

Conditional Approval Follow-Up: Commercial Dishwashers

Conditionally Approved at 11/20/14 Cal TF Meeting

Summary of Workpaper Developer Follow-Up on Conditions of Approval for Commercial Dishwashers Workpaper

Condition for Approval	Update from Workpaper Developer
1. Work with Steven Long on demand analysis	<p>Revised DR calculation using the hot water profile for restaurants.</p> <p>Average Demand Peak Demand</p> $= \left(\frac{kWh}{Year} \right) \times \left(\frac{Usage \text{ During Peak}}{Total \text{ Daily Usage}} \right) \div Hours$ <p>Demand Reduction</p> $= ((Average \text{ Peak Demand})_{Base \text{ Case}} - (Average \text{ Peak Demand})_{Measure \text{ Case}}) \times Coincidence \text{ Factor}$ <p>Measure Case Tier 1 Demand Reduction</p> $= (0.90kW - 0.73kW) \times 0.9$ $= 0.17kW$
2. Add raw data to workpaper on racks/day assumption	It is included in the calculation file.
3. Reduce racks/day assumption by 52 days to account for restaurant closure	<p>365 days/yr will remain unchanged in the calculation. This is consistent with all other foodservice workpapers. 12 hr/day operation with 365 days/yr works out to be a good average for total annual operation hours.</p> <p>We obtained a survey data from over 50 restaurants on their operating hours & days. In contrast to CalTF suggestion, the survey data shows that restaurants are open almost 365 days per year. That data is included in WP and 365 days/yr is used for savings estimate.</p>
4. Adjust racks per day by type of restaurant (fast food, sit down, etc)	The average value will be used to represent all types of restaurants.
5. Do early EM&V during installation to verify racks/day assumption (follow-up survey or data collection to verify)	<p>Two options were suggested: ask participating customer upfront on the application & follow up call to ask for the estimated racks/day.</p> <p>Customers know the dishwashers are used a lot, but often, they can't provide a number.</p>

	Statements about the early M&V study proposal are added in the workpaper. The detail of the study plan is to be discussed and determined amongst IOUs before implementation of the measure.
6. Check with FSTC about averaging the monitored baseline with ENERGY STAR 2.0 consumption for the baseline, this will be resolved via teleconference	Revised as suggested. The average was used for the baseline in the workpaper.
7. Do not offer incentives for leases (Design a pilot measure/program to offer lease incentive)	Agreed. Proceed with the rebate for purchases only. Rebate for leases should be a considered separately due to the complexities in delivering the measure and claiming the appropriate savings.
8. Use two tiers for program (1. Energy Star & 2. higher-than-Energy Star)	Tier 2 (15% better than Energy Star) is added in the workpaper.
9. Add load profile for DR	Added restaurant hot water profile in the workpaper. Also, DR calculation uses this data.
10. Explain baseline methodology very clearly.	Revised as recommended.