

ET Summit 2024

Presented by



Title 20 Appliance Standards for Commercial Foodservice Equipment

Energy Savings Through Appliance Standards



Kyle Booth
Associate Director
Energy Solutions

Appliance Standards Proposal

- Request for information (RFI) and proposal (RFP) issued on November 14, 2023
- RFP initiates the process of setting minimum efficiency standards in California
- Codes and Standards Enhancement (CASE) team developed proposals that reference ENERGY STAR levels for minimum qualifying efficiency
- Equipment included:
 - Commercial dishwashers
 - Commercial fryers
 - Commercial convection ovens
 - Commercial steamers
- Proposed standards would apply to both gas and electric appliances

Existing CFS Appliance Standards in Title 20

- Commercial refrigerators, freezers, and ice machines
 - Follows federal appliance standard
 - Has provision for coolers manufactured before October 28, 2019
- Hot food holding cabinets:
 - Idle energy rate of 40W or less per cubic foot

Existing Appliance Standards in Other States

- Appliance Standards Awareness Project (ASAP) has successfully introduced appliance standards in several other states

Equipment Type	Number of States with Appliance Standards
Commercial Fryers	10
Commercial Convection Ovens	6
Commercial Steam Cookers	11
Commercial Dishwashers	11

Proposed Savings and Scope of Standard

Product and savings	CASE Team Proposed Scope and Standards	Next Step
<u>Dishwashers</u> 193 GWh/yr 8.8 million therms/yr 888.2 million gallons/yr	Standards align with ENERGY STAR V2.0 Test and list for products outside the ENERGY STAR scope	CEC is moving forward first
<u>Fryers</u> 38.2 million therms/yr	Standards proposed for gas products only aligning with ENERGY STAR (all versions the same for gas), test and list only for electric.	CEC moving forward
<u>Convection Ovens</u> 20.78 GWh/yr 9.26 million therms/yr	Standards align with ENERGY STAR V2.0 for electric and gas full size ovens and electric half sized ovens.	CEC expanding the scope to rack and combination ovens with a new RFI
<u>Steamers</u> 41.9 GWh/yr 2.5 million therms/yr 231 million gallons/yr	Standards align with current ENERGY STAR V1.2 Added metric for water efficiency	CEC was waiting for ENERGY STAR to update specification

Types of Dishwashers Included

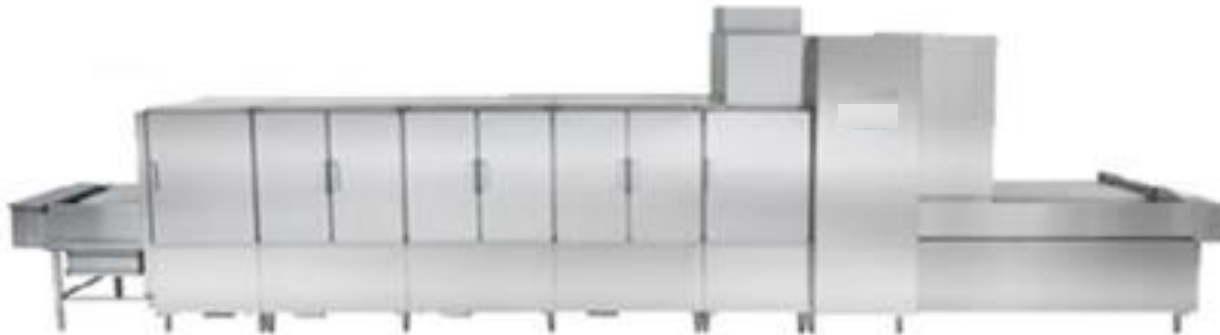


Under Counter

Stationary Door Type
Sub types: Single; Double rack;
Pot, Pan, and Utensil (PPU)



Single or Multiple Tank
Conveyor



Single or Multiple Tank Flight Type Conveyor

Glass Washing Machines Included



Stationary Rack Glasswasher
**Already covered as
undercounter**



Batch Rotary Glasswasher

Continuous Carousel
Glasswasher (not pictured)



Conveyor Glasswasher

Types of Fryers Included

- Standard open vat fryers 12-17" wide 25-50lb of oil capacity
- Large open vat fryers 18-24" wide 50-120lb of oil capacity
- Countertop fryers are standard vat fryers if they are 12" or wider and more than 25lb of oil capacity
- Round vat fryers
- Open vat fryers with an aftermarket hood vent system
- Fryers with robots operating them



Types of Fryers Excluded

- Pressure Fryers
- Ventless Fryers
- Air Fryers
- Combi Ovens with Air Fry Feature
- Donut Fryers
- Fryers less than 25lb oil capacity
- Fryers greater than 120lb oil capacity



Types of Steamers Included



Boilerless Steamer
Proposed Standards



Steam Generator Steamer
Proposed Standards



Pressure Steamer
Test and List

Types of Ovens Included

- Full-size convection ovens
 - Gas and Electric
- Half-size electric convection ovens
- Combi ovens sized 3 to 40 pans
 - Gas and Electric
- Rack Ovens (single and double)
 - Gas only



Types of Ovens Excluded

- Rapid Cook Ovens
- Conveyor Ovens
- Deck Ovens
- Slow Cook Ovens
- Retherm Ovens
- Holding Cabinets
- Rotisserie Ovens
- Range Ovens
- Full-size and half-size convection ovens that can accommodate less than 3 full-size sheet pans
- Half-size gas convection ovens.
- Convection ovens that can accommodate more than 6 full size sheet pans per cavity
- Combi ovens that cannot accommodate standard size 12.7x 20.8 x 2.5-inch steam pans (often referred to as 2/3 size or mini combis)
- Combi ovens that cannot accommodate at least 3 steam pans
- Combi ovens that can accommodate more than 40 steam pans
- Rack ovens that cannot accommodate a standard size roll in rack with 15 sheet pans (often referred to as mini rack ovens)
- Rack ovens that can accommodate more than two racks (more than 30 sheet pans)