

Understanding your local codes and your company's regulations is essential to serving your customers.

## NATIONAL RESOURCES

- **International Code Council (ICC)** | A member-focused association that is dedicated to developing model codes and standards used in the design, build and compliance process to construct safe, sustainable, affordable and resilient structures. [www.iccsafe.org](http://www.iccsafe.org)
- **National Fire Protection Association (NFPA)** | Devoted to eliminating death, injury, property and economic loss due to fire, electrical and related hazards. [www.nfpa.org](http://www.nfpa.org)
- **International Association of Plumbing and Mechanical Officials (IAPMO)** | The IAPMO Group is a complete service organization, providing code development assistance, industry-leading education, plumbing and mechanical product testing and certification, building product evaluation and a manufacturer-preferred quality assurance program. [www.iapmo.org](http://www.iapmo.org)
- **American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE)** | To advance the arts and sciences of heating, ventilation, air conditioning and refrigeration to serve humanity and promote a sustainable world. [www.ashrae.org](http://www.ashrae.org)
- **Hearth, Patio & Barbeque Association (HPBA)** | The association includes manufacturers, retailers, distributors, manufacturers' representatives, service and installation firms, and other companies and individuals - all having business interests in and related to the hearth, patio, and barbecue products industries. [www.hpba.org](http://www.hpba.org)
- **Gas Technology Institute (GTI)** | GTI is the leading research, development and training organization addressing energy and environmental challenges to enable a secure, abundant, and affordable energy future. [www.gastechnology.org](http://www.gastechnology.org)
- **American Institute of Architects (AIA)** | Advocating for the value of architecture and give architects the resources they need to do their best work. "Our work drives positive change through the power of design." [www.aia.org](http://www.aia.org)
- **Air-Conditioning, Heating & Refrigeration Institute (AHRI)** | Manufacture quality, efficient, and innovative residential and commercial air conditioning, space heating, water heating, and commercial refrigeration equipment and components for sale in North America and around the world, and account for more than 90 percent of HVACR and water heating residential and commercial equipment manufactured and sold in North America. [www.ahrinet.org](http://www.ahrinet.org)
- **National Propane Gas Association (NPGA)** | The national trade association representing the U.S. propane industry. [www.npga.org](http://www.npga.org)
- **Department of Energy (DOE)** | Ensure America's security and prosperity by addressing its energy, environmental and nuclear challenges through transformative science and technology solutions. [www.energy.gov](http://www.energy.gov)
- **Energy Efficiency Programs** | Be sure to check your local energy efficiency programs
- **Energy Solutions Center** | The center is a member focused organization of energy utilities and equipment manufacturers that creates educational and marketing materials, case studies, training manuals, decision analysis software, and other tools and resources designed to enhance the success of those utility customer service professionals.
- **NGV America** | NGV America is a national organization dedicated to the development of a growing, profitable, and sustainable market for vehicles powered by natural gas or biomethane.
- **IAPMO** | IAPMO coordinates the development and adaption of plumbing, mechanical, swimming pools and solar energy codes to meet the specific needs of individual jurisdictions both in the United States and abroad.

## HOW TO GET INVOLVED IN CODES & STANDARDS

- **Building Energy Codes and Standards (BECS)** | An American Gas Association committee; Jim Ranfone—[jranfone@aga.org](mailto:jranfone@aga.org)
- **Codes & Standards** | An American Public Gas Association committee; Dan Lapato—[dlapato@apgga.org](mailto:dlapato@apgga.org)
- **End Use Codes & Standards** | A Southern Gas Association committee; Jake Wagner—[jwagner@southerngas.org](mailto:jwagner@southerngas.org)
- **National Association of Home Builders (NAHB)** | Helps its members build communities with a federation of more than 700 state and local associations, NAHB represents more than 140,000 members.  
**Be sure to check your state and local Home Builders Association.**
- **Building Officials Association** | Be sure to check your state and local Building Officials Association and ask how you can get involved.
- **State Gas Associations** | Get involved with your state/local association

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### QUICK DEFINITIONS

- CHP (Cogeneration or Combined Heat and Power) - Engine driven or central power station that generates electricity and uses the heat produced for other purposes such as space or water heating.
- Net-Zero - An energy efficient building where, on a source energy basis, the actual annual delivered energy is less than or equal to the on-site renewable exported energy.
- DOT 49 CFR Part 192 - Federal minimum regulation on the transportation of natural gas by pipeline: ([Federal codes simplified](#))
- End Use Codes and Standards - Regulations adopted by the State or local jurisdiction to judge the acceptability of a fuel gas installation and building construction
- Source Energy or Full-Fuel-Cycle Energy - Includes, in addition to site energy use, the energy consumed in the extraction, processing, and transportation of primary fuels such as coal, oil, and natural gas; energy losses in thermal combustion in power-generation plants; and energy losses in transmission and distribution to homes and commercial buildings.
- Site Energy - The use of electricity, natural gas, propane and/or fuel oil by an appliance as metered at the site.
- AHJ (Authority Having Jurisdiction) - An organization, office, or individual responsible for enforcing the requirements of a code or standard, or for approving equipment, materials, an installation, or a procedure.
- Condensing appliance - An appliance that produces a lower flue temperature such that the water vapor produce during combustion will condense in the appliance or vent (commonly listed as Category IV)
- Non condensing - An appliance that produces a higher flue temperature such that the water vapor produce during combustion will not condense in the appliance or vent (commonly listed as Category I)

### MODEL CODES TO KNOW

Model installation codes are developed by national consensus committees and are the basis for the end use codes when adopted into law. These model codes are either adopted in whole without change or can contain state or local jurisdiction amendments. Commonly encountered model codes include:

- National Fuel Gas Code (NFPA 54 / ANSI Z223.1)
- International Fuel Gas Code (IFGC)
- International Residential Code, Chapter 24—Fuel Gas Provision
- International Energy Conservation Code
- NFPA 58 Propane Code
- NFPA 52
- IAPMO

### COMMON APPLIANCE VENTING CATEGORIES

Venting categories apply to furnaces, boilers, and water heaters. The most common categories for listed appliances are:

- **Category I Vented Appliance:** An appliance that operates with a non-positive vent static pressure and with a vent gas temperature that avoids excessive condensate production in the vent.
- **Category IV Vented Appliance:** An appliance that operates with a positive vent static pressure and with a vent gas temperature that can cause excessive condensate production in the vent.

### THINGS YOU SHOULD KNOW!

- How to illustrate cost savings to the customer.
- The fuel gas codes adopted by your jurisdiction and any local or state amendments.
- Remember that NFPA 54/ANSI Z223.1, the IFGC, or the local fuel gas code, does not apply to utility owned components; applicability of these codes begin at the outlet side of the meter.
- Understand your company's meter and regulator installation requirements including:
  - ⇒ The appliance vent termination distance.
  - ⇒ Regulator vent outlet distance from a source of ignition normally 3 ft.

### THINGS TO THINK ABOUT...

Some items to consider in understanding the service needs when working with a customer who is applying for a new gas service or one who currently has gas service.

- How many appliances will be installed and the total combined BTU input.
- The type of appliance and whether it is condensing vs. non-condensing to determine the type of venting system(s) required.
- Existing fuel gas piping changes and or meter replacement may be needed when adding high input appliances such as a pool heater, generator, or tankless water heater to an existing gas service.
- Generator electrical load sizing factors include how many circuits are to be supplied and the types of appliances on those circuits. The minimum inlet gas pressure required by the generator should be determined to properly size the gas service.

### NEVER FORGET ...

**Safety is #1 to the Natural Gas Industry, so  
always commit to SAFETY FIRST!**