Saving Energy and Water in On-Premise Laundry and Commercial Warewashing Sectors

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Introduction

This poster focuses on two under researched areas of potential energy savings in the commercial sector, on-premise laundry and ware washing. Little previous research has been published on either technology areas. Ware washers are considered one of the largest users of energy in the commercial kitchen and Energy Star® recently established a rating system for the machines. The potential for energy savings in the sector appears to be significantly larger than previously suspected. Additionally, the project researched the savings potential of water re-use technologies in On-Premise Laundry (OPL) facilities – including that wash as much as 26 million pounds of fabrics per year. The barriers, decision-making, best practices, and energy saving potential were identified.

Findings

We studied the complexity of the actors, equipment, practices, and relationships involved in these two end-uses. The research found the largest factor in the decision-making process for both technologies was reported as financial. However, for many facilities, the ROI, technical issues, implementation, and not least of all, the facility's desire to "do good" for the environment are beginning to play a larger role in installation decisions. In-depth interviews uncovered barriers and marketing techniques to overcome them. Assessment of non-energy benefits identified specific marketing / rebate techniques to speed market penetration. The project examined the current ware-washing and on-premise laundry market saturation and estimated the energy savings potential in the market place.

Conclusions

Overall, the laundry technology has significant advantages, which are highly regarded by the participants, including very strong savings (water and energy), easy process with few changes to procedures for staff, "green" process, and a compact system that installs and integrates relatively easily. While a percentage of the first few installations invariably have a few "kinks", as more data and case studies become available, these issues will be resolved. The adopters are strong proponents of the technology, and within a few months the vast majority of sites had realized the exceptional savings numbers (80% of water) that had been promised, as well as other benefits.

In the warewashing sector, we identified a number of suggestions and interventions that may help move the market forward in warewashing equipment efficiencies. These include financial incentives, incentives for leasing companies, attention to specific barriers (particularly maintenance concerns), and education / information / marketing to decision-leaders, leasers, and relevant industry consultants.

Both the ware washing and OPL technologies have the potential to drastically reduce the energy use in certain portions of the commercial sector, and the research found interesting differences between participants / non-participants that are critical for program design. The poster presents graphs and charts related to savings, penetration, decision-making, potential, and other factors for these two commercial end-uses.