
ISP STUDY PRE-RESEARCH: FOOD SERVICE EQUIPMENT

TO: ISP Task Working Group

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This memo outlines findings from preliminary research conducted on industry standard practice (ISP) within the food service industry.

MEASURE BACKGROUND AND RESEARCH GOAL

Discussions through normal operation of collecting applications and fielding questions for projects within the food services industry have raised a question as to whether or not used equipment should be considered part of industry standard practice within the food service industry. The goal of this research was to assess whether we see enough evidence of used food service equipment being purchased and installed that it warrants further ISP investigation. ERS conducted pre-ISP study research including web-research and interviews to determine whether a blended baseline is worth pursuing for food service measures.

DETAILED RESULTS OF RESEARCH

The following sections describe the specific tasks in the pre-research.

Web Research

ERS searched over the internet for the information on used/refurbished/rebuilt kitchen equipment suppliers, vendors, and other relevant sources such as workpapers and case studies. The used equipment inventory exists in the market because most restaurants close within 3-5 years, and these restaurants sell their equipment directly to other commercial kitchens or vendors. Since most of the kitchen equipment lasts longer than this 5-year time horizon, many independently owned restaurants buy used kitchen equipment. Additionally, used food service equipment is less expensive, and inventory is available in the market. There may be differences in standard practices between independently-owned restaurants and chain restaurants; this should be considered in future ISP research.

Refrigerators and walk-in coolers performance degrade sooner than other food service kitchen equipment. Also, refrigerators and walk-in coolers have a higher probability of breaking down than other kitchen equipment such as griddle and gas ranges. In this pre-research, we focused on the most commonly incentivized commercial kitchen equipment, including combination ovens, conveyor ovens, fryers, griddles, gas ranges, ice makers, and dishwashers.

Online Supplier Research

In the northeast region, businesses are selling both used and new kitchen equipment in their stores, warehouses, and websites. For this preliminary research, we went through the websites of 12 suppliers of kitchen equipment to determine if they sell the used kitchen equipment and the type of used kitchen equipment sold. Most of these 12 suppliers sell both new and used food service equipment. Conveyor oven, fryer, griddle, combination oven, and gas range are the most common type used kitchen equipment found in supplier websites. Additionally, we observed that pizza restaurant-specific used kitchen equipment (primarily convection pizza ovens) is being sold by 3 out of 12 suppliers. The majority of the vendors' used kitchen equipment inventory fluctuates. Most of the vendors do business in one to three states.

The market for used kitchen equipment is fragmented. In addition to the suppliers investigated as part of this study, we also found that other online peer-to-peer sales platforms such as Craigslist and Facebook Marketplace frequently feature used restaurant equipment. This suggests that some discussion with end users should be included in any ISP research about used equipment baselines, rather than relying only on established kitchen equipment distributors.

Technical Reference Manual (TRM) Research

ERS searched the energy efficiency TRMs of other states to determine if any programs already have ISP for used kitchen equipment. We looked over the TRMs of NY, CA, IL, and PA states. We did not find any evidence about ISP baseline for used kitchen equipment. The DEER California workpapers under the program exclusions stated that 'used or rebuilt equipment is not eligible'. Workpaper on commercial electric and gas fryer (SWFS011-01) stated that their current ISP baseline does not reflect standard purchasing practices including higher efficiency equipment and refurbished used equipment.

Food Service Technology Center (FSTC)

The Food Service Technology Center (FSTC) is a commercial food service energy research and education organization owned and operated by Frontier Energy. FSTC maintains databases on kitchen equipment case studies and baselines, and also provides technical support to the California EnergyWise food service equipment calculators. ERS looked over resources such as case studies provided on the FSTC website. FSTC has a vast database on new kitchen equipment, but does not include any information about used food service equipment.

ERS staff spoke to an FSTC engineer over the phone. The FSTC engineer told us that one other utility in the west region contacted them to know if the FSTC has information about used kitchen equipment and they were looking to determine the ISP baseline for used kitchen equipment. FSTC engineer believes that restaurant shutdowns due to COVID will bring lots of used kitchen equipment inventory to the market in the coming months. The FSTC engineer also stated that they observed refrigerators and walk-in coolers performance degradation happen sooner than other kitchen equipment. Due to less reduction of efficiency of kitchen equipment (excluding refrigerators) in the earlier operating years and long-lasting life, commercial kitchens often buy the used kitchen equipment directly from the restaurants or the suppliers.

ERS conducted brief interviews with two suppliers over the phone to discuss the inventory proportion of new and used kitchen equipment sold in a year at their company. One supplier's salesperson stated that they inspect all the equipment operating conditions before buying, refurbish it and sell it to the customers. The sale of new and used equipment inventory would be typically 50% each approximately. He also stated that they usually do not check for energy star labels or other performance labels on used kitchen equipment. The other supplier was reluctant to give any information about what they sell and how much of it is used equipment.

Findings and Recommendations

Based on the online research, referring to the TRMs, FSTC engineer input, and phone calls with two suppliers, we have found that there is a significant market for used and refurbished food service equipment. We believe that further research to determine a new baseline for used kitchen equipment will be valuable. The following topics are recommended for inclusion in a full ISP study:

- **Include research on used equipment market prevalence and practices in research.** This may be challenging due to the scattered nature of the used equipment market. Including some interviews with end users may be necessary.
- **Limit ISP research to non-refrigeration equipment.** The interviews and research we conducted suggests that cooking equipment, particularly ovens, griddles, fryers, and ranges, are more likely to last long enough to become part of the used equipment market, and this equipment is not subject to federal efficiency standards in the same way that refrigeration equipment is.
- **Consider differentiating practices by restaurant type.** Fast food, franchised, and chain restaurants may have different standard practices, especially when considering used equipment.
- **Include both gas and electric equipment.** Typical operating efficiencies for cooking equipment differ substantially depending on the fuel used.

- **Note that ongoing impacts due to the Coronavirus may drive a change in behavior.** An upswing in the used equipment market may change industry standard practice in the short and long term.