

A Code Review for the Use of Temporary Indoor Gas and Electric Cooking Appliances

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I. INTRODUCTION

This document was prepared to list the requirements for the use of gas and electric cooking appliances, e.g., for catering. These requirements are based on the 2009 edition of the *International Fire Code* (IFC), the 2008 edition of the *Liquefied Petroleum Gas Code* (NFPA 58), the 2009 edition of the *Uniform Fire Code* (NFPA 1), the 2009 edition of the *Life Safety Code* (NFPA 101), and the 2007 edition of the *Portable Fire Extinguishers Code* (NFPA 10).

II. EXECUTIVE SUMMARY

The use of temporary gas and electric cooking appliances is discouraged but allowed for catering subject to the limitations and restrictions given in this document. For example, the amount of gas should be limited to the minimum needed and may not exceed the amounts listed below. All temporary cooking operations must be attended by qualified persons at all times and an approved fire extinguisher must be readily available. In addition, adequate ventilation must be maintained in the temporary cooking space. Please see the code requirements listed below.

III. USE OF COOKING APPLIANCES CODE REQUIREMENTS

A. Propane Fueled Cooking Appliance Requirements

1. Section 3803.2.1 of the IFC states that portable LP-gas containers are not to be used in buildings except as specified in NFPA 58.
2. Section 3803.2.1.1 of the IFC states that LP-gas containers are not to be used in a basement, pit or similar location where heavier-than-air gas might collect. LP-gas containers are not to be used in an above-grade under floor spaces or basements unless such locations are provided with an approved means of ventilation.
3. Section 3803.2.1.5 of the IFC states that portable LP-gas containers are allowed to be used temporarily for demonstrations and public exhibitions. Such containers are not to exceed a water capacity of 12 pounds. Where more than one such container is present in the same room, each container is to be separated from other containers by a distance of not less than 20 feet.

4. Section 5.20.1 of NFPA-58 states that new residential, commercial, and industrial LP-Gas consuming appliances are to be approved.
5. Section 6.2.2 of NFPA-58 states that LP-Gas containers are to be allowed in buildings only where specifically provided for in Section 6.19.
6. Section 6.19.1.2 of NFPA-58 states the use of cylinders indoors shall be only for the purposes specified in 6.19.4 through 6.19.9.
 - a. Section 6.19.9 of NFPA-58 is for food service appliances and is applicable.
7. Section 6.19.4 of NFPA-58 states the cylinders used with commercial food service appliances are to be used inside restaurants and in attended commercial food catering operations in accordance with the following:
 - a. Cylinders and appliances are to be listed.
 - b. Cylinders and appliances are not to have more than two 10 oz non-refillable butane gas cylinders each have a maximum capacity of 1.08 lb.
 - c. Cylinders are to comply with UL147B.
 - d. Cylinders are to be connected directly to the appliance and are not to be manifolded.
 - e. Cylinders are to be an integral part of the listed, approved, commercial food service device and are to be connected without the use of a rubber hose.
 - f. Storage of cylinders is to be in accordance with 8.3.1.

B. LP-Gas Indoor Storage Requirements

1. Storage Quantity
 - a. Section 8.3.2.3 of NFPA-58 states that storage in restaurants and food service locations of 10 oz butane nonrefillable containers is to be limited to no more than twenty-four containers and an additional twenty-four 10 oz butane nonrefillable containers stored in another location within the building where constructed with at least a 2-hour fire wall protection.
 - b. Section 3809.5 of the IFC states that empty containers that have been in LP-gas service are to be considered as full containers for the purpose of determining the maximum quantities of LP-gas allowed.
2. Storage Location
 - a. Section 3809.2 of the IFC states that containers in storage are to be located in a manner which minimizes exposure to excessive temperature rise, physical damage or tampering.
 - b. Section 3809.4 of the IFC states that containers stored in buildings are not to be located near exit access doors, exits, stairways, or in areas normally used, or intended to be used, as a means of egress.
 - c. Section 3809.6 of the IFC states that containers which are not connected for use are not to be stored on roofs.

- d. Section 3809.7 of the IFC states that LP-gas containers are not to be stored in a basement, pit, or similar location where heavier-than-air gas might collect. LP-gas containers are not to be stored in above-ground underfloor spaces or basements unless such location is provided with an approved means of ventilation.
- e. Section 3809.8 of the IFC states that container valves are to be protected by screw-on-type caps or collars which are to be securely in place on all containers stored regardless of whether they are full, partially full, or empty. Container outlet valves are to be closed or plugged.

C. Electrical Cooking Equipment Requirements

- 1. Section 11.1.7.3 of NFPA 1 states that extension cords are to be maintained in good condition without splices, deterioration, or damage.
- 2. Section 11.1.7.5 of NFPA 1 states that extension cords or flexible cords are not to be affixed to structures; extend through walls, ceilings, or floors, or under doors or floor coverings; or be subject to environmental or physical damage.

C. General Cooking Requirements

- 1. Section 13.7.2.1 of NFPA-101 states that all devices in connection with the preparation of food are to be installed and operated to avoid hazard to the safety of occupants.
- 2. Section 6.6.1 of NFPA-10 states that Class K fire extinguishers are to be provided for hazards where there is a potential for fires involving combustible cooking media, i.e. vegetable or animal oils and fats.
- 3. Section 13.7.2.4 of NFPA 101 states that portable cooking equipment that is not flue connected is to be permitted only as follows:
 - a. Equipment fueled by small heat sources that can be readily extinguished by water, such as candles or alcohol-burning equipment, including solid alcohol, is to be permitted to be used, provided that precautions satisfactory to the authority having jurisdiction (AHJ) are taken to prevent ignition of any combustible materials.
 - b. Listed and approved LP-Gas commercial food service appliances are to be permitted to be used where in accordance with NFPA-58.