.33	1.51	1.74	2.12	2.38	2.66	2.86
32 -	Commercial Clothes Washers - Washer Only.xls	0.01	0.04	0.09	0.16	0.18	0.22	0.29	0.37	0.47	0.56	0.63	0.73	0.89	1.00	1.12	1.20
33 -	Convection Oven.xls	0.01	0.02	0.05	0.08	0.09	0.11	0.15	0.19	0.24	0.29	0.33	0.38	0.46	0.52	0.58	0.62
34 -	Custom Rebate.xls	1.03	4.01	8.74	15.12	16.76	19.95	26.53	34.04	43.71	51.63	58.62	67.57	82.48	92.87	103.77	111.28
35 -	Engineered Nozzles - COMPRESS AIR.xls	0.07	0.27	0.58	1.00	1.11	1.32	1.76	2.25	2.89	3.42	3.88	4.47	5.46	6.14	6.87	7.36
36 -	ES Sleeve AC over 14,000 Btu hr.xls	0.00	0.00	0.01	0.01	0.01	0.01	0.02	0.02	0.03	0.04	0.04	0.05	0.06	0.07	0.08	0.08
37 -	ES Sleeve AC under 14,000 Btu hr.xls	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.03	0.03	0.03	0.04
38 -	ES Window AC over 14,000 Btu hr.xls	0.00	0.01	0.01	0.02	0.03	0.03	0.04	0.06	0.07	0.09	0.10	0.11	0.14	0.15	0.17	0.18
39 -	ES Window AC under 14,000 Btu hr.xls	0.00	0.00	0.01	0.01	0.01	0.02	0.02	0.03	0.03	0.04	0.04	0.05	0.06	0.07	0.08	0.08
40 -	Fryer.xls	0.00	0.01	0.02	0.04	0.04	0.05	0.06	0.08	0.10	0.12	0.14	0.16	0.20	0.22	0.25	0.27
41 -	Griddles.xls	0.01	0.02	0.04	0.08	0.09	0.10	0.14	0.17	0.22	0.26	0.30	0.34	0.42	0.47	0.53	0.57
42 -	Head Pressure Control.xls	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
43 -	High Bay 2L T5HO.xls	0.02	0.09	0.19	0.32	0.36	0.43	0.57	0.73	0.93	1.10	1.25	1.44	1.76	1.98	2.21	2.37
44 -	High Bay 4L T5HO.xls	0.34	1.34	2.91	5.04	5.58	6.65	8.84	11.34	14.56	17.20	19.53	22.51	27.47	30.93	34.56	37.06
45 -	High Bay 6L T5HO.xls	0.11	0.42	0.91	1.57	1.74	2.07	2.75	3.53	4.53	5.35	6.07	7.00	8.54	9.62	10.75	11.53
46 -	High Bay 8L T5HO.xls	0.87	3.41	7.42	12.84	14.23	16.94	22.53	28.90	37.11	43.84	49.77	57.37	70.03	78.85	88.11	94.48
47 -	High Bay Fluorescent 4LF32T8.xls	0.02	0.07	0.15	0.26	0.29	0.34	0.45	0.58	0.74	0.88	1.00	1.15	1.40	1.58	1.77	1.90
48 -	High Bay Fluorescent 6LF32T8.xls	0.11	0.43	0.93	1.61	1.78	2.12	2.82	3.62	4.65	5.49	6.24	7.19	8.77	9.88	11.04	11.84
49 -	High Bay Fluorescent 8LF32T8.xls	0.07	0.29	0.63	1.09	1.20	1.43	1.91	2.45	3.14	3.71	4.21	4.85	5.93	6.67	7.46	8.00
50 -	High Efficiency Pumps HP 5.xls	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
51 -	Holding Cabinet Full Size Insulated.xls	0.00	0.02	0.04	0.06	0.07	0.08	0.11	0.14	0.18	0.21	0.24	0.27	0.33	0.37	0.42	0.45
52 -	Holding Cabinet Half Size Insulated.xls	0.00	0.01	0.01	0.02	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09	0.11	0.13	0.14	0.15
53 -	Holding Cabinet Three Quarter Size Insulated.xls	0.00	0.01	0.02	0.03	0.04	0.04	0.06	0.07	0.09	0.11	0.13	0.15	0.18	0.20	0.22	0.24
54 -	HP 65,000 - 135,000.xls	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01
55 -	HP 135,000 - 240,000.xls	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.02
56 -	HP greater than 240,000.xls	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.03	0.03	0.03	0.03
57 -	HP less than 65,000 1 Ph.xls	0.00	0.01	0.01	0.02	0.02	0.03	0.04	0.05	0.06	0.08	0.09	0.10	0.12	0.14	0.15	0.16
58 -	HP less than 65,000 3 Ph.xls	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
59 -	HP Water Heater 500 gal_day.xls	0.03	0.12	0.26	0.44	0.49	0.58	0.78	1.00	1.28	1.51	1.71	1.98	2.41	2.72	3.03	3.25
60 -	HP Water Heater 1000 gal_day.xls	0.02	0.08	0.17	0.30	0.33	0.39	0.52	0.67	0.86	1.01	1.15	1.33	1.62	1.83	2.04	2.19
61 -	HP Water Heater 1500 gal_day.xls	0.03	0.12	0.26	0.45	0.50	0.59	0.78	1.01	1.29	1.53	1.73	2.00	2.44	2.75	3.07	3.29
62 -	Icemaker, (100 to 500 lbs_day).xls	0.00	0.00	0.01	0.01	0.01	0.02	0.02	0.03	0.03	0.04	0.05	0.05	0.06	0.07	0.08	0.09
63 -	Icemaker, (500 to 1000 lbs_day).xls	0.00	0.01	0.01	0.02	0.02	0.03	0.03	0.04	0.06	0.07	0.08	0.09	0.11	0.12	0.13	0.14
64 -	Icemaker, (Greater Than 1000 lbs_day).xls	0.00	0.01	0.03	0.04	0.05	0.06	0.08	0.10	0.13	0.15	0.17	0.19	0.24	0.27	0.30	0.32

	MW	HIGH CASE															
	Year	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
65 -	LED Auto Traffic Signals.xls	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
66 -	LED Exit Signs Electronic Fixtures (Retrofit Only).xls	0.03	0.12	0.26	0.45	0.50	0.60	0.80	1.02	1.31	1.55	1.76	2.03	2.48	2.79	3.12	3.34
67 -	LED Pedestrian Signals.xls	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
68 -	Light Tube.xls	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
69 -	Motors 1-5 HP - Incentives per participant.xls	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
70 -	Motors 25-100 HP - Incentives per participant.xls	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
71 -	Night covers for displays.xls	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02
72 -	Occupancy Sensors over 500 Watts.xls	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
73 -	Occupancy Sensors under 500 Watts .xls	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
74 -	Packaged Terminal AC.xls	0.00	0.00	0.01	0.02	0.02	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.10	0.11	0.13	0.14
75 -	Pellet Dryer Tanks & Ducts 3in dia.xls	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
76 -	Pellet Dryer Tanks & Ducts 5in dia.xls	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
77 -	Pellet Dryer Tanks & Ducts 8in dia.xls	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
78 -	Plug Load Occupancy Sensors Document Stations.xls	0.00	0.01	0.03	0.04	0.05	0.06	0.08	0.10	0.13	0.15	0.17	0.20	0.24	0.27	0.30	0.33
79 -	Pulse Start Metal Halide (retrofit only).xls	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
80 -	Pumps HP 7.5.xls	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
81 -	Pumps HP 10.xls	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
82 -	Pumps HP 15.xls	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
83 -	Pumps HP 20.xls	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
84 -	Setback_Programmable Thermostat.xls	0.06	0.23	0.49	0.85	0.95	1.13	1.50	1.92	2.47	2.91	3.31	3.81	4.65	5.24	5.85	6.28
85 -	Solid Door Reach-in Freezer, (19 to 60 cu ft).xls	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.03	0.03
86 -	Solid Door Reach-in Freezer, (Greater Than 60cu ft).xls	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.03
87 -	Solid Door Reach-in Freezer, (Less Than19 cu ft).xls	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.03	0.03
88 -	Solid Door Reach-in Refrig. (19 to 60 cu ft).xls	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.02	0.02	0.03	0.03	0.03	0.04	0.05	0.05	0.06
89 -	Solid Door Reach-in Refrig. (Greater Than 60cu ft).xls	0.00	0.00	0.01	0.01	0.01	0.01	0.02	0.02	0.03	0.03	0.04	0.04	0.05	0.06	0.07	0.07
90 -	Solid Door Reach-in Refrig. (Less Than 19 cu ft).xls	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.03	0.03	0.04	0.04	0.04	0.05
91 -	Steamer.xls	0.03	0.11	0.24	0.42	0.46	0.55	0.73	0.94	1.20	1.42	1.61	1.86	2.27	2.56	2.86	3.06
92 -	T-8 2ft 1 lamp.xls	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
93 -	T-8 2ft 2 lamp.xls	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
94 -	T-8 2ft 3 lamp.xls	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
95 -	T-8 2ft 4 lamp.xls	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
96 -	T-8 3ft 1 lamp.xls	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
97 -	T-8 3ft 2 lamp.xls	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
98 -	T-8 3ft 3 lamp.xls	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
99 -	T-8 3ft 4 lamp.xls	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
100 -	T-8 4ft 1 lamp.xls	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
101 -	T-8 4ft 2 lamp.xls	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
102 -	T-8 4ft 3 lamp.xls	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
103 -	T-8 4ft 4 lamp.xls	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
104 -	T-8 8ft 1 lamp.xls	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
105 -	T-8 8ft 2 lamp.xls	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
106 -	T-8 HO 8 ft 1 Lamp.xls	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
107 -	T-8 HO 8 ft 2 Lamp.xls	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

	MW	HIGH CASE															
	Year	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
108 -	Thermal Storage lrg C&I.xls	0.50	1.94	4.23	7.31	8.11	9.65	12.84	16.47	21.15	24.98	28.36	32.69	39.91	44.93	50.21	53.84
109 -	Variable Frequency Drive Pumps HP 5.xls	0.00	0.01	0.02	0.03	0.04	0.04	0.06	0.07	0.09	0.11	0.12	0.14	0.18	0.20	0.22	0.24
110 -	Vending Equipment Controller.xls	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
111 -	VFD HP 1|5.xls	0.00	0.00	0.01	0.01	0.01	0.01	0.02	0.02	0.03	0.03	0.04	0.04	0.05	0.06	0.07	0.07
112 -	VFD HP 2.xls	0.00	0.00	0.01	0.01	0.01	0.02	0.02	0.03	0.04	0.04	0.05	0.06	0.07	0.08	0.09	0.09
113 -	VFD HP 3.xls	0.00	0.01	0.01	0.02	0.02	0.03	0.03	0.04	0.06	0.07	0.07	0.09	0.11	0.12	0.13	0.14
114 -	VFD HP 7|5.xls	0.00	0.01	0.03	0.05	0.05	0.06	0.08	0.11	0.14	0.17	0.19	0.22	0.26	0.30	0.33	0.36
115 -	VFD HP 10.xls	0.01	0.02	0.05	0.08	0.09	0.11	0.14	0.18	0.23	0.28	0.31	0.36	0.44	0.49	0.55	0.59
116 -	VFD HP 15.xls	0.01	0.03	0.07	0.12	0.13	0.16	0.21	0.27	0.35	0.41	0.47	0.54	0.66	0.74	0.83	0.89
117 -	VFD HP 20.xls	0.01	0.04	0.09	0.16	0.18	0.21	0.28	0.36	0.47	0.55	0.62	0.72	0.88	0.99	1.11	1.19
118 -	VFD HP 25.xls	0.00	0.02	0.03	0.06	0.07	0.08	0.10	0.13	0.17	0.20	0.23	0.26	0.32	0.36	0.40	0.43
119 -	VFD HP 30.xls	0.00	0.02	0.04	0.07	0.08	0.09	0.12	0.16	0.20	0.24	0.27	0.32	0.39	0.43	0.49	0.52
120 -	VFD HP 40.xls	0.01	0.03	0.05	0.09	0.10	0.12	0.17	0.21	0.27	0.32	0.37	0.42	0.51	0.58	0.65	0.69
121 -	VFD HP 50.xls	0.01	0.03	0.07	0.12	0.13	0.16	0.21	0.27	0.34	0.40	0.46	0.53	0.64	0.72	0.81	0.87
122 -	Window Film.xls	0.00	0.01	0.02	0.04	0.04	0.05	0.06	0.08	0.11	0.12	0.14	0.16	0.20	0.22	0.25	0.27
123 -	Zone Shutoff Valves -COMPRESSED AIR.xls	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Total	4.41	17.20	37.50	64.85	71.90	85.58	113.81	146.01	187.48	221.45	251.44	289.82	353.78	398.34	445.10	477.30

	MW									
	Year	2025	2026	2027	2028	2029	2030	2031	2032	2033
	Impact hour	17	17	17	17	17	17	17	17	17
	Total MW	1,191.0	1,302.0	1,462.0	1,582.0	1,704.0	1,704.0	1,704.0	1,704.0	1,704.0
	Residential	665.62	727.65	817.07	884.14	952.32	952.32	952.32	952.32	952.32
	Non-Residential	525.38	574.35	644.93	697.86	751.68	751.68	751.68	751.68	751.68
	Residential									
1 -	Agency Kit and CFLs.xls	121.71	133.06	149.41	161.67	174.14	174.14	174.14	174.14	174.14
2 -	Home Energy House Call - KIT.xls	57.81	63.19	70.96	76.78	82.71	82.71	82.71	82.71	82.71
3 -	K-12 Education Program- CFL Distribution.xls	185.22	202.48	227.36	246.02	265.00	265.00	265.00	265.00	265.00
4 -	K-12 Education Program- Curriculum.xls	-	-	-	-	-	-	-	-	-
5 -	Low Income Weatherization- Refrigerator Replacement.xls	2.16	2.36	2.65	2.86	3.08	3.08	3.08	3.08	3.08
6 -	Low Income Weatherization- Tier 1.xls	1.40	1.53	1.71	1.85	2.00	2.00	2.00	2.00	2.00
7 -	Low Income Weatherization- Tier 2.xls	11.16	12.20	13.70	14.83	15.97	15.97	15.97	15.97	15.97
8 -	Multi-Family Assessments- KIT ONLY.xls	1.37	1.50	1.68	1.82	1.96	1.96	1.96	1.96	1.96
9 -	Online Audit w_EE kit.xls	12.33	13.48	15.13	16.37	17.64	17.64	17.64	17.64	17.64
10 -	Personalized Energy Report.xls	102.72	112.29	126.09	136.44	146.96	146.96	146.96	146.96	146.96
11 -	Smart Saver - CAC.xls	32.62	35.66	40.04	43.33	46.67	46.67	46.67	46.67	46.67
12 -	Smart Saver - Heat Pump.xls	14.47	15.82	17.77	19.22	20.71	20.71	20.71	20.71	20.71
13 -	Smart Saver - Res CFL Promo.xls	122.66	134.09	150.56	162.92	175.49	175.49	175.49	175.49	175.49
	Total	**665.6**	**727.7**	**817.1**	**884.1**	**952.3**	**952.3**	**952.3**	**952.3**	**952.3**
	Non Residential									
1 -	1 Lamp T-5 HO with Elec Ballast replacing T-12.xls	-	-	-	-	-	-	-	-	-
2 -	1 Lamp T-5 with Elec Ballast replacing T-12.xls	-	-	-	-	-	-	-	-	-
3 -	2 Lamp T-5 replacing T-12.xls	-	-	-	-	-	-	-	-	-
4 -	2 Lamp T-5HO replacing T-12.xls	-	-	-	-	-	-	-	-	-
5 -	3 Lamp T-5 replacing T-12.xls	-	-	-	-	-	-	-	-	-
6 -	3 Lamp T-5HO replacing T-12.xls	-	-	-	-	-	-	-	-	-
7 -	4 Lamp T-5 replacing T-12.xls	-	-	-	-	-	-	-	-	-
8 -	4 Lamp T-5HO replacing T-12.xls	0.73	0.80	0.90	0.97	1.05	1.05	1.05	1.05	1.05
9 -	42W 8 Lamp Hi Bay CFL.xls	0.05	0.05	0.06	0.06	0.07	0.07	0.07	0.07	0.07
10 -	80Plus NC_Desktop Unit.xls	8.64	9.45	10.61	11.48	12.37	12.37	12.37	12.37	12.37
11 -	80Plus NC_Server Unit.xls	0.38	0.42	0.47	0.51	0.55	0.55	0.55	0.55	0.55
12 -	AC 65,000 - 135,000.xls	1.60	1.75	1.97	2.13	2.29	2.29	2.29	2.29	2.29
13 -	AC 135,000 - 240,000.xls	7.68	8.40	9.43	10.21	10.99	10.99	10.99	10.99	10.99
14 -	AC 240,000 - 760,000.xls	1.09	1.20	1.34	1.45	1.57	1.57	1.57	1.57	1.57
15 -	AC greater than 760,000.xls	0.11	0.12	0.14	0.15	0.16	0.16	0.16	0.16	0.16
16 -	AC less than 65,000 1 Ph Rooftop & Unitary.xls	0.62	0.68	0.76	0.82	0.88	0.88	0.88	0.88	0.88
17 -	AC less than 65,000 3 Ph.xls	0.45	0.49	0.55	0.59	0.64	0.64	0.64	0.64	0.64
18 -	Barrel Wraps (Inj Mold & Extruders).xls	1.34	1.46	1.64	1.77	1.91	1.91	1.91	1.91	1.91
19 -	CFL Fixture.xls	-	-	-	-	-	-	-	-	-
20 -	CFL Screw In.xls	-	-	-	-	-	-	-	-	-
21 -	Chilled Air EE Cooled Chillers.xls	14.73	16.10	18.08	19.56	21.07	21.07	21.07	21.07	21.07

	MW									
	Year	2025	2026	2027	2028	2029	2030	2031	2032	2033
22 -	Chilled Water EE Cooled Chillers 150 - 300 ton.xls	23.64	25.85	29.02	31.40	33.83	33.83	33.83	33.83	33.83
23 -	Chilled Water EE Cooled Chillers greater than 300 ton.xls	47.70	52.15	58.56	63.36	68.25	68.25	68.25	68.25	68.25
24 -	Chilled Water EE Cooled Chillers less than150 ton.xls	1.36	1.49	1.67	1.81	1.95	1.95	1.95	1.95	1.95
25 -	Chilled Water Reset Air Cooled 300-400 tons.xls	-	-	-	-	-	-	-	-	-
26 -	Chilled Water Reset Air Cooled 400-500 tons.xls	-	-	-	-	-	-	-	-	-
27 -	Chilled Water Reset Water Cooled 0-1000 tons.xls	-	-	-	-	-	-	-	-	-
28 -	Chilled Water Reset Water Cooled 1000-2000 tons.xls	-	-	-	-	-	-	-	-	-
29 -	Chilled Water Reset Water Cooled 2000-3000 tons.xls	-	-	-	-	-	-	-	-	-
30 -	Combi Oven, (90 lbs_hr).xls	1.72	1.88	2.11	2.28	2.45	2.45	2.45	2.45	2.45
31 -	Commercial Clothes Washers - Electric Dryer & Washer.xls	3.15	3.44	3.86	4.18	4.50	4.50	4.50	4.50	4.50
32 -	Commercial Clothes Washers - Washer Only.xls	1.32	1.45	1.63	1.76	1.89	1.89	1.89	1.89	1.89
33 -	Convection Oven.xls	0.69	0.75	0.84	0.91	0.98	0.98	0.98	0.98	0.98
34 -	Custom Rebate.xls	122.49	133.90	150.36	162.70	175.24	175.24	175.24	175.24	175.24
35 -	Engineered Nozzles - COMPRESS AIR.xls	8.10	8.86	9.95	10.76	11.59	11.59	11.59	11.59	11.59
36 -	ES Sleeve AC over 14,000 Btu hr.xls	0.09	0.10	0.11	0.12	0.13	0.13	0.13	0.13	0.13
37 -	ES Sleeve AC under 14,000 Btu hr.xls	0.04	0.04	0.05	0.05	0.06	0.06	0.06	0.06	0.06
38 -	ES Window AC over 14,000 Btu hr.xls	0.20	0.22	0.25	0.27	0.29	0.29	0.29	0.29	0.29
39 -	ES Window AC under 14,000 Btu hr.xls	0.09	0.10	0.11	0.12	0.13	0.13	0.13	0.13	0.13
40 -	Fryer.xls	0.29	0.32	0.36	0.39	0.42	0.42	0.42	0.42	0.42
41 -	Griddles.xls	0.62	0.68	0.77	0.83	0.89	0.89	0.89	0.89	0.89
42 -	Head Pressure Control.xls	-	-	-	-	-	-	-	-	-
43 -	High Bay 2L T5HO.xls	2.61	2.86	3.21	3.47	3.74	3.74	3.74	3.74	3.74
44 -	High Bay 4L T5HO.xls	40.80	44.60	50.08	54.19	58.37	58.37	58.37	58.37	58.37
45 -	High Bay 6L T5HO.xls	12.69	13.87	15.58	16.85	18.15	18.15	18.15	18.15	18.15
46 -	High Bay 8L T5HO.xls	104.00	113.70	127.67	138.15	148.80	148.80	148.80	148.80	148.80
47 -	High Bay Fluorescent 4LF32T8.xls	2.09	2.28	2.56	2.77	2.98	2.98	2.98	2.98	2.98
48 -	High Bay Fluorescent 6LF32T8.xls	13.03	14.24	16.00	17.31	18.64	18.64	18.64	18.64	18.64
49 -	High Bay Fluorescent 8LF32T8.xls	8.80	9.62	10.80	11.69	12.59	12.59	12.59	12.59	12.59
50 -	High Efficiency Pumps HP 5.xls	-	-	-	-	-	-	-	-	-
51 -	Holding Cabinet Full Size Insulated.xls	0.49	0.54	0.60	0.65	0.70	0.70	0.70	0.70	0.70
52 -	Holding Cabinet Half Size Insulated.xls	0.17	0.18	0.20	0.22	0.24	0.24	0.24	0.24	0.24
53 -	Holding Cabinet Three Quarter Size Insulated.xls	0.26	0.29	0.32	0.35	0.38	0.38	0.38	0.38	0.38
54 -	HP 65,000 - 135,000.xls	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.02
55 -	HP 135,000 - 240,000.xls	0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
56 -	HP greater than 240,000.xls	0.04	0.04	0.05	0.05	0.05	0.05	0.05	0.05	0.05
57 -	HP less than 65,000 1 Ph.xls	0.18	0.20	0.22	0.24	0.26	0.26	0.26	0.26	0.26
58 -	HP less than 65,000 3 Ph.xls	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
59 -	HP Water Heater 500 gal_day.xls	3.58	3.92	4.40	4.76	5.12	5.12	5.12	5.12	5.12
60 -	HP Water Heater 1000 gal_day.xls	2.41	2.63	2.96	3.20	3.45	3.45	3.45	3.45	3.45
61 -	HP Water Heater 1500 gal_day.xls	3.62	3.96	4.45	4.81	5.18	5.18	5.18	5.18	5.18
62 -	Icemaker, (100 to 500 lbs_day).xls	0.10	0.11	0.12	0.13	0.14	0.14	0.14	0.14	0.14
63 -	Icemaker, (500 to 1000 lbs_day).xls	0.16	0.17	0.19	0.21	0.22	0.22	0.22	0.22	0.22
64 -	Icemaker, (Greater Than 1000 lbs_day).xls	0.35	0.38	0.43	0.47	0.50	0.50	0.50	0.50	0.50

	MW Year	2025	2026	2027	2028	2029	2030	2031	2032	2033
65 -	LED Auto Traffic Signals.xls	-	-	-	-	-	-	-	-	-
66 -	LED Exit Signs Electronic Fixtures (Retrofit Only).xls	3.68	4.02	4.52	4.89	5.26	5.26	5.26	5.26	5.26
67 -	LED Pedestrian Signals.xls	-	-	-	-	-	-	-	-	-
68 -	Light Tube.xls	-	-	-	-	-	-	-	-	-
69 -	Motors 1-5 HP - Incentives per participant.xls	-	-	-	-	-	-	-	-	-
70 -	Motors 25-100 HP - Incentives per participant.xls	-	-	-	-	-	-	-	-	-
71 -	Night covers for displays.xls	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
72 -	Occupancy Sensors over 500 Watts.xls	-	-	-	-	-	-	-	-	-
73 -	Occupancy Sensors under 500 Watts .xls	-	-	-	-	-	-	-	-	-
74 -	Packaged Terminal AC.xls	0.15	0.16	0.18	0.20	0.21	0.21	0.21	0.21	0.21
75 -	Pellet Dryer Tanks & Ducts 3in dia.xls	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
76 -	Pellet Dryer Tanks & Ducts 5in dia.xls	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
77 -	Pellet Dryer Tanks & Ducts 8in dia.xls	-	-	-	-	-	-	-	-	-
78 -	Plug Load Occupancy Sensors Document Stations.xls	0.36	0.39	0.44	0.48	0.51	0.51	0.51	0.51	0.51
79 -	Pulse Start Metal Halide (retrofit only).xls	-	-	-	-	-	-	-	-	-
80 -	Pumps HP 7I5.xls	-	-	-	-	-	-	-	-	-
81 -	Pumps HP 10.xls	-	-	-	-	-	-	-	-	-
82 -	Pumps HP 15.xls	-	-	-	-	-	-	-	-	-
83 -	Pumps HP 20.xls	-	-	-	-	-	-	-	-	-
84 -	Setback_Programmable Thermostat.xls	6.91	7.55	8.48	9.18	9.89	9.89	9.89	9.89	9.89
85 -	Solid Door Reach-in Freezer, (19 to 60 cu ft).xls	0.03	0.03	0.04	0.04	0.04	0.04	0.04	0.04	0.04
86 -	Solid Door Reach-in Freezer, (Greater Than 60cu ft).xls	0.03	0.03	0.03	0.04	0.04	0.04	0.04	0.04	0.04
87 -	Solid Door Reach-in Freezer, (Less Than19 cu ft).xls	0.03	0.03	0.04	0.04	0.04	0.04	0.04	0.04	0.04
88 -	Solid Door Reach-in Refrig, (19 to 60 cu ft).xls	0.06	0.07	0.08	0.08	0.09	0.09	0.09	0.09	0.09
89 -	Solid Door Reach-in Refrig, (Greater Than 60cu ft).xls	0.08	0.09	0.10	0.11	0.11	0.11	0.11	0.11	0.11
90 -	Solid Door Reach-in Refrig, (Less Than 19 cu ft).xls	0.05	0.06	0.06	0.07	0.08	0.08	0.08	0.08	0.08
91 -	Steamer.xls	3.37	3.68	4.14	4.48	4.82	4.82	4.82	4.82	4.82
92 -	T-8 2ft 1 lamp.xls	-	-	-	-	-	-	-	-	-
93 -	T-8 2ft 2 lamp.xls	-	-	-	-	-	-	-	-	-
94 -	T-8 2ft 3 lamp.xls	-	-	-	-	-	-	-	-	-
95 -	T-8 2ft 4 lamp.xls	-	-	-	-	-	-	-	-	-
96 -	T-8 3ft 1 lamp.xls	-	-	-	-	-	-	-	-	-
97 -	T-8 3ft 2 lamp.xls	-	-	-	-	-	-	-	-	-
98 -	T-8 3ft 3 lamp.xls	-	-	-	-	-	-	-	-	-
99 -	T-8 3ft 4 lamp.xls	-	-	-	-	-	-	-	-	-
100 -	T-8 4ft 1 lamp.xls	-	-	-	-	-	-	-	-	-
101 -	T-8 4ft 2 lamp.xls	-	-	-	-	-	-	-	-	-
102 -	T-8 4ft 3 lamp.xls	-	-	-	-	-	-	-	-	-
103 -	T-8 4ft 4 lamp.xls	-	-	-	-	-	-	-	-	-
104 -	T-8 8ft 1 lamp.xls	-	-	-	-	-	-	-	-	-
105 -	T-8 8ft 2 lamp.xls	-	-	-	-	-	-	-	-	-
106 -	T-8 HO 8 ft 1 Lamp.xls	-	-	-	-	-	-	-	-	-
107 -	T-8 HO 8 ft 2 Lamp.xls	-	-	-	-	-	-	-	-	-

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	MW									
	Year	2025	2026	2027	2028	2029	2030	2031	2032	2033
108 -	Thermal Storage lrg C&I.xls	59.27	64.79	72.75	78.72	84.79	84.79	84.79	84.79	84.79
109 -	Variable Frequency Drive Pumps HP 5.xls	0.26	0.29	0.32	0.35	0.37	0.37	0.37	0.37	0.37
110 -	Vending Equipment Controller.xls	-	-	-	-	-	-	-	-	-
111 -	VFD HP 1l5.xls	0.08	0.09	0.10	0.10	0.11	0.11	0.11	0.11	0.11
112 -	VFD HP 2.xls	0.10	0.11	0.13	0.14	0.15	0.15	0.15	0.15	0.15
113 -	VFD HP 3.xls	0.16	0.17	0.19	0.21	0.22	0.22	0.22	0.22	0.22
114 -	VFD HP 7l5.xls	0.39	0.43	0.48	0.52	0.56	0.56	0.56	0.56	0.56
115 -	VFD HP 10.xls	0.65	0.71	0.80	0.87	0.93	0.93	0.93	0.93	0.93
116 -	VFD HP 15.xls	0.98	1.07	1.20	1.30	1.40	1.40	1.40	1.40	1.40
117 -	VFD HP 20.xls	1.31	1.43	1.60	1.73	1.87	1.87	1.87	1.87	1.87
118 -	VFD HP 25.xls	0.48	0.52	0.59	0.63	0.68	0.68	0.68	0.68	0.68
119 -	VFD HP 30.xls	0.57	0.63	0.70	0.76	0.82	0.82	0.82	0.82	0.82
120 -	VFD HP 40.xls	0.76	0.84	0.94	1.01	1.09	1.09	1.09	1.09	1.09
121 -	VFD HP 50.xls	0.95	1.04	1.17	1.27	1.37	1.37	1.37	1.37	1.37
122 -	Window Film.xls	0.30	0.32	0.36	0.39	0.42	0.42	0.42	0.42	0.42
123 -	Zone Shutoff Valves -COMPRESSED AIR.xls	-	-	-	-	-	-	-	-	-
	Total	525.38	574.35	644.93	697.86	751.68	751.68	751.68	751.68	751.68

CERTIFICATE OF SERVICE

I certify that a copy of Duke Energy Carolinas, LLC's Revised Pages 19 and 20 of the Direct Testimony of Richard G. Stevie originally filed on January 11, 2010; the Revised Exhibit Nos. 1 and 3 of the Direct Testimony of James A. Riddle originally filed on January 11, 2010; the Rebuttal Testimony of Richard G. Stevie, Ph.D.; and the Rebuttal Testimony of Robert A. McMurry in Docket Nos. E-100, Sub 118 and E-100, Sub 124 has been served by electronic mail (e-mail), hand delivery or by depositing a copy in the United States Mail, first class postage prepaid, properly addressed to parties of record.

This the 9th day of March, 2010.

Robert W. Kaylor
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