

**Docket No. 13-0498**  
**Staff Group Cross Exhibit 1**  
**Page 1**

**Ameren Illinois Company's**  
**Response to ELPC Data Requests**  
**Docket No. 13-0498**  
**Approval of the Energy Efficiency and Demand-Response Plan Pursuant to**  
**220 ILCS 5/8-103 and 220 ILCS 5/8-104**  
**Data Request Response Date: 10/8/2013**

ELPC 1.25

For the ground source heat pumps, smart strips and residential hot water heaters proposed to be eliminated from the portfolio (see page 36 of the Plan) please provide the a) screening inputs, b) assumptions, c) supporting documentation and recommendations that led to the elimination of each of these three measures.

**RESPONSE**

**Prepared By: Andrew Cottrell**  
**Title: Principal Consultant, Applied Energy Group, Inc.**  
**Phone Number: 732-447-1358**

Ground source heat pumps, smart strips, and hot water heaters were excluded from programs due to very low planned TRC values that were not mitigated by other factors weighing in favor of inclusion. See ELPC 1.25 Attach for a spreadsheet that includes all screening inputs, assumptions, and measure-level TRC results.

**Docket No. 13-0498**  
**Staff Group Cross Exhibit 1**  
**Page 2**

**Ameren Illinois Company's**  
**Response to ELPC Data Requests**  
**Docket No. 13-0498**  
**Approval of the Energy Efficiency and Demand-Response Plan**  
**Pursuant to 220 ILCS 5/8-103 and 220 ILCS 5/8-104**  
**Data Request Response Date: 10/14/2013**

ELPC 2.02

In the Residential Standard CFLs program, there is no mention of LED technology. Why is AIC not including LED technology in their lighting program?

**RESPONSE**

**Prepared By: Andrew Cotrell**  
**Title: Principal Consultant, Applied Energy Group, Inc.**  
**Phone Number: 732-447-1358**

LEDs do not pass the TRC using the IL TRM values, even when using 100% NTG and the NPV of baseline replacement costs. However, LEDs are included in the Specialty Lighting program submitted for the IPA programs. Please see the table below for measure-level TRC results.

<b>Measure</b>	<b>Watts Base</b>	<b>Watts EE</b>	<b>Total Resource B/C Ratio</b>
PAR20 screw-in lamps	13	46	0.57
PAR30 screw-in lamps	15	67	0.70
PAR38 screw-in lamps	18	78	0.75
MR16/PAR16 pin-based lamps	8	20	0.56
	14	35	0.65
	20	50	0.74
Recessed downlight luminaries	11	50	0.38
	12	65	0.45
	13	100	0.61
Track lights (R20)	8	45	0.60
Track lights (BR30 and BR40)	11	65	0.73

**Docket No. 13-0498**  
**Staff Group Cross Exhibit 1**  
**Page 3**

**Ameren Illinois Company's**  
**Response to ELPC Data Requests**  
**Docket No. 13-0498**  
**Approval of the Energy Efficiency and Demand-Response Plan**  
**Pursuant to 220 ILCS 5/8-103 and 220 ILCS 5/8-104**  
**Data Request Response Date: 10/14/2013**

ELPC 2.05

IL Public Act 98-0090 expands the definition of an energy efficiency project to include “measures that reduce the total Btus of electricity and natural gas needed to meet the end use or uses.” Does AIC interpret this expanded definition to mean that combined heat and power (CHP) projects can now be included in an energy efficiency portfolio? Please explain the extent to which AIC evaluated CHP for inclusion in its Plan, the conclusions from the evaluation, and provide all relevant documents.

**RESPONSE**

**Prepared By: Keith E. Goerss**  
**Title: Assistant Manager, Energy Efficiency**  
**Phone Number: 309-677-5708**

AIC objects to this data request as it calls for a legal opinion. AIC's legal positions will be set forth in its briefs.

Subject to the above objection, AIC did seek evaluator advice regarding CHP. See ELPC 2.05 Attach for a copy of the memo.



## MEMORANDUM

TO: Karen Kansfield, Jonathon Jackson, Ameren Illinois Company  
FROM: The Evaluation Team  
DATE: 4/25/2013  
RE: Evaluation Methods for Combined Heat and Power

---

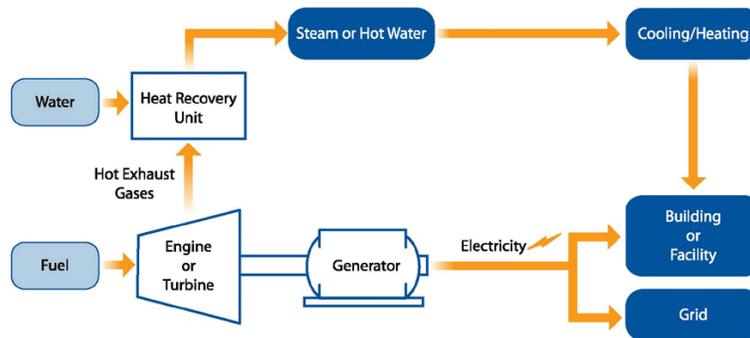
On March 27, 2013, Karen requested that the evaluation team provide Ameren Illinois Company (AIC) with comments on how our team would evaluate a Combined Heat & Power (CHP)<sup>1</sup> program. This was followed up via a separate email on April 1, 2013 with a list of specific questions from AIC to the evaluation team (included as Attachment 1).

We organized AIC's questions into the four main categories: gross impacts, net impacts, program implementation, and policy issues in the remainder of the memo as well as providing a brief introduction of CHP for context.

### ***Combined Heat and Power***

There are a variety of types of CHP systems – reciprocating engines, combustion (gas) turbines, and steam turbines. From a thermodynamic perspective there are two main types of CHP, topping and bottoming cycle systems. Figure 1 shows an example of a topping cycle CHP system. This is the most common CHP system. In this system, fuel<sup>2</sup> is first used as the energy source for a “prime mover” such as a gas turbine or engine, thereby generating electrical or mechanical power. Waste heat from the prime mover is then recovered and used to provide process heat (for industrial sites), hot water, or space conditioning for a site (either heating or cooling).

Figure 1. Example of a Topping Cycle CHP System



Source: U.S. Environmental Protection Agency (EPA) CHP Partnership [www.epa.gov/chp/basic/index.html](http://www.epa.gov/chp/basic/index.html)

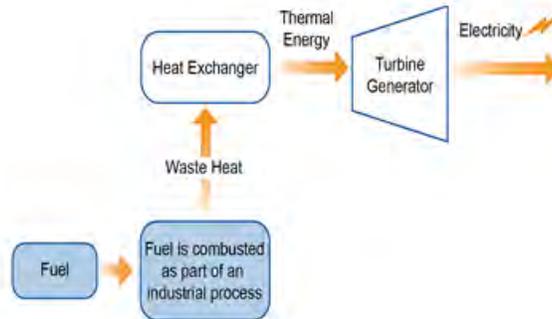
<sup>1</sup> Also referred to as “cogeneration”.

<sup>2</sup> Fuel can be natural gas, biomass, biogas, coal, waste heat, or oil.

**Docket No. 13-0498**  
**Staff Group Cross Exhibit 1**  
**Page 5**

Figure 2 shows a bottoming cycle CHP system (also called Waste Heat to Power, WHP) where fuel is first used to provide a thermal input to a furnace or some other high temperature industrial process. The rejected heat is recovered to create electrical power – often through a turbine.

**Figure 2. Example of a Bottoming Cycle CHP System**



Source: U.S. EPA CHP Partnership [www.epa.gov/chp/documents/waste\\_heat\\_power.pdf](http://www.epa.gov/chp/documents/waste_heat_power.pdf)

For energy efficiency programs, addition of a CHP plant using either topping or bottoming cycle will have different impacts. As such, the impacts occur when the turbine generator energy (created onsite) is substituted for the grid energy (from the utility). For the more common topping cycle CHP, the impacts must take into account the additional fuel used within the prime mover as well as the site electricity created by the generator.

## **Gross Impacts**

Below are each of five questions posed by AIC along with our responses on how gross impacts would be evaluated for different system and fuel types:

1. What is our opinion of using waste heat or steam pressure reduction for kWh generation in the current program?

Bottoming cycle CHP systems (or waste heat/steam systems) are more common in heavy industrial sites and there are no reasons from an EM&V perspective for excluding them from the program. The EM&V methodology and metering requirements would be very similar to the methodology for topping cycle CHP systems used in commercial, institutional, and smaller industrial facilities. Larger sites will have control systems capable of logging the main data needs:

- Fuel consumed (assume it would be natural gas)
- Electricity produced
- Steam generated

One challenge is correctly metering steam production, with potentially high variability in the flow and uncertainty in measuring.

Sites installing smaller CHP, especially smaller package units, might not meter the thermal energy directly or even the gas consumption. To properly evaluate systems with these missing items we recommend additional metering equipment including recording gas meters and BTU meters.

2. What special EM&V issues do they expect if a CHP project uses a renewable fuel?

The methodology for verifying electricity generation and useful heat recovered is the same for renewable fueled and non-renewable fueled CHP systems. Additional metering equipment would be

**Docket No. 13-0498**  
**Staff Group Cross Exhibit 1**  
**Page 6**

necessary if a facility is using both renewable and non-renewable fuel so that cost-effectiveness can be more accurately assessed since the cost of renewable fuel is different from fossil fuel and likely zero (e.g., biogas, sawdust, woodchips).

If the utility or state has goals for reducing greenhouse gas emissions, then there may be advantages to installing additional metering equipment to monitor the methane content and flow rate of the biogas to refine GHG emission reduction calculations. Note that if gas metering is required, it's best to install this equipment during construction of the CHP system.

Where renewable fuels are solid biomass (e.g. wood chips), metering fuel input has two issues: mass of the fuel and moisture content. For auger fed processes the mass flow of the solid fuel can be approximated by logging the run time of the auger. Moisture content is important because it determines the net heat content of the fuel. It is best determined through testing samples of the fuel. Metering fuel input and heat content would be useful in calculating the overall efficiency of the CHP systems to determine if systems are performing as expected from engineering calculations and assumptions.

3. For CHP projects can we claim credit for reduced line losses since we're considering Point of Use applications?

While line losses are reduced if the electricity generated is used on site, how the programs count savings (i.e., site savings and not source savings) may be more of the issue than if such losses occur. Whether transformer loss reduction can also be claimed depends on the voltage of the CHP system and on site transformers. In any scenario, each kilowatt-hour generated on site displaces more than one kilowatt-hour generated by a central plant.

4. Should the claimed CHP program electric savings be limited to the kWh that can be used at the site, or include all kWh generated?

For a facility using a CHP system to primarily offset onsite energy usage, the CHP system is most cost-effective when sized to fully use the recovered heat (rather than sized based on electricity needs which generally results in waste heat that cannot be utilized). This means that electricity is only exported to the grid when heating needs are at a maximum and electricity needs are at a minimum, for example on a winter night. When this occurs, we recommend the claimed savings include all kWh generated. This is standard practice for solar PV incentive programs. Solar PV performance-based incentive programs often cap rebates at 100% of the customer's load over a year, allowing customers to generate excess electricity during some periods and to generate less than needed during other periods. This same concept could be applied to an upfront incentive, where engineering calculations are submitted with the customer's application showing how much of the customer's annual electricity consumption is expected to be offset with the CHP system. The program could cap the incentive at a system size that offsets 100% of a customer's annual consumption.

5. Should the program be limited to CHP that is integrated as part of a process or building, i.e. it cannot be a stand-alone generation plant?

We recommend limiting the program to integrated processes with on-site generation. Those CHP facilities that are built to primarily feed electricity to the grid should be treated as a qualifying facility (QF) under PURPA requirements and are generally treated under different regulatory requirements than demand side management opportunities. As such, they may not qualify toward meeting the Illinois Energy Efficiency Resource Standard requirement.

## **Net Impacts**

Net impacts take into account the counterfactual – what would have occurred absent program intervention. There are two theoretical viewpoints that are the foundation for the methods currently

**Docket No. 13-0498**  
**Staff Group Cross Exhibit 1**  
**Page 7**

employed within energy efficiency evaluation.<sup>3</sup> However, only one is useful for determining net impacts from CHP.

The first viewpoint (called the positivist approach) states that causal relationships are not directly observable and one must use quantitative comparisons to look at the correlation of events and changes. Experimental designs such as used by behavioral programs employ this approach as do quasi-experimental designs that use billing data with a comparison group. There are several specific designs, but all use statistical data to infer causality. For CHP projects, expected to be implemented in industrial plants or large commercial sites, there are few projects and no comparable group for appropriate statistical analysis. While statistical analysis could occur using data pre and post-implementation, this shows change in use, not what would have occurred absent the program. As such, statistical methods are not able to be used to assess net impacts for this type of program.

Therefore, we must use the second viewpoint (called the realist approach) to assess net impacts. This approach defines causality in terms of real (and in principle observable) causal mechanisms and processes. This approach assumes that people can observe and report on important reasons behind behavior. Within energy efficiency evaluation, the self-report method applies this viewpoint.

Self-reporting can come in various formats, though. Energy efficiency evaluation practitioners have generally used a set of closed-ended scalar type questions to create a value that represents what would have occurred absent program intervention. These questions are typically put to participating customers, though market actors also are included at times. Additionally, open-ended questions that provide context have also been used to adjust the results from the original index of questions.

None of this is really new, though. It just serves as background for why self-reporting is the method of choice for a CHP program. For this type of program, we believe that the challenge to the evaluation team determining attribution is complicated by the following:

- The probable size of savings and associated incentive will make any results a “high-stakes” answer
- Organizational decisions are multi-layered and take time.
  - The evaluation team typically does not have access to each of the decision makers due to people leaving or insufficient budgets
  - The history of a utility working with their larger customers and talking about energy efficiency (or CHP) is typically not available as a source of information for possibly showing attribution.
  - Large scale capital projects often take a long time to come to fruition. Often these very large projects are undertaken for reasons other than the incentive. These projects could be operational imperatives versus being induced by an incentive.
- The federal government and now the Illinois state government is also involved with increasing CHP penetration. Both parties are bringing resources (although this may be relatively small resources) to AIC’s customers that will play a part in helping the customer make a decision to move forward with CHP. Our evaluation industry currently has only a “broad-swath” approach to apportioning impacts (e.g., using costs associated with multiple entities to assign savings).

To get around these challenges, we would expect to go beyond a simple net-to-gross battery of questions, although these questions would play a part in the overall answer. It would work best if the evaluation team works closely with the implementation team to provide a site-specific net-to-gross

---

<sup>3</sup> Please refer to Ridge 2009, for more complete discussion of these viewpoints.

ratio (NTGR) shortly after the project closes so there is quick knowledge for the program in terms of net savings. However, once known, this information should not affect the incentive to the customer, but does provide an idea of the cost effectiveness of the program moving forward.

The actual analysis would include information gathered from multiple people, any available information in project files, existing policies of the site, federal compliance regulations (for EPA type of requirements), or email discussions. The analysis would begin with results from a battery of closed ended questions, but we need to go beyond any one value from that battery and take into account all data we have gathered. We would expect to adjust any original NTG value based on other information. This may increase or reduce the original value. We have experience performing this type of analysis, having done so many times. The final adjustment is arrived at through two independent analysts looking at the information gathered and coming to separate conclusions and then discussing reasons for any disparities. All aspects of this analysis are clearly documented.

With this type of program, we think that a pilot that works through both implementation and evaluation issues would be beneficial. Given that the potential for CHP within AIC service territory is probably not high (although we do not know exactly what the potential is) we think that somewhere between 5 and 10 completed projects would be sufficient for a pilot on the evaluation side. (During this period, we recommend that any projects should have a deemed NTGR that is agreed to between AIC and ICC staff.) As part of this effort, we suggest that the evaluation and implementation team work together to come up with a high level screening tool for free ridership. This tool would be expected to screen out only those projects where the likelihood of the customer being a full free rider (i.e., NTGR=0) is very clear. The data from this tool may be used to inform evaluation questions afterwards, but is not expected to give a specific NTG value.

## ***Program Implementation***

AIC may use a split incentive payment structure whereby part of the incentive payment is provided to the customer at installation while the remainder is provided a year later based on performance. We have seen split incentive payments for wind programs and it appears to be a prudent use of incentives. Savings from this type of implementation would be garnered across two program years. Similar to the current “carryover” method for CFL’s, the evaluation team would track a specific portion of the savings in year one and then assign savings as a true up in the second year. The proportion of savings within the first year is set based on the proportion of the incentive. For example, if the program paid 75% of the incentive in year one, then the first year gross and net impacts would be 75% of the estimated values. The second year may true up such that there is only 21% of the incentive that is applicable. For this second year, the program would accrue only 21% of the first year impacts.

## ***Policy Issues***

There were three to four questions posed to the evaluation team that appear to be policy questions that are best answered through discussions with ICC staff and other SAG members. While our team has opinions on these questions, we believe that ultimately, the way that we would conduct our evaluation and provide results for these questions will be based on choices made elsewhere.

- 1) What program issues do they see for a CHP project that generates electricity, but requires more gas use?
  - o Our team believes that additional gas use should be included in the evaluation. We can perform our analysis on a BTU basis, but believe there would be difficulties in separating out the BTUs afterwards. However, we recognize that this choice is bound with question 2) below and what is ultimately shown in results may depend on who is providing the natural gas.

**Docket No. 13-0498**  
**Staff Group Cross Exhibit 1**  
**Page 9**

- 2) Do they see any issue with claiming gas savings for a CHP project at an “opt-out gas customer” or for an “electric only customer”?
  - o We understand that the current policy may be to not count non-customer savings towards goals, but to include those savings within TRC calculations. We have no opinion about this type of use.
  - o Aside from the above bullet point, it seems that who pays into specific energy efficiency riders and how savings are claimed is a policy issue. (This seems to play out in the single-fuel versus dual-fuel customers within AIC service territory.) For our part, if gas savings can be claimed, we believe that any additional gas use should also be accounted for.
- 3) What EPA regulations or IL net metering regulations might influence their [the evaluation team’s] assessment of program impact?
  - o We discussed the EPA regulations in the Net Impacts section, above. However, we would need to become more familiar with the IL net metering regulations to answer this question thoroughly. At this point, we believe that this may be a policy question as well.

Additionally, there is one question that we have discussed within the gross impact section that is also a policy question (shown next).

- Should the program be limited to CHP that is integrated as part of a process or building, i.e. it cannot be a stand-alone generation plant?

The evaluation of either an integrated or stand-alone system would be similar, but whether energy efficiency funds should be used to increase generation capabilities that a third party then sells to AIC customers is a policy issue.

While not a question posed to the evaluation team, this type of program has differences that need to be handled within any cost effectiveness tests. Since other parts of the cost effectiveness tests appear to have been covered through policy choices, we have added this information to this section. The California Standard Practice Manual (SPM) states that the labeling of a project or program is important as it affects how the costs and benefits are handled within cost-benefit tests.

*Fuel substitution and load building programs share the common feature of increasing annual consumption of either electricity or natural gas relative to what would have happened in the absence of the program. This effect is accomplished in significantly different ways, by inducing the choice of one fuel over another (fuel substitution), or by increasing sales of electricity, gas, or electricity and gas (load building). Self generation refers to distributed generation (DG) installed on the customer’s side of the electric utility meter, which serves some or all of the customer’s electric load, that otherwise would have been provided by the central electric grid.*

*In some cases, self generation products are applied in a combined heat and power manner, in which case the heat produced by the self generation product is used on site to provide some or all of the customer’s thermal needs. Self generation technologies include, but are not limited to, photovoltaics, wind turbines, fuel cells, microturbines, small gas-fired turbines, and gas-fired internal combustion engines. [Standard Practice Manual, page 2]*

An example of potential differences from the regular demand side management programs is that the analysis of the cost effectiveness of self-generation (which is how CHP projects could be labeled) should account for the utility interconnection costs. Attachment 2 provides a listing of the costs and benefits used within an analysis of cost-effectiveness for distributed generation within California.

## References

California Standard Practice Manual: Economic Analysis of Demand-Side Programs and Projects. 2002.

Cuttica, John. 2013. National Governors Association Policy Academy – Illinois Participation. PowerPoint presentation to Illinois Stakeholder Advisory Group. March 19, 2013.

KEMA, ITRON, ERS. 2012. *2010 Combined Heat and Power Impact Evaluation Methodology and Analysis Memo*. Massachusetts Energy Efficiency Programs' Large Commercial & Industrial Evaluation. January 2012.

ITRON, Inc. 2011. *CPUC Self-Generation Incentive Program. Cost-Effectiveness of Distributed Generation Technologies. Final Report*. [http://www.cpuc.ca.gov/NR/rdonlyres/2EB97E1C-348C-4CC4-A3A5-D417B4DDD58F/0/SGIP\\_CE\\_Report\\_Final.pdf](http://www.cpuc.ca.gov/NR/rdonlyres/2EB97E1C-348C-4CC4-A3A5-D417B4DDD58F/0/SGIP_CE_Report_Final.pdf)

Maxwell, J., Gregoire, C., Meissner, J., Megdal L. *Large Lessons Learned: Impact Evaluation of Projects that Reported Over 1,500,000 kWh/yr Savings*. <http://www.iepec.org/conf-docs/papers/2009PapersTOC/papers/104.pdf>. Site accessed on 4/1/13.

Ridge, R. Willems, P., Fagan, J, Randazzo, K. 2009. *The Origins of the Misunderstood and Occasionally Maligned Self-Report Approach to Estimating the Net-To-Gross Ratio*. IEPEC Portland. <http://www.iepec.org/conf-docs/papers/2009PapersTOC/papers/015.pdf#page=1>

Steigelmann, W. Hindle, B. *CHP – the “Ugly Duckling” of Energy Efficiency*. 2009. <http://www.iepec.org/conf-docs/papers/2009PapersTOC/papers/106.pdf>.

The State and Local Energy Efficiency Action Network. 2013. *Guide to the Successful Implementation of State Combined Heat and Power Policies*. March 2013

U.S. Environmental Protection Agency. Combined Heat and Power Partnership. Methods for Calculating Efficiency. <http://www.epa.gov/chp/basic/methods.html> Site accessed on 4/1/13.

## **Attachment 1 – Original list of evaluation questions from AIC to evaluation team**

*The eMail from Karen Kansfield to Mary Sutter dated 4/1/13 is copied over verbatim below:*

As requested we have developed a list of questions for EMV for a potential Cycle #3 CHP program offering. But first we want to make sure they know our understanding of the eligible customers which are:

- Combination gas-electric customers
- Electric only customers
- Electric customers and gas customers (including opt-out gas customers)

Here are our questions for EMV:

- What experience do they have providing EMV for CHP programs and what lessons learned can they share with us regarding EMV issues?
- What potential free-rider challenges do they foresee?
- How would they expect us to document program impact if a CHP project also received technical or financial assistance from alternative organizations (ie: DOE)?
- What EPA regulations or IL net metering regulations might influence their assessment of program impact?
- What is their opinion of using waste heat or steam pressure reduction for kWh generation in the current program?
- What program issues do they see for a CHP project that generates electricity, but requires more gas use?
- Do they see any issue with claiming gas savings for a CHP project at an “opt-out gas customer” or for an “electric only customer”?
- What special EMV issues do they expect if a CHP project uses a renewable fuel?
- For CHP projects can we claim credit for reduced line losses since we’re considering Point of Use applications?
- What is their opinion of using a split incentive payment; upon installation the applicant is paid by installed capacity and then one year later they receive a performance payment based on metered data? When would the program claim the savings based on this approach?
- Should the claimed CHP program electric savings be limited to the kWh that can be used at the site, or include all kWh generated?
- Should the program be limited to CHP that is integrated as part of a process or building, i.e. it cannot be a stand-alone generation plant?

## Attachment 2 – California Cost Benefit Inputs for Distributed Generation

### **Benefits**

<b>Benefit</b>	<b>PCT</b>	<b>TRC</b>	<b>STRC</b>	<b>PA</b>
Avoided line losses	NA	Included	Included	Included
Avoided purchase of energy commodity and resource adequacy costs	NA	Included	Included	Included
Avoided transmission and distribution (T&D) costs (T&D investment deferrals)	NA	Included	Included	Included
Combined heat and power (CHP) plant-specific benefits	Included	Included	Included	NA
CHP gas and electric bill savings	Included	NA	NA	NA
Environmental benefits (CO <sub>2</sub> , NO <sub>x</sub> , and particulate matter emissions)	NA	Included*	Included	Included
Market transformation effects	Included	Included	Included	NA
Net energy metering bill credits	Not Included	NA	NA	NA
Rebates/Incentives	Included and can be run with and w/out rebates	NA	NA	NA
Reduced electricity bills	Included	NA	NA	NA
Reliability benefits (both system and customer ancillary services/VAR support)	Not included in SGIPce model	Included	Included	Included
Standby charge exemption	Included	NA	NA	NA
Tax credits/depreciation	Included	Included	Included	NA

**Docket No. 13-0498**  
**Staff Group Cross Exhibit 1**  
**Page 13**

<b>Benefit</b>	<b>PCT</b>	<b>TRC</b>	<b>STRC</b>	<b>PA</b>
Utility interconnection not charged to DG customer	Not included in SGIPce model	NA	NA	NA

Source: Itron 2011. Table 3-1

**Costs**

<b>Costs</b>	<b>PCT</b>	<b>TRC</b>	<b>STRC</b>	<b>PA</b>
Costs of DG system, interconnection, emission controls and offset purchases	Included	Included	Included	NA
Increased IOU fuel transportation costs for gas-fired DG	NA	NA	NA	Included
Net energy metering costs	NA	NA	NA	Not Included
Nonbypassable charges (PGC, DWR, nuclear decommissioning)	Included	NA	NA	NA
Operation maintenance, fuel, ongoing emission offset purchases	Included	Included.	Included	NA
Program administration	NA	Included	Included	Included
Reliability costs (system cost of additional ancillary services/VAR support)	NA	Not Included	Not Included	Not Included
Removal costs (less salvage)	Not Included	Not Included	Not Included	NA
Utility interconnection	NA	Not Included	Not Included	Not Included
Utility rebates/incentives	NA	NA	NA	Included

Source: Itron 2011. Table 3-10

**Docket No. 13-0498**  
**Staff Group Cross Exhibit 1**  
**Page 14**

**Ameren Illinois Company's**  
**Response to ELPC Data Requests**  
**Docket No. 13-0498**  
**Approval of the Energy Efficiency and Demand-Response Plan**  
**Pursuant to 220 ILCS 5/8-103 and 220 ILCS 5/8-104**  
**Data Request Response Date: 11/4/2013**

ELPC 3.08

Please refer to the recommendations on page 4 of “Process Evaluation of 2011 (PY4) Ameren Illinois Company Behavioral Modification Program,” Opinion Dynamics, January 2013. Opinion Dynamics recommended that “AIC and CSG might consider the Behavioral Modification Program as an avenue to boost savings in other programs through targeted marketing.”

- A. What is Ameren’s position on using the Behavior Modification program as an avenue to boost saving in other programs?
- B. Has Ameren used the OPower HER tips to specifically identify other energy efficiency programs? If so, describe in detail what Ameren has done. If not, please explain why not.
- C. Has Ameren used any other mechanism to use the Behavioral Modification Program as an avenue to boost savings in other programs? If so, describe in detail what Ameren has done. If not, please explain why not.
- D. Does Ameren intend to implement the recommendation that “AIC and CSG might consider the Behavioral Modification Program as an avenue to boost savings in other programs through targeted marketing?” If not, why not? If so, when and what does Ameren intend to do?

**RESPONSE**

**Prepared By: Wade A. Morehead**  
**Title: Program Manager, CSG**  
**Phone Number: 309.740.7044**

- A. Ameren Illinois has and will continue to experiment with the promotion of other programs through the Home Energy Report and will monitor whether a synergistic lift is produced from the cross-promotion. Promotions that result in an overall positive lift will be repeated.
- B. Yes, the Appliance Recycling program was promoted on the Home Energy Report during January and February 2013.
- C. The online portal offers several channels for participants to find more information about other programs, and the Home Energy Report includes messaging to drive participants to the portfolio website.
- D. Yes, Ameren Illinois intends to continue promoting other programs on the Home Energy Report and are currently planning to promote the Home Performance with ENERGY STAR® program during the winter of 2013-2014.

**Docket No. 13-0498**  
**Staff Group Cross Exhibit 1**  
**Page 15**

**Ameren Illinois Company's**  
**Response to ELPC Data Requests**  
**Docket No. 13-0498**  
**Approval of the Energy Efficiency and Demand-Response Plan**  
**Pursuant to 220 ILCS 5/8-103 and 220 ILCS 5/8-104**  
**Data Request Response Date: 11/4/2013**

ELPC 3.09

Please refer to the recommendations on page 4 of “Process Evaluation of 2011 (PY4) Ameren Illinois Company Behavioral Modification Program,” Opinion Dynamics, January 2013. Opinion Dynamics recommended, “AIC, CSG, and OPower should continue to monitor the energy use of customers dropped from the program, specifically those in Expansion Groups 2 and 3. This may give an indication of the persistence of the treatment after the treatment is terminated.”

- A. Has Ameren previously monitored the energy use of customers dropped from the Behavioral Modification Program?
- B. How does Ameren intend to implement the recommendation by Opinion Dynamics? Please explain.
- C. What is Ameren doing to maximize the persistence of savings under the Behavioral Modification program? Please explain in detail and provide documentation for your response.

**RESPONSE**

**Prepared By: Wade A. Morehead**  
**Title: Program Manager, CSG**  
**Phone Number: 309.740.7044**

- A. Ameren Illinois has not specifically directed Opower to continue monitoring the energy use of participants dropped from the program.
- B. Ameren Illinois will confer with Opower to determine if an analysis of persistence can be cost-effectively performed on program participants. To proceed, there would need to be a strong indication that the potential for a net increase in savings from such an analysis would be enough to justify than the cost of the analysis.
- C. Ameren Illinois is not currently aware of sufficient evidence supporting the premise that attempts to establish and quantify persistence would be a cost-effective use of available resources.

If more information regarding persistence is needed, please contact Opower directly. The point of contact for this program is Dave Bend, Engagement Manager, 415.336.2278, dave.bend@opower.com.

**Docket No. 13-0498**  
**Staff Group Cross Exhibit 1**  
**Page 16**

**Ameren Illinois Company's**  
**Response to ICC Staff Data Requests**  
**Docket No. 13-0498**

**Approval of the Energy Efficiency and Demand-Response Plan Pursuant to**  
**220 ILCS 5/8-103 and 220 ILCS 5/8-104**  
**Data Request Response Date: 10/10/2013**

JLH 2.06

Please provide a spreadsheet summarizing AIC's historical (PY1, PY2, PY3, PY4, and PY5) program-level cost-effectiveness results.

- a) Please provide a summary of general input assumptions used for each program year (e.g., discount rate, avoided cost components, societal benefits, carbon).
- b) Inputs for each program used in the cost-effectiveness analysis for a given program year should be broken out by the following categories: administrative costs, marketing costs, gross measure/customer/participant/incremental cost per measure, gross measure/customer/participant/incremental costs for program, net measure/customer/incremental costs for program, implementation cost, incentive cost, non-rider costs, program gross annual savings, program net annual savings, free-ridership percentage, spillover percentage, net-to-gross ratio, number of participants (define participant), measure life, and sources.
- c) For each program year and each program (separately and combined across years), please provide the cost-effectiveness results under the IL Total Resource Cost ("TRC") Test and the Utility Cost Test ("UCT") in the following format: net present value of dollar benefits of the program, the net present value of dollar costs of the program, dollar amount of net benefits provided by the program, and benefit-cost ratios.
- d) Please explain the source of any deviations in cost-effectiveness approach across program years for similar programs.
- e) Please explain any differences in cost-effectiveness approach used in Ameren Ex. 1.1R and AIC Resp. to Staff DR JLH 1 Attachments, with that used historically.
- f) For programs which have historically provided negative net benefits for a given program year, please explain the cause of the negative net benefits. Further, please explain in detail, including but not limited to specific program modifications, how the Company plans to ensure customers will receive positive net benefits over the course of Plan 3.

**RESPONSE**

**Response to subparts a) thru e) only:**

**Prepared By: Andrew Cottrell**

**Title: Principal Consultant, Applied Energy Group, Inc.**

**Phone Number: 732-447-1357**

**Response to subpart f) only:**

**Docket No. 13-0498**  
**Staff Group Cross Exhibit 1**  
**Page 17**

**Prepared By: Keith E. Goerss**  
**Title: Assistant Manager, Energy Efficiency**  
**Phone Number: 309-677-5708**

- a) Please see the Company's response to data request JLH 1.02 (dated September 23).
- b) Please see JLH 2.06 Attach.
- c) Cost-effectiveness analysis was performed combined across all years, not for each individual year. Budgets and participation per program are consistent across all years, so the cost-effectiveness results are consistent after accounting for differences in avoided costs. Individual program TRC and UTC results are found "Cottrell DWP 2" with all requested results available for each program in the individual program tabs.
- d) There is no deviation between cost-effectiveness approaches across programs.
- e) There are no differences in cost-effectiveness approaches.
- f) Ameren Illinois objects to the term "negative net benefits" as vague and ambiguous. Negative net benefits, as that term is understood to be used, occur when costs exceed savings (benefits). This can occur due to a variety of reasons that either results in lower than expected participation or reduces savings, frequently beyond the utility's control including but not limited to the following: lack of available or participating program allies, lack of consumer interest or desire, lack of funds to increase the incentive to an attractive level, changes in standards which increases the baseline and thus reduces savings, and increases in costs. Ameren Illinois objects to the term "positive net benefits" as vague and ambiguous. As has been the practice for five and a half years, the Company monitors the implementer's activity on a monthly basis in order to analyze and determine program changes in an effort to maintain a portfolio level positive TRC.

# Docket No. 13-0498

## Staff Group Cross Exhibit 1

### Page 18

1	A	B	C	D	E	F	G	H	I	J	K	L
2	Market Segment	Program	Rate Class	Measure	TRM Section Number	TRM Section Heading	TRM Measure Code	Fuel	End Use	Baseline Description	Efficient Description	Measure Life
3	Business	Business Custom Incentive Program	D52-D53	Custom Electric (Includes New Const.)	Not in TRM	Not in TRM	Not in TRM	Elec	Miscellaneous	Existing equipment	Upgraded equipment	13
4	Business	Business Custom Incentive Program	D52-D53	Custom Gas (Includes New Const.)	Not in TRM	Not in TRM	Not in TRM	Gas	Miscellaneous	Existing equipment	Upgraded equipment	13
5	Business	Business Retro Commissioning	D52-D53	Retro-commissioning Electric	Not in TRM	Not in TRM	Not in TRM	Gas	Miscellaneous	No reset or correction	Efficiency improvements	5
6	Business	Business Retro Commissioning	D52-D53	Retro-commissioning Gas	Not in TRM	Not in TRM	Not in TRM	Gas	Miscellaneous	No reset or correction	Efficiency improvements	5
7	Business	Business Standard Incentive Program	D52	Phillips 10w Endura LED A19 L Prize	4.5.2	LED Bulbs and Fixtures	CI-LTG-LEDB-V01-120601	Elec	Lighting	60W incandescent (from of	Energy Efficient Lighting	15
8	Business	Business Standard Incentive Program	D52	Phillips 12w Endura LED A19 912E26A60)	4.5.2	LED Bulbs and Fixtures	CI-LTG-LEDB-V01-120601	Elec	Lighting	60W incandescent (from of	Energy Efficient Lighting	15
9	Business	Business Standard Incentive Program	D52	Phillips 12w Endura LED TM Par30	4.5.2	LED Bulbs and Fixtures	CI-LTG-LEDB-V01-120601	Elec	Lighting	60W incandescent (from of	Energy Efficient Lighting	15
10	Business	Business Standard Incentive Program	D52	2-foot T8 lamps (17W) and ballasts replacing 2-foot T12	4.5.3	High Performance and Reduced Wattage T8 Fixtures and Lamps	CI-LTG-T8FX-V01-120601	Elec	Lighting	F34T12 w/ EEMag ballast-	Energy Efficient Lighting	15
11	Business	Business Standard Incentive Program	D52	Air Conditioner Tune-Up	4.4.1	Air Conditioner Tune-up	CI-HVC-ACFU-V01-120601	Elec	HVAC	AC system that does not ha	Upgraded HVAC Equipment	3
12	Business	Business Standard Incentive Program	D52	Air-Cooled Chillers (150 tons and larger)	4.4.6	Electric Chiller	CI-HVC-CHIL-V01-120601	Elec	HVAC	Equipment meeting efficien	>150 tons	20
13	Business	Business Standard Incentive Program	D52	Air-Cooled Chillers (up to 150 tons)	4.4.6	Electric Chiller	CI-HVC-CHIL-V01-120601	Elec	HVAC	Equipment meeting efficien	>150 tons	20
14	Business	Business Standard Incentive Program	D52	Anti Sweat Heater Control, Cooler	4.6.3	Door Heater Controls for Cooler or Freezer	CI-RFG-DHCT-V01-120601	Elec	Refrigeration	Cooler or refrigerator with	HVAC Controls	12
15	Business	Business Standard Incentive Program	D52	Anti Sweat Heater Control, Freezer	4.6.3	Door Heater Controls for Cooler or Freezer	CI-RFG-DHCT-V01-120601	Elec	Refrigeration	Cooler or refrigerator with	HVAC Controls	12
16	Business	Business Standard Incentive Program	D52	Auto Closer for Display Case Door: Reach-in Cooler	4.6.1	Automatic Door Closer for Walk-in Coolers and Freezers	CI-RFG-ATDC-V01-120601	Elec	Refrigeration	Cooler or freezer without a	Cooler or freezer with an ai	8
17	Business	Business Standard Incentive Program	D52	Automatic Door Closer for Walk-in Freezer/Cooler	4.6.1	Automatic Door Closer for Walk-in Coolers and Freezers	CI-RFG-ATDC-V01-120601	Elec	Refrigeration	Cooler or freezer without a	Cooler or freezer with an ai	8
18	Business	Business Standard Incentive Program	D52	Beverage Machine Control	4.6.2	Beverage and Snack Machine Controls	CI-RFG-BEVM-V01-120601	Elec	Refrigeration	Standard efficiency unit wit	Standard efficiency unit wit	5
19	Business	Business Standard Incentive Program	D52	Cree CR6 Downlight Retrofit	4.5.2	LED Bulbs and Fixtures	CI-LTG-LEDB-V01-120601	Elec	Lighting	60W incandescent (from of	Energy Efficient Lighting	15
20	Business	Business Standard Incentive Program	D52	Cree LR6 Downlight Module LR6-27K	4.5.2	LED Bulbs and Fixtures	CI-LTG-LEDB-V01-120601	Elec	Lighting	60W incandescent (from of	Energy Efficient Lighting	15
21	Business	Business Standard Incentive Program	D52	Dishwasher, High Temp (Includes Booster Heater)	4.2.6	ENERGY STAR Dishwasher	CI-FSE-ESDW-V01-120601	Elec&Gas	Food Service	Non-ENERGY STAR dishwas	Energy Star Equipment	15
22	Business	Business Standard Incentive Program	D52	Earthmate 15w Spiral E1552AK	4.5.1	Commercial Standard CFL	CI-LTG-CCFL-V01-120601	Elec	Lighting	60-75W incandescent (fro	Energy Efficient Lighting	2.2
23	Business	Business Standard Incentive Program	D52	Earthmate 20w Spiral E2052AK	4.5.1	Commercial Standard CFL	CI-LTG-CCFL-V01-120601	Elec	Lighting	75-100W incandescent (fro	Energy Efficient Lighting	2.2
24	Business	Business Standard Incentive Program	D52	EC Motor for Reach-In Cooler	4.6.4	Electronically Commutated Motors (ECM) for Walk-in and Reach-in Coolers / Freez	CI-RFG-ECMF-V01-120601	Elec	Refrigeration	Shaded pole motor	EC Motor	15
25	Business	Business Standard Incentive Program	D52	EC Motor for Reach-In Freezer	4.6.4	Electronically Commutated Motors (ECM) for Walk-in and Reach-in Coolers / Freez	CI-RFG-ECMF-V01-120601	Elec	Refrigeration	Shaded pole motor	EC Motor	15
26	Business	Business Standard Incentive Program	D52	EC Motor for Walk-In Cooler	4.6.4	Electronically Commutated Motors (ECM) for Walk-in and Reach-in Coolers / Freez	CI-RFG-ECMF-V01-120601	Elec	Refrigeration	Shaded pole motor	EC Motor	15
27	Business	Business Standard Incentive Program	D52	EC Motor for Walk-In Freezer	4.6.4	Electronically Commutated Motors (ECM) for Walk-in and Reach-in Coolers / Freez	CI-RFG-ECMF-V01-120601	Elec	Refrigeration	Shaded pole motor	EC Motor	15
28	Business	Business Standard Incentive Program	D52	Electric Griddle	4.2.8	ENERGY STAR Griddle	CI-FSE-ESGR-V01-120601	Elec	Food Service	Non-ENERGY STAR certifie	Energy Star Equipment	12
29	Business	Business Standard Incentive Program	D52	Electric Steamer (3 pan)	4.2.3	Commercial Steam Cooker	CI-FSE-STMC-V01-120601	Elec	Food Service	Non-ENERGY STAR steame	Energy Star Equipment	12
30	Business	Business Standard Incentive Program	D52	Electric Steamer (4 pan)	4.2.3	Commercial Steam Cooker	CI-FSE-STMC-V01-120601	Elec	Food Service	Non-ENERGY STAR steame	Energy Star Equipment	12
31	Business	Business Standard Incentive Program	D52	Electric Steamer (6 pan)	4.2.3	Commercial Steam Cooker	CI-FSE-STMC-V01-120601	Elec	Food Service	Non-ENERGY STAR steame	Energy Star Equipment	12
32	Business	Business Standard Incentive Program	D52	Equipment Heater Timers	4.1.1	Engine Block Timer for Agricultural Equipment	RS-APL-ESDM-V01-120601	Elec	Agricultural	Manually plugged-in engine	Equipment Controls	3
33	Business	Business Standard Incentive Program	D52	Evaporator Fan Controls	4.6.6	Evaporator Fan Control	CI-RFG-EVPF-V01-120601	Elec	Refrigeration	Cooler with continuously r	HVAC Controls	16
34	Business	Business Standard Incentive Program	D52	Exterior Lighting	4.5.4	T5 Fixtures and Lamps	CI-LTG-T5FX-V01-120601	Elec	Lighting	From ActOnEnergy TRM: C	Energy Efficient Lighting	15
35	Business	Business Standard Incentive Program	D52	Felt 23w PAR-38 EcoBall Flood (EST23PAR38T)	4.5.1	Commercial Standard CFL	CI-LTG-CCFL-V01-120601	Elec	Lighting	100W incandescent (from	Energy Efficient Lighting	2.2
36	Business	Business Standard Incentive Program	D52	Fixture mounted occupancy sensor for fluorescent or LED	4.5.5	Occupancy Sensor Lighting Controls	CI-LTG-OSLC-V01-120601	Elec	Lighting	Lighting system uncontrol	Lighting Controls	8
37	Business	Business Standard Incentive Program	D52	Fixture mounted occupancy sensor or daylighting control	4.5.5	Occupancy Sensor Lighting Controls	CI-LTG-OSLC-V01-120601	Elec	Lighting	Lighting system uncontrol	Energy Efficient Lighting	8
38	Business	Business Standard Incentive Program	D52	Gas Boiler Replacement (AFUE 85% min)	4.4.10	High Efficiency Boiler	CI-HVC-BOIL-V01-120601	Gas	HVAC	Hot water boiler <300kBtu	Replaced equipment	20
39	Business	Business Standard Incentive Program	D52	Gas Boiler Replacement (Thermal Eff 90%)	4.4.10	High Efficiency Boiler	CI-HVC-BOIL-V01-120601	Gas	HVAC	Hot water boiler <300kBtu	Replaced equipment	20
40	Business	Business Standard Incentive Program	D52	Gas Boiler Tune-Up	4.4.3	Process Boiler Tune-up	CI-HVC-PBTU-V01-120601	Gas	HVAC	Facility that does not have	Equipment Tune-up	3
41	Business	Business Standard Incentive Program	D52	Gas Fryer	4.2.7	ENERGY STAR Fryer	CI-FSE-ESFR-V01-120601	Gas	Food Service	Non-ENERGY STAR fryer at	Energy Star Equipment	15
42	Business	Business Standard Incentive Program	D52	Gas Furnace Replacement (92% AFUE)	4.4.11	High Efficiency Furnace	CI-HVC-FRNC-V01-120601	Gas	HVAC	Minimum 80% AFUE furnac	Replaced equipment	16.5
43	Business	Business Standard Incentive Program	D52	Gas Furnace Replacement (94% AFUE)	4.4.11	High Efficiency Furnace	CI-HVC-FRNC-V01-120601	Gas	HVAC	Minimum 80% AFUE furnac	Replaced equipment	16.5
44	Business	Business Standard Incentive Program	D52	Gas Griddle	4.2.8	ENERGY STAR Griddle	CI-FSE-ESGR-V01-120601	Gas	Food Service	Non-ENERGY STAR certifie	Energy Star Equipment	12
45	Business	Business Standard Incentive Program	D52	Gas Steamer (5 pan)	4.2.3	Commercial Steam Cooker	CI-FSE-STMC-V01-120601	Gas	Food Service	Non-ENERGY STAR steame	Energy Star Equipment	12
46	Business	Business Standard Incentive Program	D52	Gas Steamer (6 pan)	4.2.3	Commercial Steam Cooker	CI-FSE-STMC-V01-120601	Gas	Food Service	Non-ENERGY STAR steame	Energy Star Equipment	12
47	Business	Business Standard Incentive Program	D52	GE 15w R30 Soft White Dimmable Flood (FLE 15/2/DV)	4.5.1	Commercial Standard CFL	CI-LTG-CCFL-V01-120601	Elec	Lighting	60W incandescent (from of	Energy Efficient Lighting	2.2
48	Business	Business Standard Incentive Program	D52	GE 15w R30 Soft White Flood (FLE 15/2/R30XL)	4.5.1	Commercial Standard CFL	CI-LTG-CCFL-V01-120601	Elec	Lighting	60W incandescent (from of	Energy Efficient Lighting	2.2
49	Business	Business Standard Incentive Program	D52	GE Ecolum Starcoat F32T8 (case of 36)	4.5.3	High Performance and Reduced Wattage T8 Fixtures and Lamps	CI-LTG-T8FX-V01-120601	Elec	Lighting	F34T12 w/ EEMag ballast-	Energy Efficient Lighting	15
50	Business	Business Standard Incentive Program	D52	GE UltraMax Ballast 232-MAX/L/Ultra	4.5.3	High Performance and Reduced Wattage T8 Fixtures and Lamps	CI-LTG-T8FX-V01-120601	Elec	Lighting	F34T12 w/ EEMag ballast-	Energy Efficient Lighting	15
51	Business	Business Standard Incentive Program	D52	GE UltraMax Ballast 332-MAX/L/Ultra	4.5.3	High Performance and Reduced Wattage T8 Fixtures and Lamps	CI-LTG-T8FX-V01-120601	Elec	Lighting	F34T12 w/ EEMag ballast-	Energy Efficient Lighting	15
52	Business	Business Standard Incentive Program	D52	GE UltraMax Ballast 432-MAX/L/Ultra	4.5.3	High Performance and Reduced Wattage T8 Fixtures and Lamps	CI-LTG-T8FX-V01-120601	Elec	Lighting	F34T12 w/ EEMag ballast-	Energy Efficient Lighting	15
53	Business	Business Standard Incentive Program	D52	Glass Door Freezer (31-50 cu ft)	4.2.2	Commercial Solid and Glass Door Refrigerators & Freezers	CI-FSE-CSDO-V01-120601	Elec	Refrigeration	Existing unit meeting EPA 2	Glass Door Freezer	12
54	Business	Business Standard Incentive Program	D52	Glass Door Freezer (51 cu ft or more)	4.2.2	Commercial Solid and Glass Door Refrigerators & Freezers	CI-FSE-CSDO-V01-120601	Elec	Refrigeration	Existing unit meeting EPA 2	Glass Door Freezer	12
55	Business	Business Standard Incentive Program	D52	Glass Door LED Cooler/Freezer Lighting	4.5.2	LED Bulbs and Fixtures	CI-LTG-LEDB-V01-120601	Elec	Lighting	Baseline LED refrigerated, f	Energy Efficient Lighting	15
56	Business	Business Standard Incentive Program	D52	Glass Door LED cooler/Freezer Lighting Controls/Sensors	4.5.5	Occupancy Sensor Lighting Controls	CI-LTG-OSLC-V01-120601	Elec	Lighting	Lighting system uncontrol	Energy Efficient Lighting	8
57	Business	Business Standard Incentive Program	D52	Guest Room Energy Management (GREM) Controls on	4.4.8	Guest Room Energy Management (PTAC & PTHP)	CI-HVC-GREM-V01-120601	Elec	HVAC	Manual heating/cooling ter	HVAC Controls	15
58	Business	Business Standard Incentive Program	D52	Guest Room Energy Management (GREM) Controls on	4.4.8	Guest Room Energy Management (PTAC & PTHP)	CI-HVC-GREM-V01-120601	Elec	HVAC	Manual heating/cooling ter	HVAC Controls	15
59	Business	Business Standard Incentive Program	D52	Hard wired CFL fixtures replacing existing incandescent	4.5.1	Commercial Standard CFL	CI-LTG-CCFL-V01-120601	Elec	Lighting	100w (72w) incandescent	Compact Fluorescent Light	2.2
60	Business	Business Standard Incentive Program	D52	Harmony 20w Lightwiz Spiral(H20027S)	4.5.1	Commercial Standard CFL	CI-LTG-CCFL-V01-120601	Elec	Lighting	60-75W incandescent (fro	Energy Efficient Lighting	2.2
61	Business	Business Standard Incentive Program	D52	Harmony Light 25w/Max/Itle 25w	4.5.1	Commercial Standard CFL	CI-LTG-CCFL-V01-120601	Elec	Lighting	100W incandescent (from	Energy Efficient Lighting	2.2
62	Business	Business Standard Incentive Program	D52	High Efficiency Circulation Fans (24-35 in diameter)	4.1.3	High Speed Fans	CI-AGE-HSF -V01-120601	Elec	Agricultural	Existing fan at the end of us	Replaced equipment	7
63	Business	Business Standard Incentive Program	D52	High Efficiency Circulation Fans (36-47 in diameter)	4.1.3	High Speed Fans	CI-AGE-HSF -V01-120601	Elec	Agricultural	Existing fan at the end of us	Replaced equipment	7
64	Business	Business Standard Incentive Program	D52	High Efficiency Circulation Fans (48-71 in diameter)	4.1.3	High Speed Fans	CI-AGE-HSF -V01-120601	Elec	Agricultural	Existing fan at the end of us	Replaced equipment	7
65	Business	Business Standard Incentive Program	D52	High Efficiency Condensing Tanked Water Heater (gas)	4.3.1	Storage Water Heater	CI-HW -STWHV-V01-120601	Gas	Hot Water	From ActOnEnergy TRM: C	High efficiency hot water	5
66	Business	Business Standard Incentive Program	D52	High Efficiency High Speed Exhaust/Ventilation Fans (24	4.1.3	High Speed Fans	CI-AGE-HSF -V01-120601	Elec	Agricultural	Existing fan at the end of us	Replaced equipment	7
67	Business	Business Standard Incentive Program	D52	High Efficiency High Speed Exhaust/Ventilation Fans (36	4.1.3	High Speed Fans	CI-AGE-HSF -V01-120601	Elec	Agricultural	Existing fan at the end of us	Replaced equipment	7
68	Business	Business Standard Incentive Program	D52	High Efficiency High Speed Exhaust/Ventilation Fans (48	4.1.3	High Speed Fans	CI-AGE-HSF -V01-120601	Elec	Agricultural	Existing fan at the end of us	Replaced equipment	7
69	Business	Business Standard Incentive Program	D52	High Efficiency Ice Maker (1001-1500 lbs)	4.2.10	ENERGY STAR Ice Maker	CI-FSE-ESIM-V01-120601	Elec	Food Service	Commercial ice machine m	Energy Star Equipment	10
70	Business	Business Standard Incentive Program	D52	High Efficiency Ice Maker (101-200 lbs)	4.2.10	ENERGY STAR Ice Maker	CI-FSE-ESIM-V01-120601	Elec	Food Service	Commercial ice machine m	Energy Star Equipment	10
71	Business	Business Standard Incentive Program	D52	High Efficiency Ice Maker (1501 and up lbs)	4.2.10	ENERGY STAR Ice Maker	CI-FSE-ESIM-V01-120601	Elec	Food Service	Commercial ice machine m	Energy Star Equipment	10
72	Business	Business Standard Incentive Program	D52	High Efficiency Ice Maker (201-300 lbs)	4.2.10	ENERGY STAR Ice Maker	CI-FSE-ESIM-V01-120601	Elec	Food Service	Commercial ice machine m	Energy Star Equipment	10
73	Business	Business Standard Incentive Program	D52	High Efficiency Ice Maker (301-400 lbs)	4.2.10	ENERGY STAR Ice Maker	CI-FSE-ESIM-V01-120601	Elec	Food Service	Commercial ice machine m	Energy Star Equipment	10
74	Business	Business Standard Incentive Program	D52	High Efficiency Ice Maker (401-500 lbs)	4.2.10	ENERGY STAR Ice Maker	CI-FSE-ESIM-V01-120601	Elec	Food Service	Commercial ice machine m	Energy Star Equipment	10
75	Business	Business Standard Incentive Program	D52	High Efficiency Ice Maker (501-1000 lbs)	4.2.10	ENERGY STAR Ice Maker	CI-FSE-ESIM-V01-120601	Elec	Food Service	Commercial ice machine m	Energy Star Equipment	10
76	Business	Business Standard Incentive Program	D52	High efficiency T5 or T8 fluorescent fixtures replacing ex	4.5.4	T5 Fixtures and Lamps	CI-LTG-T5FX-V01-120601	Elec	Lighting	Existing system	Energy Efficient Lighting	15
77	Business	Business Standard Incentive Program	D52	High Efficiency Tanked Water Heater (electric)	4.3.1	Storage Water Heater	CI-HW -STWHV-V01-120601	Elec	Hot Water	Electric storage water heat	High efficiency hot water	5
78	Business	Business Standard Incentive Program	D52	High Efficiency Tanked Water Heater (gas)	4.3.1	Storage Water Heater	CI-HW -STWHV-V01-120601	Gas	Hot Water	Gas storage water heater w	High efficiency hot water	15
79	Business	Business Standard Incentive Program	D52	High Efficiency Tankless Water Heater (gas)	4.3.4	Tankless Water Heater	CI-HW -TWVH-V01-120601	Gas	Hot Water	Gas-fired tank type water h	High efficiency hot water	20
80	Business	Business Standard Incentive Program	D52	High Efficiency Tankless Water Heaters (electric)	4.3.4	Tankless Water Heater	CI-HW -TWVH-V01-120601	Elec	Hot Water	Electric commercial-grade	High efficiency hot water	5
81	Business	Business Standard Incentive Program	D52	High Volume Low Speed (HVLS) Fans	4.1.2	High Volume Low Speed Fans	CI-AGE-HVSF-V01-120601	Elec	Agricultural	Multiple non-HVLS fans at	Replaced equipment	15
82	Business	Business Standard Incentive Program	D52	Highbay Fixture Replacement Option	4.5.3	High Performance and Reduced Wattage T8 Fixtures and Lamps	CI-LTG-T8FX-V01-120601	Elec	Lighting	200w PSMH250w metal ha	Energy Efficient Lighting	15
83	Business	Business Standard Incentive Program	D52	Hot Holding Cabinet (full size)	4.2.9	ENERGY STAR Hot Food Holding Cabinets	CI-FSE-ESSH-V01-120601	Elec	Food Service	Non-ENERGY STAR certified	Energy Star Equipment	12

# Docket No. 13-0498

## Staff Group Cross Exhibit 1

### Page 19

1	A	B	C	D	E	F	G	H	I	J	K	L
2	Market Segment	Program	Rate Class	Measure	TRM Section Number	TRM Section Heading	TRM Measure Code	Fuel	End Use	Baseline Description	Efficient Description	Measure Life
85	Business	Business Standard Incentive Program	D52	Hot Holding Cabinet (half size)	4.2.9	ENERGY STAR Hot Food Holding Cabinets	C-FSE-ESHV-V01-120601	Elec	Food Service	Non-ENERGY STAR certified	Energy Star Equipment	12
86	Business	Business Standard Incentive Program	D52	Hot Holding Cabinet (three-quarter size)	4.2.9	ENERGY STAR Hot Food Holding Cabinets	C-FSE-ESHV-V01-120601	Elec	Food Service	Non-ENERGY STAR certified	Energy Star Equipment	12
87	Business	Business Standard Incentive Program	D52	Hubbell Ivory Motion-Sensing Wall Switch 120/277 lws	4.5.5	Occupancy Sensor Lighting Controls	C-LTG-OSLC-V01-120601	Elec	Lighting	Uncontrolled lighting system	Lighting Controls	8
88	Business	Business Standard Incentive Program	D52	Hubbell White Wall Switch 120/277 1WS-2P-3P-W	4.5.5	Occupancy Sensor Lighting Controls	C-LTG-OSLC-V01-120601	Elec	Lighting	Uncontrolled lighting system	Lighting Controls	8
89	Business	Business Standard Incentive Program	D52	Interior LED Lamps and Fixtures	4.5.4	T5 Fixtures and Lamps	C-LTG-T5FX-V01-120601	Elec	Lighting	Fluorescent exit sign/ballast	Energy Efficient Lighting	15
90	Business	Business Standard Incentive Program	D52	LED Exit Sign Retro-fit Kit 6W or less	4.5.5	Occupancy Sensor Lighting Controls	C-LTG-OSLC-V01-120601	Elec	Lighting	Fluorescent exit sign/ballast	Energy Efficient Lighting	16
91	Business	Business Standard Incentive Program	D52	LED lamp	4.5.2	LED Bulbs and Fixtures	C-LTG-LEDB-V01-120601	Elec	Lighting	Incandescent, 25.150 watt	LED Lighting	15
92	Business	Business Standard Incentive Program	D52	LED recessed down fixture (18W or less per fixture), req	4.5.2	LED Bulbs and Fixtures	C-LTG-LEDB-V01-120601	Elec	Lighting	Incandescent, 25.150 watt	LED Lighting	15
93	Business	Business Standard Incentive Program	D52	LED, T-1 or electroluminescent exit sign	4.5.5	Occupancy Sensor Lighting Controls	C-LTG-OSLC-V01-120601	Elec	Lighting	Fluorescent exit sign/ballast	Energy Efficient Lighting	16
94	Business	Business Standard Incentive Program	D52	Live Stock Waterer (electrically heated)	4.1.4	Live Stock Waterer	C-AGE-LSW1-V01-120601	Elec	Hot Water	Electric open waterer with	Reduced water usage	10
95	Business	Business Standard Incentive Program	D52	Live Stock Waterer (energy free or ground source heat)	4.1.4	Live Stock Waterer	C-AGE-LSW1-V01-120601	Elec	Hot Water	From ActOnEnergy TRM: C	Reduced water usage	10
96	Business	Business Standard Incentive Program	D52	Low wattage occupancy sensors or daylight dimming cd	4.5.5	Occupancy Sensor Lighting Controls	C-LTG-OSLC-V01-120601	Elec	Lighting	Lighting system uncontrolle	Lighting Controls	8
97	Business	Business Standard Incentive Program	D52	Maxlite 25w MicroMax MLM255WW	4.5.1	Commercial Standard CFL	C-LTG-CCLF-V01-120601	Elec	Lighting	100W incandescent (from	Energy Efficient Lighting	2.2
98	Business	Business Standard Incentive Program	D52	New high performance T8 fixture (with or without a refl	4.5.3	High Performance and Reduced Wattage T8 Fixtures and Lamps	C-LTG-T8FX-V01-120601	Elec	Lighting	F34112 w/ EEMg ballast -	Energy Efficient Lighting	15
99	Business	Business Standard Incentive Program	D52	New T5 fluorescent replacing an existing T12	4.5.4	T5 Fixtures and Lamps	C-LTG-T5FX-V01-120601	Elec	Lighting	Existing system	Energy Efficient Lighting	15
100	Business	Business Standard Incentive Program	D52	New, high performance T8 (32W) lamps and ballasts rel	4.5.3	High Performance and Reduced Wattage T8 Fixtures and Lamps	C-LTG-T8FX-V01-120601	Elec	Lighting	F34112 w/ EEMg ballast -	Energy Efficient Lighting	15
101	Business	Business Standard Incentive Program	D52	Night Curtain for Open Cooler	4.6.7	Strip Curtain for Walk-in Coolers and Freezers	C-RFG-GRTN-V01-120601	Elec	Refrigeration	From ActOnEnergy TRM: C	Case with cover	5
102	Business	Business Standard Incentive Program	D52	Permanent Fixture/Lamp Removal	4.5.2	LED Bulbs and Fixtures	C-LTG-LEDB-V01-120601	Elec	Lighting	From ActOnEnergy TRM: A	Delamping	11
103	Business	Business Standard Incentive Program	D52	Philips 17w EnduraLED PAR38	4.5.2	LED Bulbs and Fixtures	C-LTG-LEDB-V01-120601	Elec	Lighting	65W incandescent (from	Energy Efficient Lighting	15
104	Business	Business Standard Incentive Program	D52	PTAC/PTHP less than 65,000 Btu/h input, replacing an ex	4.4.13	Package Terminal Air Conditioner (PTAC) and Package Terminal Heat Pump (PTHP)	C-HVC-PTAC-V01-120601	Elec	HVAC	PTAC: 10.9 EER/THP: 10.8	<65K BTU	15
105	Business	Business Standard Incentive Program	D52	PTAC/PTHP less than 65Kbtu/h input, new installation	4.4.13	Package Terminal Air Conditioner (PTAC) and Package Terminal Heat Pump (PTHP)	C-HVC-PTAC-V01-120601	Elec	HVAC	PTAC: 12.5 EER/THP: 12.3	<65K BTU	15
106	Business	Business Standard Incentive Program	D52	Reduced wattage T8 (28W) lamps and ballasts replacing	4.5.3	High Performance and Reduced Wattage T8 Fixtures and Lamps	C-LTG-T8FX-V01-120601	Elec	Lighting	F34112 w/ EEMg ballast -	Energy Efficient Lighting	15
107	Business	Business Standard Incentive Program	D52	Refrigeration Tune-up	4.4.1	Air Conditioner Tune-up	C-HVC-ACTU-V01-120601	Elec	Refrigeration	From ActOnEnergy TRM: B	Equipment Tune-up	4
108	Business	Business Standard Incentive Program	D52	Remote mounted occupancy sensors using ultrasonic c	4.5.5	Occupancy Sensor Lighting Controls	C-LTG-OSLC-V01-120601	Elec	Lighting	Lighting system uncontrolle	Lighting Controls	8
109	Business	Business Standard Incentive Program	D52	Snack Machine Control	4.6.2	Beverage and Snack Machine Controls	C-RFG-BEVM-V01-120601	Elec	Refrigeration	Standard efficiency unit wit	Standard efficiency unit wit	5
110	Business	Business Standard Incentive Program	D52	SnackMizer (Primary with Sensor) SM150	4.6.2	Beverage and Snack Machine Controls	C-RFG-BEVM-V01-120601	Elec	Refrigeration	Uncontrolled vending mach	Controlled vending machin	5
111	Business	Business Standard Incentive Program	D52	SnackMizer (Primary with Sensor) SM170 Machine Mo	4.6.2	Beverage and Snack Machine Controls	C-RFG-BEVM-V01-120601	Elec	Refrigeration	Uncontrolled vending mach	Controlled vending machin	5
112	Business	Business Standard Incentive Program	D52	SnackMizer (Secondary W/Cable) SM171 Machine Mo	4.6.2	Beverage and Snack Machine Controls	C-RFG-BEVM-V01-120601	Elec	Refrigeration	Uncontrolled vending mach	Controlled vending machin	5
113	Business	Business Standard Incentive Program	D52	SnackMizer SM151-Secondary W/Cable	4.6.2	Beverage and Snack Machine Controls	C-RFG-BEVM-V01-120601	Elec	Refrigeration	Uncontrolled vending mach	Controlled vending machin	5
114	Business	Business Standard Incentive Program	D52	Solid Door Freezer (15-30 cu ft)	4.2.2	Commercial Solid and Glass Door Refrigerators & Freezers	C-FSE-CSDO-V01-120601	Elec	Refrigeration	Existing unit meeting EPA 2	Solid Door	12
115	Business	Business Standard Incentive Program	D52	Solid Door Freezer (31-50 cu ft)	4.2.2	Commercial Solid and Glass Door Refrigerators & Freezers	C-FSE-CSDO-V01-120601	Elec	Refrigeration	Existing unit meeting EPA 2	Solid Door	12
116	Business	Business Standard Incentive Program	D52	Solid Door Freezer (51 cu ft or more)	4.2.2	Commercial Solid and Glass Door Refrigerators & Freezers	C-FSE-CSDO-V01-120601	Elec	Refrigeration	Existing unit meeting EPA 2	Solid Door	12
117	Business	Business Standard Incentive Program	D52	Solid Door Freezer (up to 15 cu ft)	4.2.2	Commercial Solid and Glass Door Refrigerators & Freezers	C-FSE-CSDO-V01-120601	Elec	Refrigeration	Existing unit meeting EPA 2	Solid Door	12
118	Business	Business Standard Incentive Program	D52	Steam Trap Repair / Replacement (HVAC)	4.4.15	Steam Trap Replacement or Repair	C-HVC-STRE-V01-120601	Gas	HVAC	Faulty steam trap in need o		6
119	Business	Business Standard Incentive Program	D52	Steam Trap Repair / Replacement (Industrial Process or	4.4.15	Steam Trap Replacement or Repair	C-HVC-STRE-V01-120601	Gas	HVAC	Faulty steam trap in need o		6
120	Business	Business Standard Incentive Program	D52	Strip Curtain on Walk-in Coolers or Freezers	4.6.7	Strip Curtain for Walk-in Coolers and Freezers	C-RFG-GRTN-V01-120601	Elec	Refrigeration	Cooler or freezer without s	Case with cover	6
121	Business	Business Standard Incentive Program	D52	Sylvania 8W UltraLED PAR20 (LED8PAR20/DIM/830/NF)	4.5.2	LED Bulbs and Fixtures	C-LTG-LEDB-V01-120601	Elec	Lighting	35W halogen (from incand	Energy Efficient Lighting	15
122	Business	Business Standard Incentive Program	D52	T5 or reduced wattage T8 ballast and rebalast upgrade	4.5.3	High Performance and Reduced Wattage T8 Fixtures and Lamps	C-LTG-T8FX-V01-120601	Elec	Lighting	Existing system	Energy Efficient Lighting	15
123	Business	Business Standard Incentive Program	D52	T8 U-tube lamps and Ballasts Replacing T12 U-bend La	4.5.3	High Performance and Reduced Wattage T8 Fixtures and Lamps	C-LTG-T8FX-V01-120601	Elec	Lighting	F34112 w/ EEMg ballast -	Energy Efficient Lighting	15
124	Business	Business Standard Incentive Program	D52	TCP 13W EcoSave™SpringLight 1ES13	4.5.1	Commercial Standard CFL	C-LTG-CCLF-V01-120601	Elec	Lighting	60W incandescent (from	Energy Efficient Lighting	2.2
125	Business	Business Standard Incentive Program	D52	TCP 14w 25 Deg Par30 LED14E26P3030KNFL	4.5.2	LED Bulbs and Fixtures	C-LTG-LEDB-V01-120601	Elec	Lighting	75W incandescent (from	Energy Efficient Lighting	15
126	Business	Business Standard Incentive Program	D52	TCP 14w 40 Deg Beam Angle PAR30 LED	4.5.2	LED Bulbs and Fixtures	C-LTG-LEDB-V01-120601	Elec	Lighting	75W incandescent (from	Energy Efficient Lighting	15
127	Business	Business Standard Incentive Program	D52	TCP 14w G25 Globe (2G2514)	4.5.1	Commercial Standard CFL	C-LTG-CCLF-V01-120601	Elec	Lighting	60W incandescent (from	Energy Efficient Lighting	2.2
128	Business	Business Standard Incentive Program	D52	TCP 14w R30 Reflector 803014	4.5.1	Commercial Standard CFL	C-LTG-CCLF-V01-120601	Elec	Lighting	65W incandescent (from	Energy Efficient Lighting	2.2
129	Business	Business Standard Incentive Program	D52	TCP 17w 25 Deg Par38 LED17E26P3830KNFL	4.5.2	LED Bulbs and Fixtures	C-LTG-LEDB-V01-120601	Elec	Lighting	90W incandescent (from	Energy Efficient Lighting	15
130	Business	Business Standard Incentive Program	D52	TCP 17w 40 Deg Par38 LED17E26P3830KNFL	4.5.2	LED Bulbs and Fixtures	C-LTG-LEDB-V01-120601	Elec	Lighting	90W incandescent (from	Energy Efficient Lighting	15
131	Business	Business Standard Incentive Program	D52	TCP 20W SpringLight 1ES20	4.5.1	Commercial Standard CFL	C-LTG-CCLF-V01-120601	Elec	Lighting	75W incandescent (from	Energy Efficient Lighting	2.2
132	Business	Business Standard Incentive Program	D52	TCP 23w EcoSave SpringLight 1ES23	4.5.1	Commercial Standard CFL	C-LTG-CCLF-V01-120601	Elec	Lighting	100W incandescent (from	Energy Efficient Lighting	2.2
133	Business	Business Standard Incentive Program	D52	TCP 9W LED PAR20 (LED9E26P207KFL)	4.5.2	LED Bulbs and Fixtures	C-LTG-LEDB-V01-120601	Elec	Lighting	40W incandescent (from	Energy Efficient Lighting	15
134	Business	Business Standard Incentive Program	D52	TCP Exit Sign Retrofit Set 20714	4.5.5	Occupancy Sensor Lighting Controls	C-LTG-OSLC-V01-120601	Elec	Lighting	Incandescent or halogen LE	Energy Efficient Lighting	16
135	Business	Business Standard Incentive Program	D52	TCP Red LED Exit Sign with Battery (22743D)	4.5.5	Occupancy Sensor Lighting Controls	C-LTG-OSLC-V01-120601	Elec	Lighting	Incandescent or halogen LE	Energy Efficient Lighting	16
136	Business	Business Standard Incentive Program	D52	Ultra-low wattage T8 (25W) lamps and ballasts replaci	4.5.3	High Performance and Reduced Wattage T8 Fixtures and Lamps	C-LTG-T8FX-V01-120601	Elec	Lighting	F34112 w/ EEMg ballast -	Energy Efficient Lighting	15
137	Business	Business Standard Incentive Program	D52	Unitary and Split AC Systems and Air Source Heat Pump	4.4.14	Single-Package and Split System Unitary Air Conditioners	C-HVC-SPUA-V01-120601	Elec	HVAC	Standard efficiency air-, wa	EER 10.8+	15
138	Business	Business Standard Incentive Program	D52	Unitary and Split AC Systems and Air Source Heat Pump	4.4.14	Single-Package and Split System Unitary Air Conditioners	C-HVC-SPUA-V01-120601	Elec	HVAC	Standard efficiency air-, wa	EER 12+	15
139	Business	Business Standard Incentive Program	D52	Unitary and Split AC Systems and Air Source Heat Pump	4.4.14	Single-Package and Split System Unitary Air Conditioners	C-HVC-SPUA-V01-120601	Elec	HVAC	Standard efficiency air-, wa	EER 10.2+	15
140	Business	Business Standard Incentive Program	D52	Unitary and Split AC Systems and Air Source Heat Pump	4.4.14	Single-Package and Split System Unitary Air Conditioners	C-HVC-SPUA-V01-120601	Elec	HVAC	Standard efficiency air-, wa	EER 12+	15
141	Business	Business Standard Incentive Program	D52	Unitary and Split AC Systems and Air Source Heat Pump	4.4.14	Single-Package and Split System Unitary Air Conditioners	C-HVC-SPUA-V01-120601	Elec	HVAC	Standard efficiency air-, wa	EER 12+	15
142	Business	Business Standard Incentive Program	D52	Variable Frequency Drives on HVAC Motors	4.4.16	Variable Speed Drives for HVAC	C-HVC-VSDH-V01-120601	Elec	Refrigeration	Motor without a VSD	VFD Motor	15
143	Business	Business Standard Incentive Program	D52	Vending Miser EZ VM170	4.6.2	Beverage and Snack Machine Controls	C-RFG-BEVM-V01-120601	Elec	Refrigeration	Uncontrolled vending mach	Controlled vending machin	5
144	Business	Business Standard Incentive Program	D52	Vending Miser VM150	4.6.2	Beverage and Snack Machine Controls	C-RFG-BEVM-V01-120601	Elec	Refrigeration	Uncontrolled vending mach	Controlled vending machin	5
145	Business	Business Standard Incentive Program	D52	Vending Miser VM151	4.6.2	Beverage and Snack Machine Controls	C-RFG-BEVM-V01-120601	Elec	Refrigeration	Uncontrolled vending mach	Controlled vending machin	5
146	Business	Business Standard Incentive Program	D52	Vending Miser EZ VM171	4.6.2	Beverage and Snack Machine Controls	C-RFG-BEVM-V01-120601	Elec	Refrigeration	Uncontrolled vending mach	Controlled vending machin	5
147	Business	Business Standard Incentive Program	D52	VFD	4.4.16	Variable Speed Drives for HVAC	C-HVC-VSDH-V01-120601	Elec	HVAC	Variable Speed Drive	VFD Motor	15
148	Business	Business Standard Incentive Program	D52	Wall switch plate mounted occupancy sensors using ult	4.5.5	Occupancy Sensor Lighting Controls	C-LTG-OSLC-V01-120601	Elec	Lighting	Lighting system uncontrolle	Lighting Controls	8
149	Business	Business Standard Incentive Program	D53	Phillips 10w Endura LED A19 L Prize	4.5.2	LED Bulbs and Fixtures	C-LTG-LEDB-V01-120601	Elec	Lighting	60W incandescent (from	Energy Efficient Lighting	15
150	Business	Business Standard Incentive Program	D53	Phillips 12w Endura LED A19 912E26A60	4.5.2	LED Bulbs and Fixtures	C-LTG-LEDB-V01-120601	Elec	Lighting	60W incandescent (from	Energy Efficient Lighting	15
151	Business	Business Standard Incentive Program	D53	Phillips 12w Endura LED TM Par30	4.5.2	LED Bulbs and Fixtures	C-LTG-LEDB-V01-120601	Elec	Lighting	60W incandescent (from	Energy Efficient Lighting	15
152	Business	Business Standard Incentive Program	D53	2-foot T8 lamps (17W) and ballasts replacing 2-foot T12	4.5.3	High Performance and Reduced Wattage T8 Fixtures and Lamps	C-LTG-T8FX-V01-120601	Elec	Lighting	F34112 w/ EEMg ballast -	Energy Efficient Lighting	15
153	Business	Business Standard Incentive Program	D53	Air Conditioner Tune-Up	4.4.1	Air Conditioner Tune-up	C-HVC-ACTU-V01-120601	Elec	HVAC	AC system that does not ha	Upgraded HVAC Equipment	3
154	Business	Business Standard Incentive Program	D53	Air-Cooled Chillers (150 tons and larger)	4.4.6	Electric Chiller	C-HVC-CHIL-V01-120601	Elec	HVAC	Equipment meeting efficien	>150 tons	20
155	Business	Business Standard Incentive Program	D53	Air-Cooled Chillers (up to 150 tons)	4.4.6	Electric Chiller	C-HVC-CHIL-V01-120601	Elec	HVAC	Equipment meeting efficien	<150 tons	20
156	Business	Business Standard Incentive Program	D53	Anti Sweat Heater Control, Cooler	4.6.3	Door Heater Controls for Cooler or Freezer	C-RFG-DHCT-V01-120601	Elec	Refrigeration	Cooler or refrigerator with	HVAC Controls	12
157	Business	Business Standard Incentive Program	D53	Anti Sweat Heater Control, Freezer	4.6.3	Door Heater Controls for Cooler or Freezer	C-RFG-DHCT-V01-120601	Elec	Refrigeration	Cooler or refrigerator with	HVAC Controls	12
158	Business	Business Standard Incentive Program	D53	Automatic Door Closer for Display Case Door: Reach-in Cooler	4.6.1	Automatic Door Closer for Walk-In Coolers and Freezers	C-RFG-ATDC-V01-120601	Elec	Refrigeration	Cooler or freezer without a	Cooler or freezer with an ai	8
159	Business	Business Standard Incentive Program	D53	Automatic Door Closer for Walk-in Freezer/Cooler (bac	4.6.1	Automatic Door Closer for Walk-In Coolers and Freezers	C-RFG-ATDC-V01-120601	Elec	Refrigeration	Cooler or freezer without a	Cooler or freezer with an ai	8
160	Business	Business Standard Incentive Program	D53	Beverage Machine Control	4.6.2	Beverage and Snack Machine Controls	C-RFG-BEVM-V01-120601	Elec	Refrigeration	Standard efficiency unit wit	Standard efficiency unit wit	5
161	Business	Business Standard Incentive Program	D53	Cree CR6 Downlight Retrofit	4.5.2	LED Bulbs and Fixtures	C-LTG-LEDB-V01-120601	Elec	Lighting	60W incandescent (from	Energy Efficient Lighting	15
162	Business	Business Standard Incentive Program	D53	Cree LR6 Downlight Module LR6-27K	4.5.2	LED Bulbs and Fixtures	C-LTG-LEDB-V01-120601	Elec	Lighting	60W incandescent (from	Energy Efficient Lighting	15
163	Business	Business Standard Incentive Program	D53	Dishwasher, High Temp (Includes Booster Heater)	4.2.6	ENERGY STAR Dishwasher	C-FSE-ESDW-V01-120601	Elec&Gas	Food Service	Non-ENERGY STAR dishwa	Energy Star Equipment	15
164	Business	Business Standard Incentive Program	D53	Earthmate 15w Spiral E1552AK	4.5.1	Commercial Standard CFL	C-LTG-CCLF-V01-120601	Elec	Lighting	60-75W incandescent (fro	Energy Efficient Lighting	2.2
165	Business	Business Standard Incentive Program	D53	Earthmate 20w Spiral E2052AK	4.5.1	Commercial Standard CFL	C-LTG-CCLF-V01-120601	Elec	Lighting	75-100W incandescent (fro	Energy Efficient Lighting	2.2
166	Business	Business Standard Incentive Program	D53	EC Motor for Reach-in Cooler	4.6.4	Electronically Commutated Motors (ECM) for Walk-in and Reach-in Coolers / Freez	C-RFG-ECMF-V01-120601	Elec	Refrigeration	Shaded pole motor	EC Motor	15

# Docket No. 13-0498

## Staff Group Cross Exhibit 1

### Page 20

1	A	B	C	D	E	F	G	H	I	J	K	L
2	Market Segment	Program	Rate Class	Measure	TRM Section Number	TRM Section Heading	TRM Measure Code	Fuel	End Use	Baseline Description	Efficient Description	Measure Life
167	Business	Business Standard Incentive Program	D53	EC Motor for Reach-In Freezer	4.6.4	Electronically Commutated Motors (ECM) for Walk-in and Reach-in Coolers / Freezers	CI-RFG-ECMF-V01-120601	Elec	Refrigeration	Shaded pole motor	EC Motor	15
168	Business	Business Standard Incentive Program	D53	EC Motor for Walk-In Cooler	4.6.4	Electronically Commutated Motors (ECM) for Walk-in and Reach-in Coolers / Freezers	CI-RFG-ECMF-V01-120601	Elec	Refrigeration	Shaded pole motor	EC Motor	15
169	Business	Business Standard Incentive Program	D53	EC Motor for Walk-In Freezer	4.6.4	Electronically Commutated Motors (ECM) for Walk-in and Reach-in Coolers / Freezers	CI-RFG-ECMF-V01-120601	Elec	Refrigeration	Shaded pole motor	EC Motor	15
170	Business	Business Standard Incentive Program	D53	Electric Griddle	4.2.8	ENERGY STAR Griddle	CI-FSE-ESGR-V01-120601	Elec	Food Service	Non-ENERGY STAR certified	Energy Star Equipment	12
171	Business	Business Standard Incentive Program	D53	Electric Steamer (3 pan)	4.2.3	Commercial Steam Cooker	CI-FSE-STMC-V01-120601	Elec	Food Service	Non-ENERGY STAR steamer	Energy Star Equipment	12
172	Business	Business Standard Incentive Program	D53	Electric Steamer (4 pan)	4.2.3	Commercial Steam Cooker	CI-FSE-STMC-V01-120601	Elec	Food Service	Non-ENERGY STAR steamer	Energy Star Equipment	12
173	Business	Business Standard Incentive Program	D53	Electric Steamer (5 pan)	4.2.3	Commercial Steam Cooker	CI-FSE-STMC-V01-120601	Elec	Food Service	Non-ENERGY STAR steamer	Energy Star Equipment	12
174	Business	Business Standard Incentive Program	D53	Electric Steamer (6 pan)	4.2.3	Commercial Steam Cooker	CI-FSE-STMC-V01-120601	Elec	Food Service	Non-ENERGY STAR steamer	Energy Star Equipment	12
175	Business	Business Standard Incentive Program	D53	Equipment Heater Timers	4.1.1	Engine Block Timer for Agricultural Equipment	RS-APL-ESDH-V01-120601	Elec	Agricultural	Manually plugged-in engine	Equipment Controls	3
176	Business	Business Standard Incentive Program	D53	Evaporator Fan Controls	4.6.6	Evaporator Fan Control	CI-RFG-EVPF-V01-120601	Elec	Refrigeration	Cooler with continuously running fan	HVAC Controls	16
177	Business	Business Standard Incentive Program	D53	Exterior Lighting	4.5.4	T5 Fixtures and Lamps	CI-LTG-T5FX-V01-120601	Elec	Lighting	From ActOnEnergy TRM: 100W incandescent	Energy Efficient Lighting	15
178	Business	Business Standard Incentive Program	D53	Feit 23w PAR-38 EcoBulb Flood (EST23PAR38T)	4.5.1	Commercial Standard CFL	CI-LTG-CCFL-V01-120601	Elec	Lighting	100W incandescent (from 60W incandescent)	Energy Efficient Lighting	2.2
179	Business	Business Standard Incentive Program	D53	Fixture mounted occupancy sensor for fluorescent or LED	4.5.5	Occupancy Sensor Lighting Controls	CI-LTG-OSLC-V01-120601	Elec	Lighting	Lighting system uncontrolled	Lighting Controls	8
180	Business	Business Standard Incentive Program	D53	Fixture mounted occupancy sensor or daylighting control	4.5.5	Occupancy Sensor Lighting Controls	CI-LTG-OSLC-V01-120601	Elec	Lighting	Lighting system uncontrolled	Energy Efficient Lighting	8
181	Business	Business Standard Incentive Program	D53	Gas Boiler Replacement (AFUE 85% min)	4.4.10	High Efficiency Boiler	CI-HVC-BOIL-V01-120601	Gas	HVAC	Hot water boiler <300kBTU	Replaced equipment	20
182	Business	Business Standard Incentive Program	D53	Gas Boiler Replacement (Thermal Eff 90%)	4.4.10	High Efficiency Boiler	CI-HVC-BOIL-V01-120601	Gas	HVAC	Hot water boiler <300kBTU	Replaced equipment	20
183	Business	Business Standard Incentive Program	D53	Gas Boiler Tune-Up	4.4.3	Process Boiler Tune-up	CI-HVC-PBTU-V01-120601	Gas	HVAC	Facility that does not have	Equipment Tune-up	3
184	Business	Business Standard Incentive Program	D53	Gas Fryer	4.2.7	ENERGY STAR Fryer	CI-FSE-ESFR-V01-120601	Gas	Food Service	Non-ENERGY STAR fryer	Energy Star Equipment	15
185	Business	Business Standard Incentive Program	D53	Gas Furnace Replacement (92% AFUE)	4.4.11	High Efficiency Furnace	CI-HVC-FRNC-V01-120601	Gas	HVAC	Minimum 80% AFUE furnace	Replaced equipment	16.5
186	Business	Business Standard Incentive Program	D53	Gas Furnace Replacement (94% AFUE)	4.4.11	High Efficiency Furnace	CI-HVC-FRNC-V01-120601	Gas	HVAC	Minimum 80% AFUE furnace	Replaced equipment	16.5
187	Business	Business Standard Incentive Program	D53	Gas Griddle	4.2.8	ENERGY STAR Griddle	CI-FSE-ESGR-V01-120601	Gas	Food Service	Non-ENERGY STAR certified	Energy Star Equipment	12
188	Business	Business Standard Incentive Program	D53	Gas Steamer (5 pan)	4.2.3	Commercial Steam Cooker	CI-FSE-STMC-V01-120601	Gas	Food Service	Non-ENERGY STAR steamer	Energy Star Equipment	12
189	Business	Business Standard Incentive Program	D53	Gas Steamer (6 pan)	4.2.3	Commercial Steam Cooker	CI-FSE-STMC-V01-120601	Gas	Food Service	Non-ENERGY STAR steamer	Energy Star Equipment	12
190	Business	Business Standard Incentive Program	D53	GE 15w R30 Soft White Dimmable Flood (FLE 15/2/DV)	4.5.1	Commercial Standard CFL	CI-LTG-CCFL-V01-120601	Elec	Lighting	60W incandescent (from 60W incandescent)	Energy Efficient Lighting	2.2
191	Business	Business Standard Incentive Program	D53	GE 15w R30 Soft White Flood (FLE 15/2/R30XL)	4.5.1	Commercial Standard CFL	CI-LTG-CCFL-V01-120601	Elec	Lighting	60W incandescent (from 60W incandescent)	Energy Efficient Lighting	2.2
192	Business	Business Standard Incentive Program	D53	GE Ecolux Starcoat F32T8 (case of 36)	4.5.3	High Performance and Reduced Wattage T8 Fixtures and Lamps	CI-LTG-T8FX-V01-120601	Elec	Lighting	F34112 w/ EEMag ballast	Energy Efficient Lighting	15
193	Business	Business Standard Incentive Program	D53	GE UltraMax Ballast 232-MAX/L/Ultra	4.5.3	High Performance and Reduced Wattage T8 Fixtures and Lamps	CI-LTG-T8FX-V01-120601	Elec	Lighting	F34112 w/ EEMag ballast	Energy Efficient Lighting	15
194	Business	Business Standard Incentive Program	D53	GE UltraMax Ballast 332-MAX/L/Ultra	4.5.3	High Performance and Reduced Wattage T8 Fixtures and Lamps	CI-LTG-T8FX-V01-120601	Elec	Lighting	F34112 w/ EEMag ballast	Energy Efficient Lighting	15
195	Business	Business Standard Incentive Program	D53	GE UltraMax Ballast 432-MAX/L/Ultra	4.5.3	High Performance and Reduced Wattage T8 Fixtures and Lamps	CI-LTG-T8FX-V01-120601	Elec	Lighting	F34112 w/ EEMag ballast	Energy Efficient Lighting	15
196	Business	Business Standard Incentive Program	D53	Glass Door Freezer (31.50 cu ft)	4.2.2	Commercial Solid and Glass Door Refrigerators & Freezers	CI-FSE-CSDO-V01-120601	Elec	Refrigeration	Existing unit meeting EPA 2	Glass Door Freezer	12
197	Business	Business Standard Incentive Program	D53	Glass Door Freezer (51 cu ft or more)	4.2.2	Commercial Solid and Glass Door Refrigerators & Freezers	CI-FSE-CSDO-V01-120601	Elec	Refrigeration	Existing unit meeting EPA 2	Glass Door Freezer	12
198	Business	Business Standard Incentive Program	D53	Glass Door LED Cooler/Freezer Lighting	4.5.2	LED Bulbs and Fixtures	CI-LTG-LEDB-V01-120601	Elec	Lighting	Baseline LED refrigerated	Energy Efficient Lighting	15
199	Business	Business Standard Incentive Program	D53	Glass Door LED cooler/Freezer Lighting Controls/Sensors	4.5.5	Occupancy Sensor Lighting Controls	CI-LTG-OSLC-V01-120601	Elec	Lighting	Lighting system uncontrolled	Energy Efficient Lighting	8
200	Business	Business Standard Incentive Program	D53	Guest Room Energy Management (GREM) Controls on	4.4.8	Guest Room Energy Management (PTAC & PTHP)	CI-HVC-GREM-V01-120601	Elec	HVAC	Manual heating/cooling tier	HVAC Controls	15
201	Business	Business Standard Incentive Program	D53	Guest Room Energy Management (GREM) Controls on	4.4.8	Guest Room Energy Management (PTAC & PTHP)	CI-HVC-GREM-V01-120601	Elec	HVAC	Manual heating/cooling tier	HVAC Controls	15
202	Business	Business Standard Incentive Program	D53	Hard wired CFL fixtures replacing existing incandescent	4.5.1	Commercial Standard CFL	CI-LTG-CCFL-V01-120601	Elec	Lighting	100w (72w) incandescent	Compact Fluorescent Light	2.2
203	Business	Business Standard Incentive Program	D53	Harmony 20w Lightwiz Spiral(H200275)	4.5.1	Commercial Standard CFL	CI-LTG-CCFL-V01-120601	Elec	Lighting	60-75W incandescent (from 100W incandescent)	Energy Efficient Lighting	2.2
204	Business	Business Standard Incentive Program	D53	Harmony Light 25w/MaxLite 25w	4.5.1	Commercial Standard CFL	CI-LTG-CCFL-V01-120601	Elec	Lighting	100W incandescent (from 60W incandescent)	Energy Efficient Lighting	2.2
205	Business	Business Standard Incentive Program	D53	High Efficiency Circulation Fans (24-35 in diameter)	4.1.3	High Speed Fans	CI-AGE-HSF -V01-120601	Elec	Agricultural	Existing fan at the end of us	Replaced equipment	7
206	Business	Business Standard Incentive Program	D53	High Efficiency Circulation Fans (36-47 in diameter)	4.1.3	High Speed Fans	CI-AGE-HSF -V01-120601	Elec	Agricultural	Existing fan at the end of us	Replaced equipment	7
207	Business	Business Standard Incentive Program	D53	High Efficiency Circulation Fans (48-71 in diameter)	4.1.3	High Speed Fans	CI-AGE-HSF -V01-120601	Elec	Agricultural	Existing fan at the end of us	Replaced equipment	7
208	Business	Business Standard Incentive Program	D53	High Efficiency Condensing Tanked Water Heater (gas)	4.3.1	Storage Water Heater	CI-HW -STWH-V01-120601	Gas	Hot Water	From ActOnEnergy TRM: C	High efficiency hot water	5
209	Business	Business Standard Incentive Program	D53	High Efficiency High Speed Exhaust/Ventilation Fans (24	4.1.3	High Speed Fans	CI-AGE-HSF -V01-120601	Elec	Agricultural	Existing fan at the end of us	Replaced equipment	7
210	Business	Business Standard Incentive Program	D53	High Efficiency High Speed Exhaust/Ventilation Fans (36	4.1.3	High Speed Fans	CI-AGE-HSF -V01-120601	Elec	Agricultural	Existing fan at the end of us	Replaced equipment	7
211	Business	Business Standard Incentive Program	D53	High Efficiency High Speed Exhaust/Ventilation Fans (48	4.1.3	High Speed Fans	CI-AGE-HSF -V01-120601	Elec	Agricultural	Existing fan at the end of us	Replaced equipment	7
212	Business	Business Standard Incentive Program	D53	High Efficiency Ice Maker (1001-1500 lbs)	4.2.10	ENERGY STAR Ice Maker	CI-FSE-ESIM-V01-120601	Elec	Food Service	Commercial ice machine m	Energy Star Equipment	10
213	Business	Business Standard Incentive Program	D53	High Efficiency Ice Maker (101-200 lbs)	4.2.10	ENERGY STAR Ice Maker	CI-FSE-ESIM-V01-120601	Elec	Food Service	Commercial ice machine m	Energy Star Equipment	10
214	Business	Business Standard Incentive Program	D53	High Efficiency Ice Maker (1501 and up lbs)	4.2.10	ENERGY STAR Ice Maker	CI-FSE-ESIM-V01-120601	Elec	Food Service	Commercial ice machine m	Energy Star Equipment	10
215	Business	Business Standard Incentive Program	D53	High Efficiency Ice Maker (201-300 lbs)	4.2.10	ENERGY STAR Ice Maker	CI-FSE-ESIM-V01-120601	Elec	Food Service	Commercial ice machine m	Energy Star Equipment	10
216	Business	Business Standard Incentive Program	D53	High Efficiency Ice Maker (301-400 lbs)	4.2.10	ENERGY STAR Ice Maker	CI-FSE-ESIM-V01-120601	Elec	Food Service	Commercial ice machine m	Energy Star Equipment	10
217	Business	Business Standard Incentive Program	D53	High Efficiency Ice Maker (401-500 lbs)	4.2.10	ENERGY STAR Ice Maker	CI-FSE-ESIM-V01-120601	Elec	Food Service	Commercial ice machine m	Energy Star Equipment	10
218	Business	Business Standard Incentive Program	D53	High Efficiency Ice Maker (501-1000 lbs)	4.2.10	ENERGY STAR Ice Maker	CI-FSE-ESIM-V01-120601	Elec	Food Service	Commercial ice machine m	Energy Star Equipment	10
219	Business	Business Standard Incentive Program	D53	High efficiency T5 or T8 fluorescent fixtures replacing ex	4.5.4	T5 Fixtures and Lamps	CI-LTG-T5FX-V01-120601	Elec	Lighting	Existing system	Energy Efficient Lighting	15
220	Business	Business Standard Incentive Program	D53	High Efficiency Tanked Water Heater (electric)	4.3.1	Storage Water Heater	CI-HW -STWH-V01-120601	Elec	Hot Water	Electric storage water heater	High efficiency hot water	5
221	Business	Business Standard Incentive Program	D53	High Efficiency Tanked Water Heater (gas)	4.3.1	Storage Water Heater	CI-HW -STWH-V01-120601	Gas	Hot Water	Gas storage water heater	High efficiency hot water	15
222	Business	Business Standard Incentive Program	D53	High Efficiency Tankless Water Heater (gas)	4.3.4	Tankless Water Heater	CI-HW -TWWH-V01-120601	Gas	Hot Water	Gas-fired tank type water	High efficiency hot water	20
223	Business	Business Standard Incentive Program	D53	High Efficiency Tankless Water Heaters (electric)	4.3.4	Tankless Water Heater	CI-HW -TWWH-V01-120601	Elec	Hot Water	Electric commercial-grade	High efficiency hot water	5
224	Business	Business Standard Incentive Program	D53	High Volume Low Speed (HVLS) Fans	4.1.2	High Volume Low Speed Fans	CI-AGE-HVSL-V01-120601	Elec	Agricultural	Multiple non-HVLS fans at	Replaced equipment	10
225	Business	Business Standard Incentive Program	D53	Highbay Fixture Replacement Option	4.5.3	High Performance and Reduced Wattage T8 Fixtures and Lamps	CI-LTG-T8FX-V01-120601	Elec	Lighting	200w PSMH250w metal hal	Energy Efficient Lighting	15
226	Business	Business Standard Incentive Program	D53	Hot Holding Cabinet (full size)	4.2.9	ENERGY STAR Hot Food Holding Cabinets	CI-FSE-ESHV-V01-120601	Elec	Food Service	Non-ENERGY STAR certified	Energy Star Equipment	12
227	Business	Business Standard Incentive Program	D53	Hot Holding Cabinet (half size)	4.2.9	ENERGY STAR Hot Food Holding Cabinets	CI-FSE-ESHV-V01-120601	Elec	Food Service	Non-ENERGY STAR certified	Energy Star Equipment	12
228	Business	Business Standard Incentive Program	D53	Hot Holding Cabinet (three-quarter size)	4.2.9	ENERGY STAR Hot Food Holding Cabinets	CI-FSE-ESHV-V01-120601	Elec	Food Service	Non-ENERGY STAR certified	Energy Star Equipment	12
229	Business	Business Standard Incentive Program	D53	Hubbell Ivory Motion-Sensing Wall Switch 120/277 lws	4.5.5	Occupancy Sensor Lighting Controls	CI-LTG-OSLC-V01-120601	Elec	Lighting	Uncontrolled lighting system	Lighting Controls	8
230	Business	Business Standard Incentive Program	D53	Hubbell White Wall Switch 120/277 1WS-ZP-3P-W	4.5.5	Occupancy Sensor Lighting Controls	CI-LTG-OSLC-V01-120601	Elec	Lighting	Uncontrolled lighting system	Lighting Controls	8
231	Business	Business Standard Incentive Program	D53	Interior LED Lamps and Fixtures	4.5.4	T5 Fixtures and Lamps	CI-LTG-T5FX-V01-120601	Elec	Lighting	Various - see SW TRM for a	LED Lighting	15
232	Business	Business Standard Incentive Program	D53	LED Exit Sign Retro-fit Kit 6W or less	4.5.5	Occupancy Sensor Lighting Controls	CI-LTG-OSLC-V01-120601	Elec	Lighting	Existing lighting sign	Energy Efficient Lighting	16
233	Business	Business Standard Incentive Program	D53	LED lamp	4.5.2	LED Bulbs and Fixtures	CI-LTG-LEDB-V01-120601	Elec	Lighting	Incandescent, 25-150 watts	LED Lighting	15
234	Business	Business Standard Incentive Program	D53	LED recessed down fixture (18W or less per fixture), reg	4.5.2	LED Bulbs and Fixtures	CI-LTG-LEDB-V01-120601	Elec	Lighting	Incandescent, 25-150 watts	LED Lighting	15
235	Business	Business Standard Incentive Program	D53	LED, T-1 or electroluminescent exit sign	4.5.5	Occupancy Sensor Lighting Controls	CI-LTG-OSLC-V01-120601	Elec	Lighting	Fluorescent exit sign	Energy Efficient Lighting	16
236	Business	Business Standard Incentive Program	D53	Live Stock Waterer (electrically heated)	4.1.4	Live Stock Waterer	CI-AGE-LSWL-V01-120601	Elec	Hot Water	Electric open waterer with	Reduced water usage	10
237	Business	Business Standard Incentive Program	D53	Live Stock Waterer (energy free or ground source heat)	4.1.4	Live Stock Waterer	CI-AGE-LSWL-V01-120601	Elec	Hot Water	From ActOnEnergy TRM: O	Reduced water usage	10
238	Business	Business Standard Incentive Program	D53	Low wattage occupancy sensors or daylight dimming c	4.5.5	Occupancy Sensor Lighting Controls	CI-LTG-OSLC-V01-120601	Elec	Lighting	Lighting system uncontrolled	Lighting Controls	8
239	Business	Business Standard Incentive Program	D53	Maxlite 25w MicroMax MLM25SWW	4.5.1	Commercial Standard CFL	CI-LTG-CCFL-V01-120601	Elec	Lighting	100W incandescent (from 60W incandescent)	Energy Efficient Lighting	2.2
240	Business	Business Standard Incentive Program	D53	New high performance T8 fixture (with or without a ref	4.5.3	High Performance and Reduced Wattage T8 Fixtures and Lamps	CI-LTG-T8FX-V01-120601	Elec	Lighting	F34112 w/ EEMag ballast	Energy Efficient Lighting	15
241	Business	Business Standard Incentive Program	D53	New T5 fluorescent replacing an existing T12	4.5.4	T5 Fixtures and Lamps	CI-LTG-T5FX-V01-120601	Elec	Lighting	Existing system	Energy Efficient Lighting	15
242	Business	Business Standard Incentive Program	D53	New, high performance T8 (32W) lamps and ballasts re	4.5.3	High Performance and Reduced Wattage T8 Fixtures and Lamps	CI-LTG-T8FX-V01-120601	Elec	Lighting	F34112 w/ EEMag ballast	Energy Efficient Lighting	15
243	Business	Business Standard Incentive Program	D53	Night Curtain for Open Cooler	4.6.7	Strip Curtain for Walk-in Coolers and Freezers	CI-RFG-CRTN-V01-120601	Elec	Refrigeration	From ActOnEnergy TRM: O	Case with cover	5
244	Business	Business Standard Incentive Program	D53	Permanent Fixture/Lamp Removal	4.5.2	LED Bulbs and Fixtures	CI-LTG-LEDB-V01-120601	Elec	Lighting	From ActOnEnergy TRM: A	Delamping	11
245	Business	Business Standard Incentive Program	D53	Philips T7w EnduraLED PAR38	4.5.2	LED Bulbs and Fixtures	CI-LTG-LEDB-V01-120601	Elec	Lighting	65W incandescent (from 60W incandescent)	Energy Efficient Lighting	15
246	Business	Business Standard Incentive Program	D53	PTAC/PTHP less than 65,000 Btu/h input, replacing an ex	4.4.13	Package Terminal Air Conditioner (PTAC) and Package Terminal Heat Pump (PTHP)	CI-HVC-PTAC-V01-120601	Elec	HVAC	PTAC: 10.0 EER/HP: 10.8	<65k BTU	15
247	Business	Business Standard Incentive Program	D53	PTAC/PTHP less than 65kBTU input, new installation	4.4.13	Package Terminal Air Conditioner (PTAC) and Package Terminal Heat Pump (PTHP)	CI-HVC-PTAC-V01-120601	Elec	HVAC	PTAC: 12.5 EER/HP: 12.3	<65k BTU	15
248	Business	Business Standard Incentive Program	D53	Reduced wattage T8 (28W) lamps and ballasts replac	4.5.3	High Performance and Reduced Wattage T8 Fixtures and Lamps	CI-LTG-T8FX-V01-120601	Elec	Lighting	F34112 w/ EEMag ballast	Energy Efficient Lighting	15

# Docket No. 13-0498

## Staff Group Cross Exhibit 1

### Page 21

	A	B	C	D	E	F	G	H	I	J	K	L
1	Market Segment	Program	Rate Class	Measure	TRM Section Number	TRM Section Heading	TRM Measure Code	Fuel	End Use	Baseline Description	Efficient Description	Measure Life
249	Business	Business Standard Incentive Program	D53	Refrigeration Tune-up	4.4.1	Air Conditioner Tune-up	CI-HVC-ACTU-V01-120601	Elec	Refrigeration	From ActOnEnergy TRM: R	Equipment Tune-up	4
250	Business	Business Standard Incentive Program	D53	Remote mounted occupancy sensors using ultrasonic	4.5.2	Occupancy Sensor Lighting Controls	CI-LTG-OSLC-V01-120601	Elec	Lighting	Lighting system uncontrol	Lighting Controls	8
251	Business	Business Standard Incentive Program	D53	Snack Machine Control	4.6.2	Beverage and Snack Machine Controls	CI-RFG-BEVM-V01-120601	Elec	Refrigeration	Standard efficiency unit wit	Standard efficiency unit wit	5
252	Business	Business Standard Incentive Program	D53	SnackMizer (Primary with Sensor) SM150	4.6.2	Beverage and Snack Machine Controls	CI-RFG-BEVM-V01-120601	Elec	Refrigeration	Uncontrolled vending mach	Controlled vending machin	5
253	Business	Business Standard Incentive Program	D53	SnackMizer (Primary with Sensor) SM170 Machine Mo	4.6.2	Beverage and Snack Machine Controls	CI-RFG-BEVM-V01-120601	Elec	Refrigeration	Uncontrolled vending mach	Controlled vending machin	5
254	Business	Business Standard Incentive Program	D53	SnackMizer (Secondary W/Cable) SM171 Machine Mo	4.6.2	Beverage and Snack Machine Controls	CI-RFG-BEVM-V01-120601	Elec	Refrigeration	Uncontrolled vending mach	Controlled vending machin	5
255	Business	Business Standard Incentive Program	D53	SnackMizer SM151-Secondary W/Cable	4.6.2	Beverage and Snack Machine Controls	CI-RFG-BEVM-V01-120601	Elec	Refrigeration	Uncontrolled vending mach	Controlled vending machin	5
256	Business	Business Standard Incentive Program	D53	Solid Door Freezer (15-30 cu ft)	4.2.2	Commercial Solid and Glass Door Refrigerators & Freezers	CI-FSE-CSDO-V01-120601	Elec	Refrigeration	Existing unit meeting EPA 2	Solid Door	12
257	Business	Business Standard Incentive Program	D53	Solid Door Freezer (31-50 cu ft)	4.2.2	Commercial Solid and Glass Door Refrigerators & Freezers	CI-FSE-CSDO-V01-120601	Elec	Refrigeration	Existing unit meeting EPA 2	Solid Door	12
258	Business	Business Standard Incentive Program	D53	Solid Door Freezer (51 cu ft or more)	4.2.2	Commercial Solid and Glass Door Refrigerators & Freezers	CI-FSE-CSDO-V01-120601	Elec	Refrigeration	Existing unit meeting EPA 2	Solid Door	12
259	Business	Business Standard Incentive Program	D53	Solid Door Freezer (up to 15 cu ft)	4.2.2	Commercial Solid and Glass Door Refrigerators & Freezers	CI-FSE-CSDO-V01-120601	Elec	Refrigeration	Existing unit meeting EPA 2	Solid Door	12
260	Business	Business Standard Incentive Program	D53	Steam Trap Repair / Replacement (HVAC)	4.4.15	Steam Trap Replacement or Repair	CI-HVC-STRE-V01-120601	Gas	HVAC	Faulty steam trap in need o		0
261	Business	Business Standard Incentive Program	D53	Steam Trap Repair / Replacement (Industrial Process)	4.4.15	Steam Trap Replacement or Repair	CI-HVC-STRE-V01-120601	Gas	HVAC	Faulty steam trap in need o		0
262	Business	Business Standard Incentive Program	D53	Strip Curtain on Walk-in Coolers or Freezers	4.6.7	Strip Curtain for Walk-in Coolers and Freezers	CI-RFG-CRTN-V01-120601	Elec	Refrigeration	Cooler or freezer without s	Case with cover	6
263	Business	Business Standard Incentive Program	D53	Sylvania 8W UltraLED PAR20 (LED8PAR20/DIM/830/NH	4.5.2	LED Bulbs and Fixtures	CI-LTG-LEDB-V01-120601	Elec	Lighting	35W halogen (from incand	Energy Efficient Lighting	15
264	Business	Business Standard Incentive Program	D53	T5 or reduced wattage T8 relamp and rebalast upgrade	4.5.3	High Performance and Reduced Wattage T8 Fixtures and Lamps	CI-LTG-T8FX-V01-120601	Elec	Lighting	Existing system	Energy Efficient Lighting	15
265	Business	Business Standard Incentive Program	D53	T8 U-tube Lamps and Ballasts Replacing T12 U-bend La	4.5.3	High Performance and Reduced Wattage T8 Fixtures and Lamps	CI-LTG-T8FX-V01-120601	Elec	Lighting	F34T12 w/ EEMag ballast -	Energy Efficient Lighting	15
266	Business	Business Standard Incentive Program	D53	TCP 13W EcoSave™ SpringLight 1ES13	4.5.1	Commercial Standard CFL	CI-LTG-CCFL-V01-120601	Elec	Lighting	60W incandescent (from o	Energy Efficient Lighting	2.2
267	Business	Business Standard Incentive Program	D53	TCP 14w 25 Deg Par30 LED14E26P3030KNFL	4.5.2	LED Bulbs and Fixtures	CI-LTG-LEDB-V01-120601	Elec	Lighting	75W incandescent (from o	Energy Efficient Lighting	15
268	Business	Business Standard Incentive Program	D53	TCP 14w 40 Deg Beam Angle PAR30 LED	4.5.2	LED Bulbs and Fixtures	CI-LTG-LEDB-V01-120601	Elec	Lighting	75W incandescent (from o	Energy Efficient Lighting	15
269	Business	Business Standard Incentive Program	D53	TCP 14w G25 Globe (2G2514)	4.5.1	Commercial Standard CFL	CI-LTG-CCFL-V01-120601	Elec	Lighting	60W incandescent (from o	Energy Efficient Lighting	2.2
270	Business	Business Standard Incentive Program	D53	TCP 14w R30 Reflector 803014	4.5.1	Commercial Standard CFL	CI-LTG-CCFL-V01-120601	Elec	Lighting	65W incandescent (from o	Energy Efficient Lighting	2.2
271	Business	Business Standard Incentive Program	D53	TCP 17w 25 Deg Par38 LED17E26P3830KNFL	4.5.2	LED Bulbs and Fixtures	CI-LTG-LEDB-V01-120601	Elec	Lighting	90W incandescent (from o	Energy Efficient Lighting	15
272	Business	Business Standard Incentive Program	D53	TCP 17w 40 Deg Par38 LED17E26P3830KNFL	4.5.2	LED Bulbs and Fixtures	CI-LTG-LEDB-V01-120601	Elec	Lighting	90W incandescent (from o	Energy Efficient Lighting	15
273	Business	Business Standard Incentive Program	D53	TCP 20W SpringLight 1ES20	4.5.1	Commercial Standard CFL	CI-LTG-CCFL-V01-120601	Elec	Lighting	75W incandescent (from o	Energy Efficient Lighting	2.2
274	Business	Business Standard Incentive Program	D53	TCP 23w EcoSave SpringLight 1ES23	4.5.1	Commercial Standard CFL	CI-LTG-CCFL-V01-120601	Elec	Lighting	100W incandescent (from	Energy Efficient Lighting	2.2
275	Business	Business Standard Incentive Program	D53	TCP 9W LED PAR20 (LED9E26P20Z7KFL)	4.5.2	LED Bulbs and Fixtures	CI-LTG-LEDB-V01-120601	Elec	Lighting	40W incandescent (from	Energy Efficient Lighting	15
276	Business	Business Standard Incentive Program	D53	TCP Exit Sign Retrofit Set 20714	4.5.5	Occupancy Sensor Lighting Controls	CI-LTG-OSLC-V01-120601	Elec	Lighting	Incandescent or halogen LE	Energy Efficient Lighting	16
277	Business	Business Standard Incentive Program	D53	TCP Red LED Exit Sign with Battery (22743D)	4.5.5	Occupancy Sensor Lighting Controls	CI-LTG-OSLC-V01-120601	Elec	Lighting	Incandescent or halogen LE	Energy Efficient Lighting	16
278	Business	Business Standard Incentive Program	D53	Ultra-low wattage T8 (25W) lamps and ballasts replac	4.5.3	High Performance and Reduced Wattage T8 Fixtures and Lamps	CI-LTG-T8FX-V01-120601	Elec	Lighting	F34T12 w/ EEMag ballast -	Energy Efficient Lighting	15
279	Business	Business Standard Incentive Program	D53	Unitary and Split AC Systems and Air Source Heat Pump	4.4.14	Single-Package and Split System Unitary Air Conditioners	CI-HVC-SPUA-V01-120601	Elec	HVAC	Standard efficiency air-, wa	EER 10+*	15
280	Business	Business Standard Incentive Program	D53	Unitary and Split AC Systems and Air Source Heat Pump	4.4.14	Single-Package and Split System Unitary Air Conditioners	CI-HVC-SPUA-V01-120601	Elec	HVAC	Standard efficiency air-, wa	EER 12+*	15
281	Business	Business Standard Incentive Program	D53	Unitary and Split AC Systems and Air Source Heat Pump	4.4.14	Single-Package and Split System Unitary Air Conditioners	CI-HVC-SPUA-V01-120601	Elec	HVAC	Standard efficiency air-, wa	EER 10+*	15
282	Business	Business Standard Incentive Program	D53	Unitary and Split AC Systems and Air Source Heat Pump	4.4.14	Single-Package and Split System Unitary Air Conditioners	CI-HVC-SPUA-V01-120601	Elec	HVAC	Standard efficiency air-, wa	EER 15+*	15
283	Business	Business Standard Incentive Program	D53	Unitary and Split AC Systems and Air Source Heat Pump	4.4.14	Single-Package and Split System Unitary Air Conditioners	CI-HVC-SPUA-V01-120601	Elec	HVAC	Standard efficiency air-, wa	EER 12+*	15
284	Business	Business Standard Incentive Program	D53	Variable Frequency Drives on HVAC Motors	4.4.16	Variable Speed Drives for HVAC	CI-HVC-VSDH-V01-120601	Elec	Refrigeration	Motor without a VSD	VFD Motor	15
285	Business	Business Standard Incentive Program	D53	Vending Miser EZ VM170	4.6.2	Beverage and Snack Machine Controls	CI-RFG-BEVM-V01-120601	Elec	Refrigeration	Uncontrolled vending mach	Controlled vending machin	5
286	Business	Business Standard Incentive Program	D53	Vending Miser VM150	4.6.2	Beverage and Snack Machine Controls	CI-RFG-BEVM-V01-120601	Elec	Refrigeration	Uncontrolled vending mach	Controlled vending machin	5
287	Business	Business Standard Incentive Program	D53	Vending Miser VM151	4.6.2	Beverage and Snack Machine Controls	CI-RFG-BEVM-V01-120601	Elec	Refrigeration	Uncontrolled vending mach	Controlled vending machin	5
288	Business	Business Standard Incentive Program	D53	Vending Miser EZ VM171	4.6.2	Beverage and Snack Machine Controls	CI-RFG-BEVM-V01-120601	Elec	Refrigeration	Uncontrolled vending mach	Controlled vending machin	5
289	Business	Business Standard Incentive Program	D53	VFD	4.4.16	Variable Speed Drives for HVAC	CI-HVC-VSDH-V01-120601	Elec	HVAC	Variable Speed Drive	VFD Motor	15
290	Business	Business Standard Incentive Program	D53	Wall switch plate mounted occupancy sensors using ult	4.5.5	Occupancy Sensor Lighting Controls	CI-LTG-OSLC-V01-120601	Elec	Lighting	Lighting system uncontrol	Lighting Controls	8
291	Residential	Residential Appliance Recycling	D51	Recycled Refrigerator	5.1.8	Refrigerator and Freezer Recycling	RS-APL-RRFC-V01-120601	FALSE	Refrigeration	Unit still in service	Removal of old appliance	8
292	Residential	Residential Appliance Recycling	D51	Recycled Freezer	5.1.8	Refrigerator and Freezer Recycling	RS-APL-RRFC-V01-120601	FALSE	Refrigeration	Unit still in service	Removal of old appliance	8
293	Residential	Residential Behavior Modification	D51	Behavior Modification Group 1	Not in TRM	Not in TRM	Not in TRM	Elec&Gas	Miscellaneous	Not-treated group	Energy Efficient Behavior	1
294	Residential	Residential Behavior Modification	D51	Behavior Modification Group 2	Not in TRM	Not in TRM	Not in TRM	Elec&Gas	Miscellaneous	Not-treated group	Energy Efficient Behavior	1
295	Residential	Residential Behavior Modification	D51	Behavior Modification Group 3	Not in TRM	Not in TRM	Not in TRM	Elec&Gas	Miscellaneous	Not-treated group	Energy Efficient Behavior	1
296	Residential	Residential Energy Star New Homes	D51	Rated Home - gas heat only, HERS <=60	Not in TRM	Not in TRM	Not in TRM	Elec&Gas	Miscellaneous	Home built to 2012 Illinois	ENERGY STAR Home	30
297	Residential	Residential Energy Star New Homes	D51	Rated Home - gas heat, HERS <=60	Not in TRM	Not in TRM	Not in TRM	Elec&Gas	Miscellaneous	Home built to 2012 Illinois	ENERGY STAR Home	30
298	Residential	Residential Energy Star New Homes	D51	Rated Home - electric heat, HERS <=60	Not in TRM	Not in TRM	Not in TRM	Elec	Miscellaneous	Home built to 2012 Illinois	ENERGY STAR Home	30
299	Residential	Residential Energy Star New Homes	D51	E-Star Home - gas heat only, HERS 41-60	Not in TRM	Not in TRM	Not in TRM	Elec&Gas	Miscellaneous	Home built to 2012 Illinois	ENERGY STAR Home	30
300	Residential	Residential Energy Star New Homes	D51	E-Star Home - gas heat, HERS 41-60	Not in TRM	Not in TRM	Not in TRM	Elec&Gas	Miscellaneous	Home built to 2012 Illinois	ENERGY STAR Home	30
301	Residential	Residential Energy Star New Homes	D51	E-Star Home - electric heat, HERS 41-60	Not in TRM	Not in TRM	Not in TRM	Elec	Miscellaneous	Home built to 2012 Illinois	ENERGY STAR Home	30
302	Residential	Residential Energy Star New Homes	D51	E-Star Home - gas heat only, HERS <=40	Not in TRM	Not in TRM	Not in TRM	Elec&Gas	Miscellaneous	Home built to 2012 Illinois	ENERGY STAR Home	30
303	Residential	Residential Energy Star New Homes	D51	E-Star Home - gas heat, HERS <=40	Not in TRM	Not in TRM	Not in TRM	Elec&Gas	Miscellaneous	Home built to 2012 Illinois	ENERGY STAR Home	30
304	Residential	Residential Energy Star New Homes	D51	E-Star Home - electric heat, HERS <=40	Not in TRM	Not in TRM	Not in TRM	Elec	Miscellaneous	Home built to 2012 Illinois	ENERGY STAR Home	30
305	Residential	Residential Energy Star New Homes	D51	Rated Multifamily Unit - gas heat only, HERS <=60	Not in TRM	Not in TRM	Not in TRM	Elec&Gas	Miscellaneous	Home built to 2012 Illinois	ENERGY STAR Home	30
306	Residential	Residential Energy Star New Homes	D51	Rated Multifamily Unit - gas heat, HERS <=60	Not in TRM	Not in TRM	Not in TRM	Elec&Gas	Miscellaneous	Home built to 2012 Illinois	ENERGY STAR Home	30
307	Residential	Residential Energy Star New Homes	D51	Rated Multifamily Unit - electric heat, HERS <=60	Not in TRM	Not in TRM	Not in TRM	Elec	Miscellaneous	Home built to 2012 Illinois	ENERGY STAR Home	30
308	Residential	Residential Energy Star New Homes	D51	E-Star Multifamily Unit - gas heat only, HERS 41-60	Not in TRM	Not in TRM	Not in TRM	Elec&Gas	Miscellaneous	Multifamily Unit built to 20	ENERGY STAR Home	30
309	Residential	Residential Energy Star New Homes	D51	E-Star Multifamily Unit - gas heat, HERS 41-60	Not in TRM	Not in TRM	Not in TRM	Elec&Gas	Miscellaneous	Multifamily Unit built to 20	ENERGY STAR Home	30
310	Residential	Residential Energy Star New Homes	D51	E-Star Multifamily Unit - electric heat, HERS 41-60	Not in TRM	Not in TRM	Not in TRM	Elec	Miscellaneous	Multifamily Unit built to 20	ENERGY STAR Home	30
311	Residential	Residential Energy Star New Homes	D51	E-Star Multifamily Unit - gas heat only, HERS <=40	Not in TRM	Not in TRM	Not in TRM	Elec&Gas	Miscellaneous	Multifamily Unit built to 20	ENERGY STAR Home	30
312	Residential	Residential Energy Star New Homes	D51	E-Star Multifamily Unit - gas heat, HERS <=40	Not in TRM	Not in TRM	Not in TRM	Elec&Gas	Miscellaneous	Multifamily Unit built to 20	ENERGY STAR Home	30
313	Residential	Residential Energy Star New Homes	D51	E-Star Multifamily Unit - electric heat, HERS <=40	Not in TRM	Not in TRM	Not in TRM	Elec	Miscellaneous	Multifamily Unit built to 20	ENERGY STAR Home	30
314	Residential	Residential Home Energy Performance	D51	Air Sealing - Electric Heat	5.6.1	Air Sealing	RS-SHL-AIRS-V01-120601	Elec	Insulation	Existing infiltration	Upgraded insulation	15
315	Residential	Residential Home Energy Performance	D51	Air Sealing - Gas Heat Only	5.6.1	Air Sealing	RS-SHL-AIRS-V01-120601	Elec&Gas	Insulation	Existing infiltration	Upgraded insulation	15
316	Residential	Residential Home Energy Performance	D51	Air Sealing - Gas Heat w/ AC	5.6.1	Air Sealing	RS-SHL-AIRS-V01-120601	Elec&Gas	Insulation	Existing infiltration	Upgraded insulation	15
317	Residential	Residential Home Energy Performance	D51	Ceiling Insulation (R-11 to R-49) - Electric Heat	5.6.4	Wall and Ceiling/Attic Insulation	RS-SHL-AINS-V01-120601	Elec	Insulation	R11 or less existing insulat	Upgraded insulation	25
318	Residential	Residential Home Energy Performance	D51	Ceiling Insulation (R-11 to R-49) - Gas Heat Only	5.6.4	Wall and Ceiling/Attic Insulation	RS-SHL-AINS-V01-120601	Elec&Gas	Insulation	R11 or less existing insulat	Upgraded insulation	25
319	Residential	Residential Home Energy Performance	D51	Ceiling Insulation (R-11 to R-49) - Gas Heat w/ AC	5.6.4	Wall and Ceiling/Attic Insulation	RS-SHL-AINS-V01-120601	Elec&Gas	Insulation	R11 or less existing insulat	Upgraded insulation	25
320	Residential	Residential Home Energy Performance	D51	Ceiling Insulation (R-19 to R-49) - Electric Heat	5.6.4	Wall and Ceiling/Attic Insulation	RS-SHL-AINS-V01-120601	Elec	Insulation	R19 or less existing insulat	Upgraded insulation	25
321	Residential	Residential Home Energy Performance	D51	Ceiling Insulation (R-19 to R-49) - Gas Heat Only	5.6.4	Wall and Ceiling/Attic Insulation	RS-SHL-AINS-V01-120601	Elec&Gas	Insulation	R19 or less existing insulat	Upgraded insulation	25
322	Residential	Residential Home Energy Performance	D51	Ceiling Insulation (R-19 to R-49) - Gas Heat w/ AC	5.6.4	Wall and Ceiling/Attic Insulation	RS-SHL-AINS-V01-120601	Elec&Gas	Insulation	R19 or less existing insulat	Upgraded insulation	25
323	Residential	Residential Home Energy Performance	D51	CFL 43w to 14w - Post-EISA	5.5.1	ENERGY STAR Compact Fluorescent Lamp (CFL)	RS-LTG-ESCF-V01-120601	Elec	Lighting	43W Halogen	CFL Bulbs	5.2
324	Residential	Residential Home Energy Performance	D51	CFL 53w to 19w - Post-EISA	5.5.1	ENERGY STAR Compact Fluorescent Lamp (CFL)	RS-LTG-ESCF-V01-120601	Elec	Lighting	53W Halogen	CFL Bulbs	5.2
325	Residential	Residential Home Energy Performance	D51	CFL 60w to 14w candelabra - Pre-EISA	5.5.2	ENERGY STAR Specialty Compact Fluorescent Lamp (CFL)	RS-LTG-ESCC-V01-120601	Elec	Lighting	60W Incandescent	CFL Bulbs	6.8
326	Residential	Residential Home Energy Performance	D51	CFL 60w to 14w globe - Pre-EISA	5.5.2	ENERGY STAR Specialty Compact Fluorescent Lamp (CFL)	RS-LTG-ESCC-V01-120601	Elec	Lighting	60W Incandescent	CFL Bulbs	6.8
327	Residential	Residential Home Energy Performance	D51	CFL 60w to 14w inductor - Pre-EISA	5.5.2	ENERGY STAR Specialty Compact Fluorescent Lamp (CFL)	RS-LTG-ESCC-V01-120601	Elec	Lighting	60W Incandescent	CFL Bulbs	6.8
328	Residential	Residential Home Energy Performance	D51	CFL 72w to 23w - Post-EISA	5.5.1	ENERGY STAR Compact Fluorescent Lamp (CFL)	RS-LTG-ESCF-V01-120601	Elec	Lighting	72W Halogen	CFL Bulbs	5.2
329	Residential	Residential Home Energy Performance	D51	Crawl Space Insulation - Electric Heat	5.6.2	Basement Sidewall Insulation	RS-SHL-BINS-V01-120601	Elec	Insulation	Uninsulated crawl space w	Upgraded insulation	25
330	Residential	Residential Home Energy Performance	D51	Crawl Space Insulation - Gas Heat Only	5.6.2	Basement Sidewall Insulation	RS-SHL-BINS-V01-120601	Elec&Gas	Insulation	Uninsulated crawl space w	Upgraded insulation	25

# Docket No. 13-0498

## Staff Group Cross Exhibit 1

### Page 22

1	A	B	C	D	E	F	G	H	I	J	K	L
2	Market Segment	Program	Rate Class	Measure	TRM Section Number	TRM Section Heading	TRM Measure Code	Fuel	End Use	Baseline Description	Efficient Description	Measure Life
331	Residential	Residential Home Energy Performance	D51	Crawl Space Insulation - Gas Heat w/ AC	5.6.2	Basement Sidewall Insulation	RS-SHL-BINS-V01-120601	Elec&Gas	Insulation	Uninsulated crawl space w/	Upgraded insulation	25
332	Residential	Residential Home Energy Performance	D51	Faucet Aerator - Electric DHW	5.4.4	Low Flow Faucet Aerators	RS-HWE-LFFA-V01-120601	Elec	Hot Water	Standard Aerator (2.75+ gpd)	Less water usage	9
333	Residential	Residential Home Energy Performance	D51	Faucet Aerator - Gas DHW	5.4.4	Low Flow Faucet Aerators	RS-HWE-LFFA-V01-120601	Gas	Hot Water	Standard Aerator (2.75+ gpd)	Less water usage	9
334	Residential	Residential Home Energy Performance	D51	R-11 Wall Insulation - Electric Heat	5.6.4	Wall and Ceiling/Attic Insulation	RS-SHL-AINS-V01-120601	Elec	Insulation	Empty wall cavity	Upgraded insulation	25
335	Residential	Residential Home Energy Performance	D51	R-11 Wall Insulation - Gas Heat Only	5.6.4	Wall and Ceiling/Attic Insulation	RS-SHL-AINS-V01-120601	Elec&Gas	Insulation	Empty wall cavity	Upgraded insulation	25
336	Residential	Residential Home Energy Performance	D51	R-11 Wall Insulation - Gas Heat w/ AC	5.6.4	Wall and Ceiling/Attic Insulation	RS-SHL-AINS-V01-120601	Elec&Gas	Insulation	Empty wall cavity	Upgraded insulation	25
337	Residential	Residential Home Energy Performance	D51	Rim Joist Insulation - Electric Heat	5.6.4	Wall and Ceiling/Attic Insulation	RS-SHL-AINS-V01-120601	Elec	Insulation	Uninsulated rim joist	Upgraded insulation	25
338	Residential	Residential Home Energy Performance	D51	Rim Joist Insulation - Gas Heat Only	5.6.4	Wall and Ceiling/Attic Insulation	RS-SHL-AINS-V01-120601	Elec&Gas	Insulation	Uninsulated rim joist	Upgraded insulation	25
339	Residential	Residential Home Energy Performance	D51	Rim Joist Insulation - Gas Heat w/ AC	5.6.4	Wall and Ceiling/Attic Insulation	RS-SHL-AINS-V01-120601	Elec&Gas	Insulation	Uninsulated rim joist	Upgraded insulation	25
340	Residential	Residential Home Energy Performance	D51	Showerhead 1.75 gpm - Electric DHW	5.4.5	Low Flow Showerheads	RS-HWE-LFSH-V01-120601	Elec	Hot Water	2.5+ gpm Showerhead	1.75 gpm	10
341	Residential	Residential Home Energy Performance	D51	Showerhead 1.75 gpm - Gas DHW	5.4.5	Low Flow Showerheads	RS-HWE-LFSH-V01-120601	Gas	Hot Water	2.5+ gpm Showerhead	1.75 gpm	10
342	Residential	Residential Home Energy Performance	D51	Water Heater Temp Adjustment - Electric DHW	5.4.6	Water Heater Temperature Setback	RS-HWE-TMPS-V01-120601	Elec	Hot Water	Setting of 130+ degrees	Lower water temperature	2
343	Residential	Residential Home Energy Performance	D51	Water Heater Temp Adjustment - Gas DHW	5.4.6	Water Heater Temperature Setback	RS-HWE-TMPS-V01-120601	Gas	Hot Water	Setting of 130+ degrees	Lower water temperature	2
344	Residential	Residential HVAC	D51	ASHP 14.5-14.9 SEER	5.3.1	Air Source Heat Pump	RS-HVC-ASHP-V01-120601	Elec	HVAC	ASHP 9.12 SEER 5.44 HSPF	SEER 14.5-14.9	18
345	Residential	Residential HVAC	D51	ASHP 15.0-15.9 SEER	5.3.1	Air Source Heat Pump	RS-HVC-ASHP-V01-120601	Elec	HVAC	ASHP 9.12 SEER 5.44 HSPF	SEER 15.0-15.9	18
346	Residential	Residential HVAC	D51	ASHP 16.0+ SEER	5.3.1	Air Source Heat Pump	RS-HVC-ASHP-V01-120601	Elec	HVAC	ASHP 9.12 SEER 5.44 HSPF	SEER 16.0+	18
347	Residential	Residential HVAC	D51	ASHP ER 14.5-14.9 SEER	5.3.1	Air Source Heat Pump	RS-HVC-ASHP-V01-120601	Elec	HVAC	ASHP 13 SEER 7.7 HSPF * 7	SEER 14.5-14.9	18
348	Residential	Residential HVAC	D51	ASHP ER 15.0-15.9 SEER	5.3.1	Air Source Heat Pump	RS-HVC-ASHP-V01-120601	Elec	HVAC	ASHP 13 SEER 7.7 HSPF * 7	SEER 15.0-15.9	18
349	Residential	Residential HVAC	D51	ASHP ER 16.0+ SEER	5.3.1	Air Source Heat Pump	RS-HVC-ASHP-V01-120601	Elec	HVAC	ASHP 13 SEER 7.7 HSPF * 7	SEER 16.0+	18
350	Residential	Residential HVAC	D51	Boiler 90% AFUE	5.3.5	Gas High Efficiency Boiler	RS-HVC-GHEB-V01-120601	Gas	HVAC	Boiler 82% AFUE	AFUE 90%	25
351	Residential	Residential HVAC	D51	Boiler 90% AFUE	5.3.5	Gas High Efficiency Boiler	RS-HVC-GHEB-V01-120601	Gas	HVAC	Boiler 61.6% AFUE	AFUE 90%	25
352	Residential	Residential HVAC	D51	BPM Blower Motor	5.3.4	Furnace Blower Motor	RS-HVC-FBMT-V01-120601	Elec	HVAC	Non-BPM blower motor	BPM Blower Motor	20
353	Residential	Residential HVAC	D51	CAC 14.5-14.9 SEER	5.3.2	Central Air Conditioning > 14.5 SEER	RS-HVC-CAC1-V01-120601	Elec	HVAC	CAC 13 SEER	SEER 14.5-14.9	18
354	Residential	Residential HVAC	D51	CAC 15.0-15.9 SEER	5.3.2	Central Air Conditioning > 14.5 SEER	RS-HVC-CAC1-V01-120601	Elec	HVAC	CAC 13 SEER	SEER 15.0-15.9	18
355	Residential	Residential HVAC	D51	CAC 16.0+ SEER	5.3.2	Central Air Conditioning > 14.5 SEER	RS-HVC-CAC1-V01-120601	Elec	HVAC	CAC 13 SEER	SEER 16.0+	18
356	Residential	Residential HVAC	D51	CAC ER 14.5-14.9 SEER	5.3.2	Central Air Conditioning > 14.5 SEER	RS-HVC-CAC1-V01-120601	Elec	HVAC	CAC 8.6 SEER	SEER 14.5-14.9	18
357	Residential	Residential HVAC	D51	CAC ER 15.0-15.9 SEER	5.3.2	Central Air Conditioning > 14.5 SEER	RS-HVC-CAC1-V01-120601	Elec	HVAC	CAC 8.6 SEER	SEER 15.0-15.9	18
358	Residential	Residential HVAC	D51	CAC ER 16.0+ SEER	5.3.2	Central Air Conditioning > 14.5 SEER	RS-HVC-CAC1-V01-120601	Elec	HVAC	CAC 8.6 SEER	SEER 16.0+	18
359	Residential	Residential HVAC	D51	Furnace 97% AFUE	5.3.6	Gas High Efficiency Furnace	RS-HVC-GHEF-V01-120601	Gas	HVAC	Furnace 80% AFUE	AFUE 97%	20
360	Residential	Residential HVAC	D51	Furnace 97% AFUE	5.3.6	Gas High Efficiency Furnace	RS-HVC-GHEF-V01-120601	Gas	HVAC	Furnace 64.4% AFUE	AFUE 97%	20
361	Residential	Residential HVAC	D51	Ground Source Heat Pump	5.3.7	Ground Source Heat Pump	RS-HVC-GSHP-V01-120601	Elec	HVAC	ASHP 13SEER 11 EER	Ground Source Heat Pump	18
362	Residential	Residential HVAC	D51	Programmable Thermostat - Electric Heat	5.3.10	Programmable Thermostats	RS-HVC-PROG-V01-120601	Elec	HVAC	Manual setting thermostat	Thermostat Setback	5
363	Residential	Residential HVAC	D51	Programmable Thermostat - Gas Heat	5.3.10	Programmable Thermostats	RS-HVC-PROG-V01-120601	Elec&Gas	HVAC	Manual setting thermostat	Thermostat Setback	5
364	Residential	Residential Lighting	D51	Standard CFL	5.5.1	ENERGY STAR Compact Fluorescent Lamp (CFL)	RS-LTG-ESCF-V01-120601	Elec	Res Lighting	Standard halogen bulb	CFL Bulbs	5
365	Residential	Residential Moderate Income Retrofit	D51	Air Sealing - Electric Heat	5.6.1	Air Sealing	RS-SHL-AIRS-V01-120601	Elec	Insulation	Existing infiltration	Upgraded insulation	15
366	Residential	Residential Moderate Income Retrofit	D51	Air Sealing - Gas Heat Only	5.6.1	Air Sealing	RS-SHL-AIRS-V01-120601	Elec&Gas	Insulation	Existing infiltration	Upgraded insulation	15
367	Residential	Residential Moderate Income Retrofit	D51	Air Sealing - Gas Heat w/ AC	5.6.1	Air Sealing	RS-SHL-AIRS-V01-120601	Elec&Gas	Insulation	Existing infiltration	Upgraded insulation	15
368	Residential	Residential Moderate Income Retrofit	D51	ASHP 14.5+ SEER	5.3.1	Air Source Heat Pump	RS-HVC-ASHP-V01-120601	Elec	HVAC	ASHP 13.0 SEER 7.7 HSPF	SEER 14.5+	18
369	Residential	Residential Moderate Income Retrofit	D51	Basement Wall Insulation - Electric Heat	5.6.2	Basement Sidewall Insulation	RS-SHL-BINS-V01-120601	Elec	Insulation	Uninsulated basement wall	Upgraded insulation	25
370	Residential	Residential Moderate Income Retrofit	D51	Basement Wall Insulation - Gas Heat Only	5.6.2	Basement Sidewall Insulation	RS-SHL-BINS-V01-120601	Elec&Gas	Insulation	Uninsulated basement wall	Upgraded insulation	25
371	Residential	Residential Moderate Income Retrofit	D51	Basement Wall Insulation - Gas Heat w/ AC	5.6.2	Basement Sidewall Insulation	RS-SHL-BINS-V01-120601	Elec&Gas	Insulation	Uninsulated basement wall	Upgraded insulation	25
372	Residential	Residential Moderate Income Retrofit	D51	Boiler 90% AFUE	5.3.5	Gas High Efficiency Boiler	RS-HVC-GHEB-V01-120601	Gas	HVAC	Boiler 82% AFUE	AFUE 90%	25
373	Residential	Residential Moderate Income Retrofit	D51	Boiler 90% AFUE	5.3.5	Gas High Efficiency Boiler	RS-HVC-GHEB-V01-120601	Gas	HVAC	Boiler 61.6% AFUE	AFUE 90%	25
374	Residential	Residential Moderate Income Retrofit	D51	CAC 14.5+ SEER	5.3.2	Central Air Conditioning > 14.5 SEER	RS-HVC-CAC1-V01-120601	Elec	HVAC	CAC 13 SEER	SEER 14.5+	18
375	Residential	Residential Moderate Income Retrofit	D51	Ceiling Insulation (R-11 to R-49) - Electric Heat	5.6.4	Wall and Ceiling/Attic Insulation	RS-SHL-AINS-V01-120601	Elec	Insulation	R11 or less existing insulation	Upgraded insulation	25
376	Residential	Residential Moderate Income Retrofit	D51	Ceiling Insulation (R-11 to R-49) - Gas Heat Only	5.6.4	Wall and Ceiling/Attic Insulation	RS-SHL-AINS-V01-120601	Elec&Gas	Insulation	R11 or less existing insulation	Upgraded insulation	25
377	Residential	Residential Moderate Income Retrofit	D51	Ceiling Insulation (R-11 to R-49) - Gas Heat w/ AC	5.6.4	Wall and Ceiling/Attic Insulation	RS-SHL-AINS-V01-120601	Elec&Gas	Insulation	R11 or less existing insulation	Upgraded insulation	25
378	Residential	Residential Moderate Income Retrofit	D51	Ceiling Insulation (R-19 to R-49) - Electric Heat	5.6.4	Wall and Ceiling/Attic Insulation	RS-SHL-AINS-V01-120601	Elec	Insulation	R19 or less existing insulation	Upgraded insulation	25
379	Residential	Residential Moderate Income Retrofit	D51	Ceiling Insulation (R-19 to R-49) - Gas Heat Only	5.6.4	Wall and Ceiling/Attic Insulation	RS-SHL-AINS-V01-120601	Elec&Gas	Insulation	R19 or less existing insulation	Upgraded insulation	25
380	Residential	Residential Moderate Income Retrofit	D51	Ceiling Insulation (R-19 to R-49) - Gas Heat w/ AC	5.6.4	Wall and Ceiling/Attic Insulation	RS-SHL-AINS-V01-120601	Elec&Gas	Insulation	R19 or less existing insulation	Upgraded insulation	25
381	Residential	Residential Moderate Income Retrofit	D51	CFL 43w to 14w - Post-EISA	5.5.1	ENERGY STAR Compact Fluorescent Lamp (CFL)	RS-LTG-ESCF-V01-120601	Elec	Lighting	43W Halogen	Energy Efficient Lighting	5.2
382	Residential	Residential Moderate Income Retrofit	D51	CFL 53w to 19w - Post-EISA	5.5.1	ENERGY STAR Compact Fluorescent Lamp (CFL)	RS-LTG-ESCF-V01-120601	Elec	Lighting	53W Halogen	Energy Efficient Lighting	5.2
383	Residential	Residential Moderate Income Retrofit	D51	CFL 60w to 14w candelabra - Pre-EISA	5.5.2	ENERGY STAR Specialty Compact Fluorescent Lamp (CFL)	RS-LTG-ESCC-V01-120601	Elec	Lighting	60W Incandescent	Energy Efficient Lighting	6.8
384	Residential	Residential Moderate Income Retrofit	D51	CFL 60w to 14w globe - Pre-EISA	5.5.2	ENERGY STAR Specialty Compact Fluorescent Lamp (CFL)	RS-LTG-ESCC-V01-120601	Elec	Lighting	60W Incandescent	Energy Efficient Lighting	6.8
385	Residential	Residential Moderate Income Retrofit	D51	CFL 60w to 14w reflector - Pre-EISA	5.5.2	ENERGY STAR Specialty Compact Fluorescent Lamp (CFL)	RS-LTG-ESCC-V01-120601	Elec	Lighting	60W Incandescent	Energy Efficient Lighting	6.8
386	Residential	Residential Moderate Income Retrofit	D51	CFL 72w to 23w - Post-EISA	5.5.1	ENERGY STAR Compact Fluorescent Lamp (CFL)	RS-LTG-ESCF-V01-120601	Elec	Lighting	72W Halogen	Energy Efficient Lighting	5.2
387	Residential	Residential Moderate Income Retrofit	D51	Crawl Space Insulation - Electric Heat	5.6.2	Basement Sidewall Insulation	RS-SHL-BINS-V01-120601	Elec	Insulation	Uninsulated crawl space w/	Upgraded insulation	25
388	Residential	Residential Moderate Income Retrofit	D51	Crawl Space Insulation - Gas Heat Only	5.6.2	Basement Sidewall Insulation	RS-SHL-BINS-V01-120601	Elec&Gas	Insulation	Uninsulated crawl space w/	Upgraded insulation	25
389	Residential	Residential Moderate Income Retrofit	D51	Crawl Space Insulation - Gas Heat w/ AC	5.6.2	Basement Sidewall Insulation	RS-SHL-BINS-V01-120601	Elec&Gas	Insulation	Uninsulated crawl space w/	Upgraded insulation	25
390	Residential	Residential Moderate Income Retrofit	D51	ER ASHP 14.5+ SEER (Replace ASHP)	5.3.1	Air Source Heat Pump	RS-HVC-ASHP-V01-120601	Elec	HVAC	ASHP 9.12 SEER 5.44 HSPF	SEER 14.5+	18
391	Residential	Residential Moderate Income Retrofit	D51	ER ASHP 14.5+ SEER (Replace Resistance)	5.3.1	Air Source Heat Pump	RS-HVC-ASHP-V01-120601	Elec	HVAC	Electric Resistance Heat	SEER 14.5+	18
392	Residential	Residential Moderate Income Retrofit	D51	ER CAC 14.5+	5.3.2	Central Air Conditioning > 14.5 SEER	RS-HVC-CAC1-V01-120601	Elec	HVAC	CAC 8.6 SEER	SEER 14.5+	18
393	Residential	Residential Moderate Income Retrofit	D51	Faucet Aerator - Electric DHW	5.4.4	Low Flow Faucet Aerators	RS-HWE-LFFA-V01-120601	Elec	Hot Water	Standard Aerator (2.75+ gpd)	Reduced water usage	9
394	Residential	Residential Moderate Income Retrofit	D51	Faucet Aerator - Gas DHW	5.4.4	Low Flow Faucet Aerators	RS-HWE-LFFA-V01-120601	Gas	Hot Water	Standard Aerator (2.75+ gpd)	Reduced water usage	9
395	Residential	Residential Moderate Income Retrofit	D51	Furnace 95% AFUE - Gas Heat	5.3.6	Gas High Efficiency Furnace	RS-HVC-GHEF-V01-120601	Gas	HVAC	Furnace 80% AFUE	AFUE 95%	20
396	Residential	Residential Moderate Income Retrofit	D51	Furnace 95% AFUE - Gas Heat	5.3.6	Gas High Efficiency Furnace	RS-HVC-GHEF-V01-120601	Gas	HVAC	Furnace 64.4% AFUE	AFUE 95%	20
397	Residential	Residential Moderate Income Retrofit	D51	Programmable Thermostat - Electric Heat Pump	5.3.10	Programmable Thermostats	RS-HVC-PROG-V01-120601	Elec	HVAC	Manual setting thermostat	Thermostat Setback	5
398	Residential	Residential Moderate Income Retrofit	D51	Programmable Thermostat - Gas Heat	5.3.10	Programmable Thermostats	RS-HVC-PROG-V01-120601	Elec&Gas	HVAC	Manual setting thermostat	Thermostat Setback	5
399	Residential	Residential Moderate Income Retrofit	D51	R-11 Wall Insulation - Electric Heat	5.6.4	Wall and Ceiling/Attic Insulation	RS-SHL-AINS-V01-120601	Elec	Insulation	Empty wall cavity	Upgraded insulation	25
400	Residential	Residential Moderate Income Retrofit	D51	R-11 Wall Insulation - Gas Heat Only	5.6.4	Wall and Ceiling/Attic Insulation	RS-SHL-AINS-V01-120601	Elec&Gas	Insulation	Empty wall cavity	Upgraded insulation	25
401	Residential	Residential Moderate Income Retrofit	D51	R-11 Wall Insulation - Gas Heat w/ AC	5.6.4	Wall and Ceiling/Attic Insulation	RS-SHL-AINS-V01-120601	Elec&Gas	Insulation	Empty wall cavity	Upgraded insulation	25
402	Residential	Residential Moderate Income Retrofit	D51	Rim Joist Insulation - Electric Heat	5.6.4	Wall and Ceiling/Attic Insulation	RS-SHL-AINS-V01-120601	Elec	Insulation	Uninsulated rim joist	Upgraded insulation	25
403	Residential	Residential Moderate Income Retrofit	D51	Rim Joist Insulation - Gas Heat Only	5.6.4	Wall and Ceiling/Attic Insulation	RS-SHL-AINS-V01-120601	Elec&Gas	Insulation	Uninsulated rim joist	Upgraded insulation	25
404	Residential	Residential Moderate Income Retrofit	D51	Rim Joist Insulation - Gas Heat w/ AC	5.6.4	Wall and Ceiling/Attic Insulation	RS-SHL-AINS-V01-120601	Elec&Gas	Insulation	Uninsulated rim joist	Upgraded insulation	25
405	Residential	Residential Moderate Income Retrofit	D51	Showerhead 1.75 gpm - Electric DHW	5.4.5	Low Flow Showerheads	RS-HWE-LFSH-V01-120601	Elec	Hot Water	2.5+ gpm Showerhead	Reduced water usage	10
406	Residential	Residential Moderate Income Retrofit	D51	Showerhead 1.75 gpm - Gas DHW	5.4.5	Low Flow Showerheads	RS-HWE-LFSH-V01-120601	Gas	Hot Water	2.5+ gpm Showerhead	Reduced water usage	10
407	Residential	Residential Moderate Income Retrofit	D51	Water Heater Temp Adjustment - Electric DHW	5.4.6	Water Heater Temperature Setback	RS-HWE-TMPS-V01-120601	Elec	Hot Water	Setting of 130+ degrees	Reduced water usage	2
408	Residential	Residential Moderate Income Retrofit	D51	Water Heater Temp Adjustment - Gas DHW	5.4.6	Water Heater Temperature Setback	RS-HWE-TMPS-V01-120601	Gas	Hot Water	Setting of 130+ degrees	Reduced water usage	2
409	Residential	Residential Multifamily	D51	In-Unit Integral CFL 43w to 14w - Post-EISA	5.5.1	ENERGY STAR Compact Fluorescent Lamp (CFL)	RS-LTG-ESCF-V01-120601	Elec	Lighting	43W Halogen	Energy Efficient Lighting	5.2
410	Residential	Residential Multifamily	D51	In-Unit Integral CFL 53w to 19w - Post-EISA	5.5.1	ENERGY STAR Compact Fluorescent Lamp (CFL)	RS-LTG-ESCF-V01-120601	Elec	Lighting	53W Halogen	Energy Efficient Lighting	5.2
411	Residential	Residential Multifamily	D51	In-Unit Integral CFL 72w to 23w - Post-EISA	5.5.1	ENERGY STAR Compact Fluorescent Lamp (CFL)	RS-LTG-ESCF-V01-120601	Elec	Lighting	72W Halogen	Energy Efficient Lighting	5.2
412	Residential	Residential Multifamily	D51	In-Unit Showerhead - Electric DHW	5.4.5	Low Flow Showerheads	RS-HWE-LFSH-V01-120601	Elec	Hot Water	2.5+ gpm Showerhead	Less water usage	10

**Docket No. 13-0498**  
**Staff Group Cross Exhibit 1**  
**Page 23**

	A	B	C	D	E	F	G	H	I	J	K	L
1	Market Segment	Program	Rate Class	Measure	TRM Section Number	TRM Section Heading	TRM Measure Code	Fuel	End Use	Baseline Description	Efficient Description	Measure Life
2												
413	Residential	Residential Multifamily	DS1	In-Unit Faucet Aerator - Electric DHW	5.4.4	Low Flow Faucet Aerators	RS-HWE-LFFA-V01-120601	Elec	Hot Water	Standard Aerator (2.75+ gpm)	Less water usage	9
414	Residential	Residential Multifamily	DS1	In-Unit Showerhead 1.75 gpm - Gas DHW	5.4.5	Low Flow Showerheads	RS-HWE-LFSH-V01-120601	Gas	Hot Water	2.5+ gpm Showerhead	1.75 gpm	10
415	Residential	Residential Multifamily	DS1	In-Unit Faucet Aerator - Gas DHW	5.4.4	Low Flow Faucet Aerators	RS-HWE-LFFA-V01-120601	Gas	Hot Water	Standard Aerator (2.75+ gpm)	Less water usage	9
416	Residential	Residential Multifamily	DS1	In-Unit Programmable Thermostat - Electric Heat	5.3.10	Programmable Thermostats	RS-HVC-PROG-V01-120601	Elec	HVAC	Manual setting thermostat	Thermostat Setback	5
417	Residential	Residential Multifamily	DS1	In-Unit Programmable Thermostat - Gas Heat	5.3.10	Programmable Thermostats	RS-HVC-PROG-V01-120601	Elec&Gas	HVAC	Manual setting thermostat	Thermostat Setback	5
418	Residential	Residential School Kits	DS1	School Kit	Not in TRM	Not in TRM	Not in TRM	Elec&Gas	Miscellaneous			7

# Docket No. 13-0498

## Staff Group Cross Exhibit 1

### Page 24

	D	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE
1	Measure	kWh Savings / yr / unit	kWh Savings / lifetime / unit	kW Savings / yr / unit	kW Savings / lifetime / unit	Thm Savings / yr / unit	Thm Savings / lifetime / unit	Incentive / unit (yr 1)	kWh Net-To-Gross			kW Net-To-Gross			Thm Net-To-Gross			Incremental Participants		
2									PY7	PY8	PY9	PY7	PY8	PY9	PY7	PY8	PY9	PY7	PY8	PY9
3	Custom Electric (Includes New Const.)	67,509,396.57	877,622,155.39	16,877.35	219,405.54	0.00	0.00	\$3,983,054.40	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	1	1	1
4	Custom Gas (Includes New Const.)	0.00	0.00	0.00	0.00	0.00	1,073,807.17	13,959,493.17	\$674,350.90	0.83	0.83	0.83	0.76	0.76	0.76	0.76	0.76	1	1	1
5	Retro-commissioning Electric	17,973,280.90	89,866,404.52	4,493.32	22,466.60	0.00	0.00	\$952,583.89	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	1	1	1
6	Retro-commissioning Gas	0.00	0.00	0.00	0.00	0.00	140,717.23	703,586.24	\$87,666.85	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	1	1	1
7	Phillips 10w Endura LED A19 L Prize	115.83	1,737.45	0.03	0.04	0.00	-1.87	-28.02	\$13.00	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	1	1	1
8	Phillips 12w Endura LED A19 912E26A60	178.67	2,680.05	0.04	0.60	0.00	-2.88	-43.23	\$13.00	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	25	25	25
9	Phillips 12w Endura LED TM Par30	178.67	2,680.05	0.04	0.60	0.00	-2.88	-43.23	\$13.00	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	18	18	18
10	2-foot T8 lamps (17W) and ballasts replacing 2-foot T12	322.91	4,843.62	0.06	0.83	-3.70	-55.47	\$1.95	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	256	341	398
11	Air Conditioner Tune-Up	878.00	2,634.00	0.39	1.17	0.00	0.00	\$162.50	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	495	495	495
12	Air-Cooled Chillers (150 tons and larger)	17,844.89	356,897.80	18.33	366.60	0.00	0.00	\$650.00	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	1	1	1
13	Air-Cooled Chillers (up to 150 tons)	11,888.10	237,762.00	9.00	180.00	0.00	0.00	\$650.00	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	4	4	4
14	Anti Sweat Heater Control, Cooler	0.00	0.00	0.00	0.00	0.00	0.00	\$325.00	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	471	471	471
15	Anti Sweat Heater Control, Freezer	0.00	0.00	0.00	0.00	0.00	0.00	\$325.00	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	189	189	189
16	Auto Closer for Display Case Door- Reach-in Cooler Doc	1,625.00	13,000.00	0.22	1.76	0.00	0.00	\$39.00	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0	0	0
17	Automatic Door Closer for Walk-in Freezer/Cooler (bac	1,625.00	13,000.00	0.22	1.76	0.00	0.00	\$39.00	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	99	99	99
18	Beverage Machine Control	1,411.33	7,056.65	0.00	0.00	0.00	0.00	\$130.00	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0	0	0
19	Cree CR6 Downlight Retrofit	309.00	4,635.00	0.08	1.20	-4.98	-74.76	\$13.00	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	1	1	1
20	Cree LR6 Downlight Module LR6-27K	306.20	4,593.00	0.08	1.20	-4.94	-74.08	\$13.00	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	14	14	14
21	Dishwasher, High Temp (Includes Booster Heater)	0.00	0.00	0.00	0.00	0.00	0.00	\$1,170.00	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0	0	0
22	Earthmate 15w Spiral E1552AK	177.14	389.71	0.04	0.09	-2.86	-6.29	\$1.63	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	49	49	49
23	Earthmate 20w Spiral E2052AK	411.54	905.39	0.10	0.22	-6.64	-14.60	\$2.28	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	188	187	187
24	EC Motor for Reach-In Cooler	343.00	5,145.00	0.03	0.45	0.00	0.00	\$32.50	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	180	180	180
25	EC Motor for Reach-In Freezer	516.50	7,747.50	0.04	0.60	0.00	0.00	\$45.50	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	54	54	54
26	EC Motor for Walk-in Cooler	357.50	5,362.50	0.04	0.60	0.00	0.00	\$32.50	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	59	59	59
27	EC Motor for Walk-in Freezer	577.00	8,655.00	0.09	1.35	0.00	0.00	\$45.50	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	47	47	47
28	Electric Griddle	2,597.00	31,164.00	0.53	6.36	0.00	0.00	\$156.00	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0	0	0
29	Electric Steamer (3 pan)	13,649.19	163,790.28	2.49	29.88	0.00	0.00	\$990.00	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0	0	0
30	Electric Steamer (4 pan)	18,592.13	223,105.56	3.39	40.68	0.00	0.00	\$455.00	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0	0	0
31	Electric Steamer (5 pan)	23,749.42	284,993.04	4.33	51.96	0.00	0.00	\$520.00	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0	0	0
32	Electric Steamer (6 pan)	28,693.00	344,316.00	5.24	62.88	0.00	0.00	\$585.00	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0	0	0
33	Equipment Heater Timers	664.00	1,992.00	0.00	0.00	0.00	0.00	\$13.00	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0	0	0
34	Evaporator Fan Controls	478.00	7,648.00	0.06	0.96	0.00	0.00	\$78.00	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0	0	0
35	Exterior Lighting	501.00	7,515.00	0.00	0.03	0.00	0.00	\$53.14	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	1,305	1,605	2,006
36	Felt 23w PAR-38 EcoBulb Flood (EST23PAR38T)	655.53	1,442.17	0.16	0.35	-10.57	-23.26	\$3.90	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	55	55	55
37	Fixture mounted occupancy sensor for fluorescent or L	311.90	2,495.21	0.13	1.00	-3.57	-28.52	\$39.00	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	2,250	2,841	3,693
38	Fixture mounted occupancy sensor or daylighting contr	335.56	2,684.48	0.03	0.24	-5.41	-43.30	\$52.00	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	14	14	17
39	Gas Boiler Replacement (AFUE 85% min)	0.00	0.00	0.00	0.00	573.42	11,468.44	\$663.00	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	1	1	1
40	Gas Boiler Replacement (Thermal Eff 90%)	0.00	0.00	0.00	0.00	686.65	13,732.96	\$2,301.00	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	20	20	20
41	Gas Boiler Tune-Up	0.00	0.00	0.00	0.00	226.76	680.28	\$1,061.67	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	7	7	7
42	Gas Fryer	0.00	0.00	0.00	0.00	505.00	7,575.00	\$520.00	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0	0	0
43	Gas Furnace Replacement (92% AFUE)	0.00	0.00	0.00	0.00	184.07	3,037.12	\$585.00	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	2	2	2
44	Gas Furnace Replacement (94% AFUE)	0.00	0.00	0.00	0.00	166.20	2,742.23	\$780.00	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	29	29	29
45	Gas Griddle	0.00	0.00	0.00	0.00	149.00	1,788.00	\$65.00	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0	0	0
46	Gas Steamer (5 pan)	0.00	0.00	0.00	0.00	1,678.29	20,139.48	\$1,300.00	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0	0	0
47	Gas Steamer (6 pan)	0.00	0.00	0.00	0.00	1,808.98	21,707.76	\$1,560.00	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0	0	0
48	GE 15w R30 Soft White Dimmable Flood (FLE 15/2/DV/	109.60	241.12	0.03	0.07	-1.77	-3.89	\$3.90	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	69	68	68
49	GE 15w R30 Soft White Flood (FLE 15/2/R30XL)	288.50	634.70	0.07	0.15	-4.65	-10.24	\$4.55	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	16	16	16
50	GE Ecolum Starcoat F32T8 (case of 36)	2,205.00	33,075.00	0.55	8.25	-35.56	-533.47	\$15.60	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	1	1	1
51	GE UltraMax Ballast 232-MAX/L/Ultra	83.43	1,251.45	0.02	0.30	-1.35	-20.18	\$8.13	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	415	413	412
52	GE UltraMax Ballast 332-MAX/L/Ultra	155.20	2,328.00	0.04	0.60	-2.50	-37.55	\$12.48	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	66	66	65
53	GE UltraMax Ballast 432-MAX/L/Ultra	390.67	5,860.05	0.10	1.50	-6.30	-94.52	\$14.95	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	360	359	357
54	Glass Door Freezer (31-50 cu ft)	0.00	0.00	0.00	0.00	0.00	0.00	\$990.00	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	1	1	1
55	Glass Door Freezer (51 cu ft or more)	0.00	0.00	0.00	0.00	0.00	0.00	\$650.00	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0	0	0
56	Glass Door LED Cooler/Freezer Lighting	889.32	13,339.73	0.11	1.59	0.00	0.00	\$41.34	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	124	170	227
57	Glass Door LED Cooler/Freezer Lighting Controls/Sens	100.21	801.68	0.04	0.32	0.00	0.00	\$15.60	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	2	3	3
58	Guest Room Energy Management (GREM) Controls on	1,686.50	25,297.50	0.84	12.60	0.00	0.00	\$104.00	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	153	153	153
59	Guest Room Energy Management (GREM) Controls on	1,076.50	16,147.50	0.84	12.60	0.00	0.00	\$65.00	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0	0	0
60	Hard wired CFL fixtures replacing existing incandescent	339.35	746.57	0.09	2.00	-3.79	-8.34	\$23.92	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	50	114	142
61	Harmony 20w Lightwiz Spiral(H20027S)	119.57	263.05	0.03	0.07	-1.93	-4.24	\$												



# Docket No. 13-0498

## Staff Group Cross Exhibit 1

### Page 26

	D	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE
1	Measure	kWh Savings / yr / unit	kWh Savings / lifetime / unit	kW Savings / yr / unit	kW Savings / lifetime / unit	Thm Savings / yr / unit	Thm Savings / lifetime / unit	Incentive / unit (yr 1)	kWh Net-To-Gross			kW Net-To-Gross			Thm Net-To-Gross			Incremental Participants		
2									PY7	PY8	PY9	PY7	PY8	PY9	PY7	PY8	PY9	PY7	PY8	PY9
167	EC Motor for Reach-In Freezer	516.50	7,747.50	0.04	0.60	0.00	0.00	\$35.00	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	40	40	40
168	EC Motor for Walk-in Cooler	357.50	5,362.50	0.04	0.60	0.00	0.00	\$25.00	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	45	45	44
169	EC Motor for Walk-in Freezer	577.00	8,655.00	0.09	1.35	0.00	0.00	\$35.00	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	36	36	36
170	Electric Griddle	31,164.00	2,997.00	0.53	6.36	0.00	0.00	\$130.00	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0	0	0
171	Electric Steamer (3 pan)	13,649.19	163,790.28	2.49	29.88	0.00	0.00	\$300.00	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0	0	0
172	Electric Steamer (4 pan)	18,592.13	223,105.56	3.39	40.68	0.00	0.00	\$350.00	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0	0	0
173	Electric Steamer (5 pan)	23,749.42	284,993.04	4.33	51.96	0.00	0.00	\$400.00	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0	0	0
174	Electric Steamer (6 pan)	28,693.00	344,316.00	5.24	62.88	0.00	0.00	\$450.00	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0	0	0
175	Equipment Heater Timers	664.00	1,992.00	0.00	0.00	0.00	0.00	\$10.00	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0	0	0
176	Evaporator Fan Controls	478.00	7,648.00	0.06	0.96	0.00	0.00	\$60.00	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0	0	0
177	Exterior Lighting	501.00	7,515.00	0.00	0.03	0.00	0.00	\$40.88	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	993	1,220	1,525
178	Felt 23w PAR-38 EcoBulb Flood (EST23PAR38T)	655.53	1,442.17	0.16	0.35	-10.57	-23.26	\$3.00	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0	0	0
179	Fixture mounted occupancy sensor for fluorescent or L	311.90	2,495.21	0.13	1.00	-3.57	-28.52	\$30.00	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	1,710	2,159	2,807
180	Fixture mounted occupancy sensor or daylighting contr	335.56	2,684.48	0.03	0.24	-5.41	-43.30	\$40.00	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	11	11	13
181	Gas Boiler Replacement (AFUE 85% min)	0.00	0.00	0.00	0.00	573.42	11,468.44	\$510.00	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	1	1	1
182	Gas Boiler Replacement (Thermal Eff 90%)	0.00	0.00	0.00	0.00	686.65	13,732.96	\$1,770.00	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	16	16	16
183	Gas Boiler Tune-Up	0.00	0.00	0.00	0.00	226.76	680.28	\$816.67	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	6	6	6
184	Gas Fryer	0.00	0.00	0.00	0.00	505.00	7,575.00	\$400.00	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0	0	0
185	Gas Furnace Replacement (92% AFUE)	0.00	0.00	0.00	0.00	184.07	3,037.12	\$450.00	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	1	1	1
186	Gas Furnace Replacement (94% AFUE)	0.00	0.00	0.00	0.00	166.20	2,742.23	\$600.00	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	22	22	22
187	Gas Griddle	0.00	0.00	0.00	0.00	149.00	1,788.00	\$50.00	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0	0	0
188	Gas Steamer (5 pan)	0.00	0.00	0.00	0.00	1,678.29	20,139.48	\$1,000.00	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0	0	0
189	Gas Steamer (6 pan)	0.00	0.00	0.00	0.00	1,808.98	21,707.76	\$1,200.00	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0	0	0
190	GE 15w R30 Soft White Dimmable Flood (FLE 15/2/DV/	109.60	241.12	0.03	0.07	-1.77	-3.89	\$3.00	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0	0	0
191	GE 15w R30 Soft White Flood (FLE 15/2/R30XL)	288.50	634.70	0.07	0.15	-4.65	-10.24	\$3.50	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0	0	0
192	GE Ecolum Starcoat F32T8 (case of 36)	2,205.00	33,075.00	0.55	8.25	-35.56	-53.47	\$12.00	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0	0	0
193	GE UltraMax Ballast 232-MAX/L/Ultra	83.43	1,251.45	0.02	0.30	-1.35	-20.18	\$6.25	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0	0	0
194	GE UltraMax Ballast 332-MAX/L/Ultra	155.20	2,328.00	0.04	0.60	-2.50	-37.55	\$9.60	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0	0	0
195	GE UltraMax Ballast 432-MAX/L/Ultra	390.67	5,860.05	0.10	1.50	-6.30	-94.52	\$11.50	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0	0	0
196	Glass Door Freezer (31-50 cu ft)	3,871.65	46,459.80	0.41	4.87	0.00	0.00	\$300.00	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	1	1	1
197	Glass Door Freezer (51 cu ft or more)	7,341.53	88,098.30	0.79	9.42	0.00	0.00	\$500.00	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0	0	0
198	Glass Door LED Cooler/Freezer Lighting	889.32	13,339.73	0.11	1.59	0.00	0.00	\$31.80	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	95	130	173
199	Glass Door LED cooler/Freezer Lighting Controls/Senso	100.21	801.68	0.04	0.32	0.00	0.00	\$12.00	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	2	3	3
200	Guest Room Energy Management (GREM) Controls on	1,686.50	25,297.50	0.84	12.60	0.00	0.00	\$80.00	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	116	115	114
201	Guest Room Energy Management (GREM) Controls on	1,076.50	16,147.50	0.84	12.60	0.00	0.00	\$50.00	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0	0	0
202	Hard wired CFL fixtures replacing existing Incandescent	339.35	746.57	0.09	0.20	-3.79	-8.34	\$18.40	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	38	86	108
203	Harmony 20w Lightwiz Spiral(H200275)	119.57	263.05	0.03	0.07	-1.93	-4.24	\$1.75	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0	0	0
204	Harmony Light 25w/MaxLite 25w	257.91	567.40	0.06	0.13	-4.16	-9.15	\$1.25	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0	0	0
205	High Efficiency Circulation Fans (24-35 in diameter)	372.14	2,604.98	0.12	0.84	0.00	0.00	\$25.00	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0	0	0
206	High Efficiency Circulation Fans (36-47 in diameter)	625.23	4,376.61	0.20	1.40	0.00	0.00	\$50.00	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0	0	0
207	High Efficiency Circulation Fans (48-71 in diameter)	1,122.36	7,856.52	0.36	2.52	0.00	0.00	\$100.00	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	1	1	1
208	High Efficiency Condensing Tanked Water Heater (gas)	0.00	0.00	0.00	0.00	1,246.25	6,231.24	\$300.00	0.80	0.80	0.80	0.80	0.80	0.80	0.93	0.93	0.93	0	0	0
209	High Efficiency High Speed Exhaust/Ventilation Fans (24	372.14	2,604.98	0.12	0.84	0.00	0.00	\$25.00	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0	0	0
210	High Efficiency High Speed Exhaust/Ventilation Fans (36	625.23	4,376.61	0.20	1.40	0.00	0.00	\$50.00	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0	0	0
211	High Efficiency High Speed Exhaust/Ventilation Fans (48	1,122.36	7,856.52	0.36	2.52	0.00	0.00	\$100.00	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0	0	0
212	High Efficiency Ice Maker (1001-1500 lbs)	1,567.44	15,674.40	0.29	2.90	0.00	0.00	\$350.00	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0	0	0
213	High Efficiency Ice Maker (101-200 lbs)	243.66	2,436.60	0.05	0.50	0.00	0.00	\$100.00	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0	0	0
214	High Efficiency Ice Maker (1501 and up lbs)	1,693.43	16,934.30	0.32	3.20	0.00	0.00	\$350.00	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0	0	0
215	High Efficiency Ice Maker (201-300 lbs)	383.38	3,833.80	0.07	0.70	0.00	0.00	\$150.00	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0	0	0
216	High Efficiency Ice Maker (301-400 lbs)	509.43	5,094.30	0.10	1.00	0.00	0.00	\$150.00	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0	0	0
217	High Efficiency Ice Maker (401-500 lbs)	616.18	6,161.80	0.12	1.20	0.00	0.00	\$175.00	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0	0	0
218	High Efficiency Ice Maker (501-1000 lbs)	915.87	9,158.70	0.17	1.70	0.00	0.00	\$225.00	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0	0	0
219	High efficiency T5 or T8 fluorescent fixtures replacing ex	544.22	8,163.24	0.09	1.40	-6.55	-98.19	\$9.16	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	3,790	3,886	4,318
220	High Efficiency Tanked Water Heater (electric)	5,005.72	25,028.60	0.57	2.85	0.00	0.00	\$150.00	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0	0	0
221	High Efficiency Tanked Water Heater (gas)	0.00	0.00	0.00	0.00	251.00	3,765.00	\$150.00	0.80	0.80	0.80	0.80	0.80	0.80	0.93	0.93	0.93	2	2	2
222	High Efficiency Tankless Water Heater (gas)	0.00	0.00	0.00	0.00	172.09	3,441.80	\$300.00	0.80	0.80	0.80	0.80	0.80	0.80	0.93	0.93	0.93	10	10	10
223	High Efficiency Tankless Water Heaters (electric)	7,925.10	39,625.50	0.90	4.50	0.00	0.00	\$300.00	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0	0	0
224	High Volume Low Speed (HVLS) Fans	8,379.47	83,794.70	3.07	30.70	0.00	0.00	\$1,000.00	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0	0	0
225	Highbay Fixture Replacement Option	1,450.95	21,764.31	0.25	3.69	-15.76	-236.39	\$64.55	0.62											

# Docket No. 13-0498

## Staff Group Cross Exhibit 1

### Page 27

	D	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE
1	Measure	kWh Savings / yr / unit	kWh Savings / lifetime / unit	kW Savings / yr / unit	kW Savings / lifetime / unit	Thm Savings / yr / unit	Thm Savings / lifetime / unit	Incentive / unit (yr 1)	kWh Net-To-Gross			kW Net-To-Gross			Thm Net-To-Gross			Incremental Participants		
2									PY7	PY8	PY9	PY7	PY8	PY9	PY7	PY8	PY9	PY7	PY8	PY9
245	Refrigeration Tune-up	5,220.00	20,880.00	0.00	0.00	0.00	0.00	\$200.00	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	219	217	216
250	Remote mounted occupancy sensors using ultrasonic o	1,100.00	8,800.00	0.00	0.00	-0.17	-1.32	\$30.00	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	121	138	216
251	Snack Machine Control	342.75	1,713.75	0.00	0.00	0.00	0.00	\$30.00	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0	0	0
252	SnackMizer (Primary with Sensor) SM150	387.00	1,935.00	0.10	0.50	0.00	0.00	\$30.00	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0	0	0
253	SnackMizer (Primary with Sensor) SM170 Machine Mo	387.00	1,935.00	0.10	0.50	0.00	0.00	\$30.00	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0	0	0
254	SnackMizer (Secondary W/Cable) SM171 Machine Mo	387.00	1,935.00	0.10	0.50	0.00	0.00	\$30.00	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0	0	0
255	SnackMizer SM151-Secondary W/cable	387.00	1,935.00	0.10	0.50	0.00	0.00	\$30.00	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0	0	0
256	Solid Door Freezer (15-30 cu ft)	595.40	7,144.80	0.06	0.72	0.00	0.00	\$50.00	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0	0	0
257	Solid Door Freezer (31-50 cu ft)	958.40	11,500.80	0.10	1.20	0.00	0.00	\$100.00	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	1	1	1
258	Solid Door Freezer (51 cu ft or more)	2,765.50	33,186.00	0.30	3.60	0.00	0.00	\$200.00	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0	0	0
259	Solid Door Freezer (up to 15 cu ft)	269.90	3,238.80	0.03	0.36	0.00	0.00	\$35.00	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0	0	0
260	Steam Trap Repair / Replacement (HVAC)	0.00	0.00	0.00	0.00	75.00	450.00	\$100.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	218	218	218
261	Steam Trap Repair / Replacement (Industrial Process or	0.00	0.00	0.00	0.00	470.00	2,820.00	\$270.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	806	806	806
262	Strip Curtain on Walk-in Coolers or Freezers	1,698.00	10,188.00	0.20	1.20	0.00	0.00	\$65.00	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	14	14	14
263	Sylvania BR UltraLED PAR20 (LED8PAR20/DIM/830/NF	125.00	1,875.00	0.01	0.15	-0.85	-12.82	\$10.00	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0	0	0
264	T5 or reduced wattage T8 relamp and rebalast upgradi	100.24	1,503.54	0.02	0.27	-1.82	-27.30	\$8.88	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	273	273	302
265	T8 U-tube Lamps and Ballasts Replacing T12 U-bend La	171.60	2,574.02	0.03	0.42	-1.71	-25.67	\$11.10	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	892	950	1,080
266	TCP 13W EcoSave™SpringLight 1E513	195.28	429.62	0.05	0.11	-3.15	-6.93	\$1.25	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0	0	0
267	TCP 14w 25 Deg Par30 LED14E26P3030KNFL	125.93	1,888.95	0.03	0.45	-2.03	-30.47	\$10.00	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0	0	0
268	TCP 14w 40 Deg Beam Angle PAR30 LED	125.93	1,888.95	0.03	0.45	-2.03	-30.47	\$10.00	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0	0	0
269	TCP 14w G25 Globe (2G2514)	198.53	436.77	0.05	0.11	-3.20	-7.04	\$2.00	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0	0	0
270	TCP 14w R30 Reflector 803014	125.93	277.05	0.03	0.07	-2.03	-4.07	\$2.00	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0	0	0
271	TCP 17w 25 Deg Par38 LED17E26P3830KNFL	227.10	3,406.50	0.06	0.90	-3.66	-54.94	\$10.00	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0	0	0
272	TCP 17w 40 Deg Par38 LED17E26P3830KNFL	271.70	4,075.50	0.07	1.05	-4.38	-65.73	\$10.00	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0	0	0
273	TCP 20W SpringLight 1E520	256.42	564.12	0.06	0.13	-4.14	-9.10	\$1.25	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0	0	0
274	TCP 23w EcoSave SpringLight 1E523	228.45	502.59	0.06	0.13	-3.68	-8.11	\$1.25	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0	0	0
275	TCP 9W LED PAR20 (LED9E26P2027KFL)	115.83	1,737.45	0.03	0.45	-1.87	-28.02	\$10.00	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0	0	0
276	TCP Exit Sign Retrofit Set 20714	194.99	3,119.84	0.05	0.80	-3.15	-50.32	\$5.00	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0	0	0
277	TCP Red LED Exit Sign with Battery (22743D)	476.88	7,632.88	0.12	1.92	-7.89	-123.07	\$12.00	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0	0	0
278	Ultra-low wattage T8 (25W) lamps and ballasts replac	416.00	6,240.00	0.09	1.38	-0.85	-72.74	\$12.00	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	1,594	1,943	2,159
279	Unitary and Split AC Systems and Air Source Heat Pump	9,363.21	140,448.15	9.27	139.05	0.00	0.00	\$300.00	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	11	11	11
280	Unitary and Split AC Systems and Air Source Heat Pump	744.50	11,167.50	0.75	11.21	0.00	0.00	\$50.00	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	73	73	73
281	Unitary and Split AC Systems and Air Source Heat Pump	15,220.95	228,314.25	15.56	233.40	0.00	0.00	\$500.00	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0	0	0
282	Unitary and Split AC Systems and Air Source Heat Pump	514.38	7,715.70	0.50	7.50	0.00	0.00	\$50.00	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	107	107	107
283	Unitary and Split AC Systems and Air Source Heat Pump	2,850.23	42,753.39	2.84	42.60	0.00	0.00	\$150.00	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	1	1	1
284	Variable Frequency Drives on HVAC Motors	11,645.00	174,675.00	1.12	16.80	0.00	0.00	\$1,100.00	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	6	6	6
285	Vending Miser EZ VM170	1,613.00	8,065.00	0.40	2.00	0.00	0.00	\$100.00	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0	0	0
286	Vending Miser VM150	1,613.00	8,065.00	0.40	2.00	0.00	0.00	\$100.00	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0	0	0
287	Vending Miser VM151	1,613.00	8,065.00	0.40	2.00	0.00	0.00	\$100.00	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0	0	0
288	Vending Miser EZ VM171	1,613.00	8,065.00	0.40	2.00	0.00	0.00	\$100.00	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0	0	0
289	VFD	11,337.00	170,055.00	1.12	16.80	0.00	0.00	\$1,110.00	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	1,354	1,349	1,344
290	Wall switch plate mounted occupancy sensors using ult	711.00	5,688.00	0.00	0.02	-0.06	-0.47	\$30.00	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	277	302	389
291	Recycled Refrigerator	808.31	6,466.48	0.10	0.80	0.00	0.00	\$50.00	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	6,340	5,850	5,255
292	Recycled Freezer	904.03	7,232.24	0.11	0.85	0.00	0.00	\$50.00	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	2,035	1,880	1,695
293	Behavior Modification Group 1	167.70	1,677.00	0.04	0.04	9.70	9.70	\$0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	62,500	62,500	62,500
294	Behavior Modification Group 2	179.30	1,793.00	0.04	0.04	11.70	11.70	\$0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	62,500	62,500	62,500
295	Behavior Modification Group 3	122.60	1,226.00	0.03	0.03	8.80	8.80	\$0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0	0	0
296	Rated Home - gas heat only, HERS <=60	2,070.00	62,100.00	0.86	25.89	138.00	4,140.00	\$500.00	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	24	24	24
297	Rated Home - gas heat, HERS <=60	2,070.00	62,100.00	0.86	25.89	138.00	4,140.00	\$800.00	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	48	48	48
298	Rated Home - electric heat, HERS <=60	3,450.00	103,500.00	0.86	25.89	0.00	0.00	\$800.00	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	24	24	24
299	E-Star Home - gas heat only, HERS 41-60	2,670.00	80,100.00	1.11	33.38	178.00	5,340.00	\$600.00	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	12	12	12
300	E-Star Home - gas heat, HERS 41-60	2,670.00	80,100.00	1.11	33.38	178.00	5,340.00	\$1,200.00	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	24	24	24
301	E-Star Home - electric heat, HERS 41-60	4,450.00	133,500.00	1.11	33.38	0.00	0.00	\$1,200.00	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	24	24	24
302	E-Star Home - gas heat only, HERS <=40	4,470.00	134,100.00	1.86	55.88	298.00	8,940.00	\$600.00	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0	0	0
303	E-Star Home - gas heat, HERS <=40	4,470.00	134,100.00	1.86	55.88	298.00	8,940.00	\$2,400.00	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	12	12	12
304	E-Star Home - electric heat, HERS <=40	7,450.00	223,500.00	1.86	55.88	0.00	0.00	\$2,400.00	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	24	24	24
305	Rated Multifamily Unit - gas heat only, HERS <=60	1,101.00	33,030.00	0.46	13.77	78.00	2,340.00	\$300.00	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	24	24	24
306	Rated Multifamily Unit - gas heat, HERS <=60																			



**Docket No. 13-0498**  
**Staff Group Cross Exhibit 1**  
**Page 29**

	D	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE
1	Measure	kWh Savings / yr / unit	kWh Savings / lifetime / unit	kW Savings / yr / unit	kW Savings / lifetime / unit	Thm Savings / yr / unit	Thm Savings / lifetime / unit	Incentive / unit (yr 1)	kWh Net-To-Gross			kW Net-To-Gross			Thm Net-To-Gross			Incremental Participants		
2									PY7	PY8	PY9	PY7	PY8	PY9	PY7	PY8	PY9	PY7	PY8	PY9
413	In-Unit Faucet Aerator - Electric DHW	53.05	477.45	0.01	0.06	0.00	0.00	\$0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	5,880	5,880	5,880
414	In-Unit Showerhead 1.75 gpm - Gas DHW	0.00	0.00	0.00	0.00	20.61	206.10	\$0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	3,780	3,780	3,780
415	In-Unit Faucet Aerator - Gas DHW	0.00	0.00	0.00	0.00	2.61	23.49	\$0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	6,300	6,300	6,300
416	In-Unit Programmable Thermostat - Electric Heat	837.09	4,185.43	0.00	0.00	0.00	0.00	\$0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1,680	1,680	1,680
417	In-Unit Programmable Thermostat - Gas Heat	26.95	134.75	0.00	0.00	29.30	146.50	\$0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	840	840	840
418	School Kit	85.48	598.36	0.01	0.08	11.37	79.59	\$0.00	0.86	0.86	0.86	0.86	0.86	0.86	0.85	0.85	0.85	5,000	5,000	5,000

**Docket No. 13-0498**  
**Staff Group Cross Exhibit 1**  
**Page 30**

	Program Delivery Costs			Incentives Costs			Other Costs		
	PY7	PY8	PY9	PY7	PY8	PY9	PY7	PY8	PY9
RES-Appliance Recycling	\$1,164,411	\$1,074,734	\$966,288	\$418,750	\$386,500	\$347,500			
RES-Behavior Modification	\$1,312,500	\$1,312,500	\$1,312,500	\$0	\$0	\$0			
RES-ENERGY STAR New Homes	\$621,302	\$621,302	\$621,302	\$396,000	\$396,000	\$396,000			
RES-HPwES	\$2,703,768	\$2,752,807	\$2,786,430	\$3,795,663	\$3,795,663	\$3,795,663			
RES-HVAC	\$1,229,409	\$1,229,409	\$1,229,409	\$2,734,750	\$2,734,750	\$2,734,750			
RES-Standard CFLs	\$2,311,096	\$2,311,096	\$2,311,096	\$4,040,000	\$4,040,000	\$4,040,000			
RES-Moderate Income	\$761,275	\$761,275	\$761,275	\$758,785	\$758,785	\$758,785			
RES-Multifamily In-Unit	\$1,374,603	\$1,374,603	\$1,374,603	\$0	\$0	\$0			
RES-School Kits	\$235,550	\$235,550	\$235,550	\$0	\$0	\$0			
<b>RESIDENTIAL PORTFOLIO TOTAL</b>	<b>\$11,713,914</b>	<b>\$11,673,276</b>	<b>\$11,598,452</b>	<b>\$12,143,948</b>	<b>\$12,111,698</b>	<b>\$12,072,698</b>			
BUS-Standard	\$6,726,219	\$6,955,299	\$6,773,507	\$6,427,197	\$6,961,387	\$7,524,501			
BUS-Custom	\$2,741,991	\$2,732,882	\$2,723,800	\$6,398,405	\$6,377,077	\$6,355,822			
BUS-RCx	\$603,007	\$601,004	\$599,007	\$1,406,924	\$1,402,234	\$1,397,560			
<b>BUSINESS PORTFOLIO TOTAL</b>	<b>\$10,071,218</b>	<b>\$10,289,184</b>	<b>\$10,096,314</b>	<b>\$14,232,525</b>	<b>\$14,740,698</b>	<b>\$15,277,884</b>			
Ameren Illinois - Portfolio Admin costs							\$2,424,999	\$2,457,891	\$2,469,496
Ameren Illinois - EM&V costs							\$1,691,860	\$1,714,808	\$1,722,904
Ameren Illinois - Education							\$1,212,499	\$1,228,945	\$1,234,748
Ameren Illinois - Marketing							\$1,212,499	\$1,228,945	\$1,234,748
Emerging Technologies							\$1,691,860	\$1,714,808	\$1,722,904
<b>AMEREN ILLINOIS PORTFOLIO TOTAL</b>	<b>\$21,785,131</b>	<b>\$21,962,461</b>	<b>\$21,694,766</b>	<b>\$26,376,474</b>	<b>\$26,852,396</b>	<b>\$27,350,582</b>	<b>\$8,233,717</b>	<b>\$8,345,397</b>	<b>\$8,384,802</b>

**Docket No. 13-0498**  
**Staff Group Cross Exhibit 1**  
**Page 31**

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1															
2			Program Annual Savings												
3			Gross MWh			Net MWh			Gross kW			Net kW			
4			PY7	PY8	PY9	PY7	PY8	PY9	PY7	PY8	PY9	PY7	PY8	PY9	PY7
5		RES-Appliance Recycling	6,964	6,428	5,780	4,476	4,131	3,715	848	783	704	545	503	452	0
6		RES-Behavior Modification	21,688	21,688	21,688	21,688	21,688	21,688	4,938	4,938	4,938	4,938	4,938	4,938	1,337,500
7		RES-ENERGY STAR New Homes	989	989	989	791	791	791	345	345	345	244	244	244	32,079
8		RES-HPwES	6,269	6,269	6,269	5,114	5,114	5,114	4,007	4,007	4,007	3,182	3,182	3,182	1,031,386
9		RES-HVAC	8,221	8,221	8,221	5,672	5,672	5,672	5,446	5,446	5,446	3,758	3,758	3,758	263,908
10		RES-Standard CFLs	44,720	54,630	63,059	19,677	21,769	22,401	5,125	6,260	7,226	2,255	2,495	2,627	0
11		RES-Moderate Income	770	770	770	770	770	770	444	444	444	444	444	444	135,091
12		RES-Multifamily In-Unit	6,232	6,232	6,232	6,232	6,232	6,232	458	458	458	458	458	458	118,961
13		RES-School Kits	427	427	427	366	366	366	53	53	53	44	44	44	56,826
14		<i>RESIDENTIAL PORTFOLIO TOTAL</i>	<i>96,281</i>	<i>105,654</i>	<i>113,435</i>	<i>64,785</i>	<i>66,532</i>	<i>66,748</i>	<i>21,664</i>	<i>22,734</i>	<i>23,621</i>	<i>15,868</i>	<i>16,065</i>	<i>16,147</i>	<i>2,975,752</i>
15		BUS-Standard	90,493	99,067	108,987	60,073	65,400	71,567	33,736	37,171	40,994	21,190	23,328	25,708	959,197
16		BUS-Custom	67,509	67,280	67,051	51,307	51,133	50,959	16,877	16,820	16,763	12,827	12,783	12,740	1,073,807
17		BUS-RCx	17,973	17,912	17,851	17,075	17,017	16,959	4,493	4,478	4,463	4,269	4,254	4,240	140,717
18		<i>BUSINESS PORTFOLIO TOTAL</i>	<i>175,976</i>	<i>184,259</i>	<i>193,889</i>	<i>128,455</i>	<i>133,549</i>	<i>139,484</i>	<i>55,107</i>	<i>58,469</i>	<i>62,219</i>	<i>38,285</i>	<i>40,366</i>	<i>42,688</i>	<i>2,173,721</i>
19		<b>AMEREN ILLINOIS PORTFOLIO TOTAL</b>	<b>272,256</b>	<b>289,913</b>	<b>307,324</b>	<b>193,240</b>	<b>200,081</b>	<b>206,232</b>	<b>76,771</b>	<b>81,203</b>	<b>85,840</b>	<b>54,153</b>	<b>56,431</b>	<b>58,835</b>	<b>5,149,473</b>

**Docket No. 13-0498**  
**Staff Group Cross Exhibit 1**  
**Page 32**

	B	P	Q	R	S	T	U	V	W	X	Y	Z
1												
2		Program Lifetime Savings										
3		Gross Therms		Net Therms								
4		PY8	PY9	PY7	PY8	PY9	Gross MWh	Net MWh	Gross kW	Net kW	Gross Therms	Net Therms
5	RES-Appliance Recycling	0	0	0	0	0	153,381	98,569	18,676	12,000	0	0
6	RES-Behavior Modification	1,337,500	1,337,500	1,337,500	1,337,500	1,337,500	65,063	65,063	14,813	14,813	4,012,500	4,012,500
7	RES-ENERGY STAR New Homes	32,079	32,079	25,663	25,663	25,663	100,276	80,220	36,376	25,712	2,887,111	2,309,689
8	RES-HPwES	1,031,386	1,031,386	811,933	811,933	811,933	269,954	220,186	193,337	153,546	58,718,222	46,224,449
9	RES-HVAC	263,908	263,908	190,014	190,014	190,014	290,879	200,706	186,233	128,501	10,723,227	7,720,723
10	RES-Standard CFLs	0	0	0	0	0	778,186	342,402	89,177	39,238	0	0
11	RES-Moderate Income	135,091	135,091	135,091	135,091	135,091	32,499	32,499	21,365	21,365	7,753,068	7,753,068
12	RES-Multifamily In-Unit	118,961	118,961	118,961	118,961	118,961	126,395	126,395	9,645	9,645	1,987,769	1,987,769
13	RES-School Kits	56,826	56,826	48,298	48,298	48,298	9,295	7,951	1,176	975	1,304,706	1,108,913
14	<b>RESIDENTIAL PORTFOLIO TOTAL</b>	<b>2,975,752</b>	<b>2,975,752</b>	<b>2,667,461</b>	<b>2,667,461</b>	<b>2,667,461</b>	<b>1,825,926</b>	<b>1,173,992</b>	<b>570,797</b>	<b>405,794</b>	<b>87,386,603</b>	<b>71,117,112</b>
15	BUS-Standard	959,197	959,197	950,625	950,625	950,625	4,210,327	2,794,997	1,640,206	1,030,200	18,531,339	18,365,744
16	BUS-Custom	1,070,156	1,066,518	891,260	888,230	885,210	2,623,925	1,994,183	655,981	498,546	41,736,254	34,641,091
17	BUS-RCx	140,239	139,762	133,681	133,227	132,774	268,684	255,249	67,171	63,812	2,103,590	1,998,411
18	<b>BUSINESS PORTFOLIO TOTAL</b>	<b>2,169,592</b>	<b>2,165,476</b>	<b>1,975,567</b>	<b>1,972,082</b>	<b>1,968,609</b>	<b>7,102,935</b>	<b>5,044,429</b>	<b>2,363,358</b>	<b>1,592,558</b>	<b>62,371,183</b>	<b>55,005,245</b>
19	<b>AMEREN ILLINOIS PORTFOLIO TOTAL</b>	<b>5,145,343</b>	<b>5,141,228</b>	<b>4,643,027</b>	<b>4,639,542</b>	<b>4,636,069</b>	<b>8,928,861</b>	<b>6,218,421</b>	<b>2,934,155</b>	<b>1,998,352</b>	<b>149,757,786</b>	<b>126,122,358</b>