DOCKETED	
Docket Number:	23-AAER-01
Project Title:	Commercial Food Service Equipment (i.e. Commercial Steam Cookers, Commercial Ovens, Commercial Dishwashers, and Commercial Fryer)
TN #:	264432
Document Title:	California Investor Owned Utilities Comments - Commercial Fryers RFI Comments
Description:	N/A
Filer:	System
Organization:	California Investor Owned Utilities
Submitter Role:	Public
Submission Date:	6/23/2025 5:16:15 PM
Docketed Date:	6/24/2025

Comment Received From: California Investor Owned Utilities
Submitted On: 6/23/2025
Docket Number: 23-AAER-01

Commercial Fryers RFI Comments

This letter comprises the comments of the Pacific Gas and Electric Company (PG&E), San Diego Gas and Electric (SDG&E), and Southern California Edison (SCE), collectively referred to herein as the California Investor-Owned Utilities (CA IOUs), in response to the California Energy Commission request for information on commercial fryers.

Additional submitted attachment is included below.

June 23, 2025

Ms. Stefani Wilde
California Energy Commission Docket Unit
715 P Street
Sacramento, CA 95814

Topic: Commercial Food Service Fryers Request for Information (RFI)

Docket Number: 23-AAER-01
TN Number: 262994

Dear Ms. Wilde:

This letter comprises the comments of the Pacific Gas and Electric Company (PG&E), San Diego Gas and Electric (SDG&E), and Southern California Edison (SCE), collectively referred to herein as the California Investor-Owned Utilities (CA IOUs), in response to the California Energy Commission request for information on commercial fryers.

The CA IOUs are among the nation's largest utility companies, serving over 32 million customers across the Western United States. We strengthen American energy leadership by efficiently reducing energy waste, lowering customer costs, and enhancing grid reliability and security. We advocate for practical, cost-effective efficiency standards that reflect real-world usage in our service areas, ensuring both reliability and affordability for customers.

We respectfully submit the following comments to the California Energy Commission:

Propane Commercial Fryers

The CA IOUs recommend excluding propane fryers from the scope of commercial fryer efficiency standards due to their low market share and certification challenges. Propane costs two to three times more per unit of energy than natural gas, making it an impractical choice for most fryer operators unless natural gas is unavailable. Propane fryers are primarily used in mobile food trucks and remote locations that lack access to natural gas services. Discussions with fryer manufacturers indicate that propane fryers account for less than 5% of gas fryer sales nationwide. No California-specific data is available.

Certification of propane fryers presents challenges because all fryers currently listed under ENERGY STAR® were tested as natural gas models. While propane versions of these fryers are expected to exhibit similar performance characteristics, no cooking efficiency test data exists for propane fryers. However, ASTM fryer test methods can be applied to propane fryers to evaluate their performance.

1) ***Should propane commercial fryers be included in the scope of commercial fryer efficiency standards?***

The CA IOUs recommend excluding commercial propane fryers from the efficiency standards.

2) ***What is the current market share of gas commercial fryers in California that are propane commercial fryers?***

Based on conversations with ITW Vulcan and Royal, the market share of the fryers is approximately less than 5%.

3) ***Which industries or user groups primarily purchase and operate propane commercial fryers, and what factors drive their choice (e.g., lack of natural gas access, cost, portability, etc.)?***

The primary reason for using propane fryers is the lack of access to natural gas. Propane fryers are commonly used in food trucks, pop ups, catering, and food service establishments in remote locations, such as ski resorts and high-elevation areas where natural gas is not available.

4) ***Can propane and natural gas commercial fryers be converted interchangeably, and what are the technical requirements and the associated conversion costs?***

Converting commercial fryers from propane to natural gas is technically feasible but difficult for the typical operator, as it requires replacing the gas regulator and burner orifices since propane fryers differ from natural gas models in burner orifice size and gas inlet pressure regulation. Fryers are typically configured for either propane or natural gas at the factory and field retrofits are expected to be rare. Propane-to-natural gas conversion kits cost between $50 and $150, with an additional labor charge of at least $200 for a technician to complete the conversion. Therefore, retrofitting propane fryers to natural gas may not be cost effective for operators seeking to bypass regulations. While most fryers on the market are available in both natural gas and propane configurations, propane units are generally special-order equipment, whereas natural gas units are regularly stocked at food service equipment dealers. These additional costs and limited availability make it unlikely that exempting propane fryers from standards would create an exploitable loophole in natural gas regulations.

5) ***Is the performance measured under standardized testing protocols (ASTM F1361-212 and ASTM F2144-213) different for the propane and natural gas configurations of the same commercial fryer?***

The performance is not expected to be different for natural gas and propane fryers.

6) ***Are there commercial fryers that are designed exclusively for propane usage, without the existence of a natural gas equivalent model or ability to configure for natural gas?***

Commercial fryers are not designed exclusively for propane usage, as all models have a natural gas equivalent or can be configured for natural gas.

7) ***What is an appropriate average statewide price of propane to use for the CEC's cost-effectiveness analysis? Please provide supporting data sources.***

The cost range depends on whether the propane is delivered to remote sites with large tanks, used within a food truck purchasing refillable tanks, or falls somewhere in between. Retail locations may have significant markup on their prices: U-Haul retail propane prices in California were above $4.00 per gallon in the summer while National Council on Energy prices were closer to $2.60, highlighting the significant potential markup.

8) ***Are there any other factors or data the CEC should consider regarding the use, performance, or market dynamics of propane commercial fryers?***

Propane fryers represent a small market share, and low-cost ENERGY STAR fryers are available in both natural gas and propane configurations.

Scope of the Proposed Standards

9) **Should countertop commercial fryers be included in the scope of the proposed efficiency standards?**

The CA IOUs recommend excluding commercial countertop fryers from the proposed efficiency standard due to their limited market presence. Most restaurants use floor-standing fryers, which offer higher oil capacities and better access to components for repair and oil draining. Countertop fryers are typically used only in cases where space constraints prevent the installation of an upright fryer.

Kitchen hood width is a critical factor in commercial kitchens, and upright fryers occupy nearly the same width as countertop models. Furthermore, gas countertop fryers tend to be more expensive than floor-standing alternatives, likely due to lower production volumes. Restaurants using countertop fryers primarily rely on upright fryers for most cooking needs, reserving countertop units for allergen-specific preparation or low-volume production.

Most countertop fryers are electric, as gas fryers require additional space beneath the fry vat for burners. Countertop fryers generally have oil capacities between 10 and 20 pounds per vat, which falls outside the regulatory scope of fryers with capacities of 25-120 pounds. Gas countertop fryers with an oil capacity exceeding 25 pounds represent a minimal share of the market—potentially less than 1%. Currently, approximately five countertop gas fryers exist with oil capacities ranging from 30 to 35 pounds.

No gas countertop fryers are listed in ENERGY STAR, and only one electric countertop fryer qualifies. Gas countertop fryers may face design challenges in meeting ENERGY STAR criteria due to restricted space beneath the vat for efficient burner configurations. Including gas countertop fryers in the regulatory scope could effectively remove them from the market, limiting options to electric or two smaller gas countertop models in cases where space constraints prevent the use of an upright ENERGY STAR gas fryer.

a. **What is the current market share of this fryer type in California?**
    i. **Countertop fryers likely represent less than 5% of the market** with most models being **electric**. This estimate is based on the number of available units for sale:
        1. **ACityDiscount:** Out of **555 fryer models, 99** are **countertop fryers,** with **25 running on gas**. Among these, **15 have an oil capacity greater than**

25 lbs, but half feature **dual vats. As a result, single-vat gas countertop fryers account** for just **1-2% of the total fryer market** and typically have an oil capacity of **at least 25 lbs**.

2. **Webstaurant Store**: Lists **709 gas fryer models**, **18 are gas countertop fryers**, only **6 oil capacity greater than 25 lbs**. **As a result, single-vat gas countertop fryers with an oil capacity of 25 lbs or more account for just 1% of the fryer market**. Our recommended scope **excludes electric models and units with an oil capacity less than 25 lbs**, effectively **eliminating most countertop fryers.**

ii. **Gas countertop fryers with an oil capacity greater than 25 lbs likely make up less than 1% of the market.** A few manufacturers produce them, including:

1. Pitco 35 lb Countertop Fryer
2. Globe 30 lb Natural Gas Fryer
3. Keating 38 lb Countertop Fryer
4. Comstock Castle 30 lb Gas Fryer
5. Patriot 30 lb Low-Cost Gas Fryer

b. Which industries or user groups primarily purchase and operate this fryer type?

i. **Restaurants that do not engage in high-volume frying**, such as high-end establishments.

ii. **Restaurants that require a separate fry vat for allergenic reasons**, typically due to shellfish.

iii. **Restaurants with limited kitchen space**. They may have a main floor-standing fryer but could require an additional vat during high-volume operations.

iv. **Some propane users**, such as snack and beverage type carts or trucks.

c. If these types of fryers are to be excluded, what definitions do you recommend the CEC use for this purpose?

i. **Most countertop fryers have an oil capacity less than 25 lbs**, which would naturally exclude them.

ii. **The CA IOUs recommend excluding larger countertop fryers**, citing the following reasons:

1. **Although these units are eligible for ENERGY STAR certification, none are certified** due to the small market and lack of investment in testing.
2. **Countertop fryers are more expensive than full-size fryers**, so purchasers likely have a **specific operational need** for them.

Brand	Countertop	Floorstanding
Pitco	SGC-S (35lb) $7585 View on KaTom	SG14-S (50lb) $2775 View on KaTom
Keating	14 CMG (38lb) $5000 View on Cuda Kitchen	14 AA (38lb) $4200 View on Cuda Kitchen
Comstock Castle	CCGTF-35-N (35lb) $1375 View on Chefs Deal	GF90-N (40lb) $1095 View on Chefs Deal

iii. ASTM does not provide a specific definition for countertop fryers definition, but they fall under Type 1 fryer classification. An appropriate definition would be: *A*

Type 1 fryer per the ASTM standard contained in a cabinet and designed for counter use.

10) Should drop-in style commercial fryers be included in the scope of the proposed efficiency standards?

The CA IOUs recommend excluding drop-in style commercial fryers from the proposed efficiency standards. These fryers are uncommon, as most operators prefer standalone fryers, which offer better cleanability and serviceability.

Drop-in fryers are designed to be integrated into custom kitchen suites, typically found in high-end restaurants and hotels. These suites incorporate ranges, undercounter ovens, broilers and sinks, but rarely included fryers. Most kitchens with suites have a separate cookline with standalone fryers, rather than integrating them into the countertop.

Kitchen island suites often feature shelving or salamander ovens in the center, making fryer integration complex. Redirecting flue gases from a fryer would require significant modifications, as most appliances in island suites do not have a flue, except for the low-Btu range ovens.

Currently only three manufacturers offer drop-in fryers:

- **Pitco**: Model SG14RDI appears out of stock at online retailers.
- **Keating**: Model 14BBDI-G is available from several online retailers, though Keating is a relatively small manufacturer.
- **Garland/Frymaster**: Builds custom island suites and can integrate fryers in suites, but provides limited details on the fryer itself.

Fryers integrated into kitchen suites are difficult to remove or repair if the vat fails. Ventilation challenges and serviceability issues contribute to the low market demand for drop-in fryers.

a. What is the current market share of this fryer type in California?

i. **Less than 1%**: Very few gas models are available on the market.

ii. **Existing models**: These fryers are currently available through the following manufacturers:

1. **Pitco SG14RDI**: Availability unclear. Check current stock on Wasserstrom.
2. **Keating 14BBDI-G**: Model must be custom ordered. See details on Seikous.
3. **Garland/Frymaster**: Also, custom ordered. View fryer integration options on Garland Group.

b. Which industries or user groups primarily purchase and operate this fryer type?

High-end restaurants that feature custom kitchen suites—typically with a countertop island integrating ranges, ovens, and other equipment—are the primary purchasers and operators of this fryer type.

c. If these types of fryers are to be excluded, what definitions do you recommend the CEC use for this purpose?

If these types of fryers are to be excluded, the CEC could define them according to ASTM as Type 2: "shall be designed to drop into a countertop cutout or a frame."

11) **Are there any other commercial fryer types or characteristics that should be considered for inclusion or exclusion in the proposed efficiency standards? Please provide rationale and supporting data.**

The CA IOUs recommend excluding donut fryers from the scope of regulation, as there is currently no applicable test method to assess their energy efficiency. Donut fryers are not listed under ENERGY STAR, which requires testing per ASTM F1361 or ASTM F2144—procedures designed for standard deep-vat fryers that cook at least 3 lbs of frozen French fries. Donut fryers, by contrast, have a large oil surface area and shallow oil depth and are not intended to cook large volumes of French fries. As such, they are unable to complete the ASTM cooking test, and any resulting efficiency scores would not be comparable to those of standard deep-vat fryers.

The donut fryer market is small, and to date, no manufacturers have requested the development of a dedicated test method for this product. These fryers are typically produced by manufacturers in the baking equipment sector, which differs from the standard fryer market. Until a representative test procedure is available to evaluate energy consumption and production capacity, donut fryers should be excluded from the scope of regulation.

Standard Levels for Commercial Fryers

The CA IOUs recommend that the CEC align with ENERGY STAR specifications for gas fryers only and implement a test-and-list requirement for electric fryers. The electric fryer market is understood to meet ENERGY STAR Version 2.0 (V2.0) performance thresholds.

Incremental electric energy savings between V2.0 and V3.0 are relatively low compared to the additional cost of V3.0-compliant electric fryers. Once the regulation is in effect, most purchasers are expected to choose the lowest-cost model that satisfies the regulatory requirements.

The incremental cost referenced in the CA IOU CASE Report was calculated by comparing the least expensive fryers currently available to the least expensive compliant models.

12) **Should the CEC propose efficiency standards for gas commercial fryers aligning with the ENERGY STAR specification, Earthjustice's proposal (see footnote 8), or pursue something else? What would be the implications of adopting standards more stringent than ENERGY STAR Version 3.0? Please elaborate**.

We propose that the CEC align its gas fryer energy efficiency standards with ENERGY STAR specifications. The ENERGY STAR criteria for gas fryers have not been modified and are consistent across all versions.

13) **Should the CEC align efficiency standards for electric commercial fryers with ENERGY STAR Version 2.0, ENERGY STAR Version 3.0, only establish test-and-list requirements, or pursue something else? Please elaborate.**

The CA IOUs propose that the CEC adopt a test-and-list requirement for electric fryers, which will allow the CEC to collect more data on the difference in energy consumption for non-ENERGY STAR listed

fryers. This data will allow the CEC to make a data-driven decision in the future regarding whether electric fryers should be regulated.

14) **What is the most appropriate value for the CEC to assume for the incremental equipment cost for standard vat electric commercial fryers to comply with ENERGY STAR Version 3.0? Please provide supporting data.**

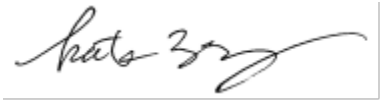
Incremental cost should reflect the difference between the lowest-cost fryer commercially available with no standard in place and the lowest-cost fryer that would meet the proposed standard. As provided in the CA IOU CASE Report, Table 18 in Section 7.1, the estimated incremental cost for a standard vat electric commercial fryer to comply with ENERGY STAR Version 3.0 is $6,239.[1]

The CA IOUs appreciate the opportunity to submit comments regarding the RFI on commercial fryers. We thank California Energy Commission for its consideration. We commend DOE for its thoughtful consideration and look forward to continued engagement in the next steps of the process.

Sincerely,

Rob Bohn
Manager, Codes & Standards
Pacific Gas and Electric Company

Christopher Malotte
Sr. Manager, Codes and Standards
Southern California Edison



Kate Zeng
ETP/C&S/ZNE Manager
Customer Programs
San Diego Gas & Electric Company

[1] The California Investor-Owned Utilities (CA IOUs), "Title 20 Fryers CASE Report RFI Response Commercial Food Service," *California Energy Commission,* July 19, 2024, https://efiling.energy.ca.gov/GetDocument.aspx?tn=257835&DocumentContentId=93738.